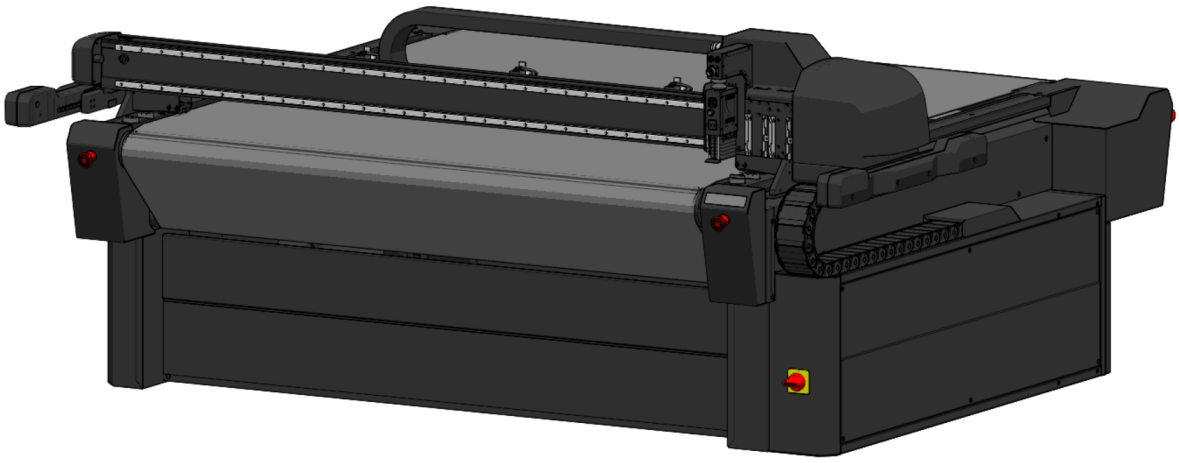
summa

F SERIES™ VANTAGE



User Manual

Rev 001

FCC Notice

The F Series tables have been tested and found to comply with the limits for Class A digital devices, in accordance with Part 15 of the FCC Rules. These limits are intended to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

The cutters generate, use, and may emit radio-frequency energy and, if not installed and operated in accordance with this instruction manual, may cause harmful interference to radio communication.

The equipment is not intended for residential environments. When operated in such environments, it may cause harmful interference, for which the user assumes full responsibility.

Caution!

Changes or modifications, not expressly approved by Summa's FCC compliance, could void the user's authority to operate this equipment.

DOC Notice

The F Series complies with the Class A limits for radio noise emissions from digital apparatus, as specified in the Radio Interference Regulations of the Canadian Department of Communications.

Notice

Waste Electrical and Electronic Equipment (WEEE) Directive

The symbol shown on this product indicates that it must not be disposed of with household or municipal waste and must be collected separately.

Electrical and electronic equipment may contain materials that are hazardous to the environment and human health. For this reason, such equipment must be disposed of at an authorized collection or recycling facility, or returned to the retailer to ensure proper treatment and recycling.

If you intend to dispose of this product while it is still functional, please consider reuse options such as donating it to a charity, selling it, or returning it to your retailer for parts reuse or exchange.

Registering the Flatbed Cutter

Please register the Flatbed Cutter on the following link:

https://www.summa.com/support/product-registration/

Failure to register the cutter may result in a delayed response to warranty and service inquiries.

Contact Information

All inquiries, comments or suggestions concerning this and other Summa manuals should be directed to Summa NV.

Summa nv - Rochesterlaan 6 - B-8470 GISTEL – Belgium - Website: www.summa.eu

Revision Overview

Revision	Reason for modification	Publication date	Author
001	Release User Manual Vantage	01/07/2026	WP / EJ

F SERIES™

Welcome

Congratulations on your purchase of the new F Series cutting table !

The F Series flatbed cutting table is designed to process both rigid materials and roll stock.

The multi-module tool holder can accommodate up to three tool holders simultaneously, allowing fast and easy tool changes. Automatic tool recognition, combined with digital and mechanical depth and blade calibration, ensures precise cutting across a wide range of materials.

For accurate contour cutting of printed flexible or rigid substrates, the base model cutting table is equipped with a drag knife tool module and an optical camera recognition system. A laser pointer is also provided for manual origin registration.

To meet diverse cutting requirements, Summa offers a wide selection of tools, modules, and blades, suitable for varying levels of complexity and different applications.

When processing roll stock, the media-handling support rollers and conveyor system enable smooth and accurate cutting over long distances.

This manual provides an overview of the main components and modules of the F Series and explains the applicable safety precautions. For detailed information on the handling and maintenance of specific parts, refer to the general reference guide and the documentation supplied with any optional modules.

Table of Contents

1 GENERAL

The purpose of this user manual is to describe the operating procedures of the machine and to provide owners, users, and operators with essential safety information for correct and safe operation in accordance with its intended use.

All information contained in this manual must be read and fully understood before operating the machine.

The manufacturer has no direct control over misuse of the machine. Responsibility for safe operation therefore rests solely with the owner, user, and operator.

All instructions and safety warnings in this manual are based on operation under normal conditions and on the assumption that the machine has not been modified from its original design.

The correct use and application limits of the cutting table depend on the selected combination of module, tool, and material.

Any use of the flatbed beyond the capabilities of the selected tool–material combination is considered improper use and may result in personal injury and/or serious damage to the machine. Use of the machine in this manner voids all warranty coverage.

Installation of the machine, accessories, and spare parts may only be carried out by trained and authorized personnel. All maintenance procedures must be performed by qualified personnel in accordance with this manual.

2 SAFETY & OPERATING ENVIRONMENT

2.1 Symbols used in this manual

	Warning with dark (red) symbol: Refers to immediate threat that can cause serious injuries and effects on health and safety.
	Warning with light (yellow) symbol: Refers to a dangerous situation that can cause injuries and serious damage to the machine.
	Attention with dark (red) symbol: Refers to useful information to prevent damage to the equipment and prolong the service life of the machine.
	Attention with light (yellow) symbol: Refers to useful tips to enhance user-friendliness and make the work significantly easier.
	Note: Can be considered as a general tip, something that is useful to know.

2.2 Safety symbols on the machine

Safety labels are used on some parts of the machine. They are explained below.

	**Caution** Servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than prescribed in the operating instructions.
	**Caution** Contains Class 2 laser. Do not stare into the beam.
	**Caution** Sharp edges. Touching the tools with bare hands may cause injury. Do not touch.
	**Caution** Moving parts. Keep away from moving parts Avoid the cutting area with the hands, clothing, jewellery or hair.
	**Caution** Hot surface. Do not touch marked parts.

Warning
Eye and ear protection must be worn.

Make sure to observe all the caution labels on the machine.

There are no user-serviceable parts inside. For servicing refer to qualified personnel only.

Turn off the table and contact a service representative in any of the following cases.

- There is visible mechanical damage.
- The power cord is damaged.
- The table is (partially) damaged by impact
- Liquid was spilt on the table.
- There is a strange noise, smoke or an unusual smell coming from the table.

2.3 Safety precaution

WARNING:
The equipment is not suitable for use in locations where children are likely to be present.

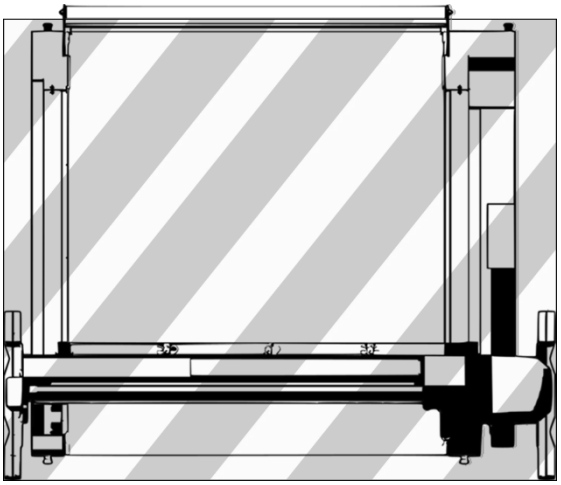
2.3.1 Safety precautions related to movement

Danger areas related to movement can be split up into three parts

WARNING:
There is a risk of injury from being caught or trapped in moving machine parts.

Keep hands, hair, clothing and jewellery away from moving parts. Do not wear jewellery, loose clothing or sleeves, scarves or open jackets.

2.3.1.1 General danger area

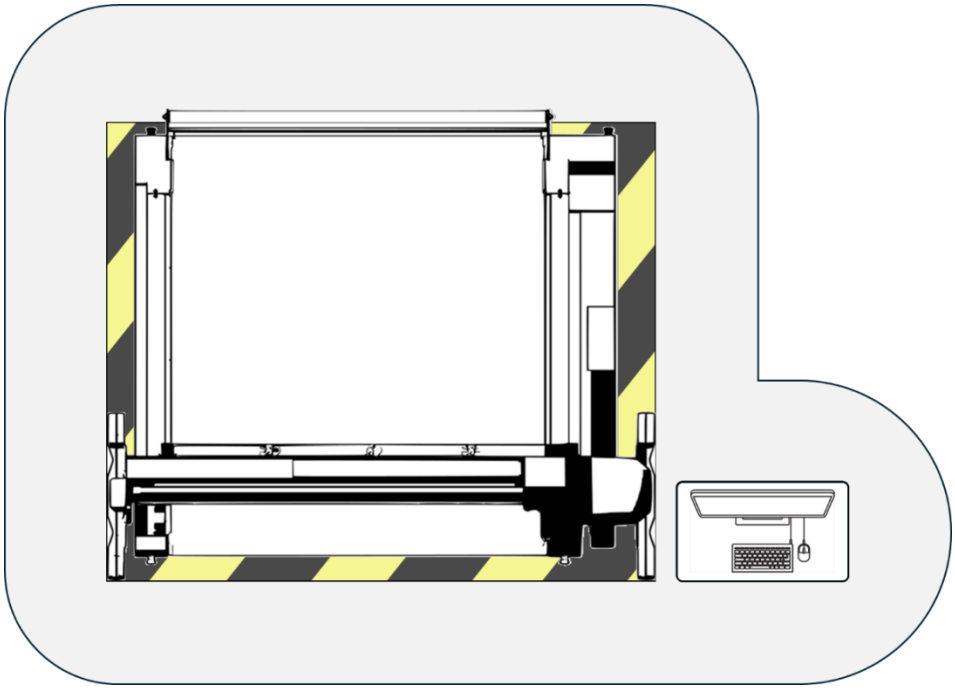


The complete table surface is considered to be a danger zone. This includes the moving parts and the area in which it operates.

WARNING:

Top beam is wider than table surface

2.3.1.2 Safety area during operation



During normal operation, the operator must remain outside the hatched safety zone. If the operator enters this zone, the bumpers or optical safety sensors will detect the presence of the operator and automatically pause the machine.

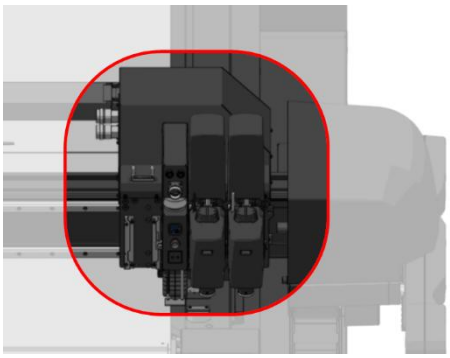
The active job is retained; however, all movement on the cutting table will stop until the operator exits the safety zone and resumes operation via *GoProduce*.

WARNING: When operating in the hatched area to change media or tools, the procedure needs to be followed strictly, as described further in the manual.

The safety area for other personnel is marked in light grey. It covers 1 meter outside the danger area and 1 meter away from the operator's desk.

2.3.1.3 Danger area around the head

During module and tool installation, the head and an area of approximately 20 cm surrounding it shall be regarded as an additional hazard zone. When operating within this zone, the operator must exercise increased caution.



Replacing a module or tool requires the operator to perform specific actions inside the hazard zone around the head. Before starting these actions, the operator must ensure that the machine cannot perform any unexpected movements. This can be achieved in one of the following ways:

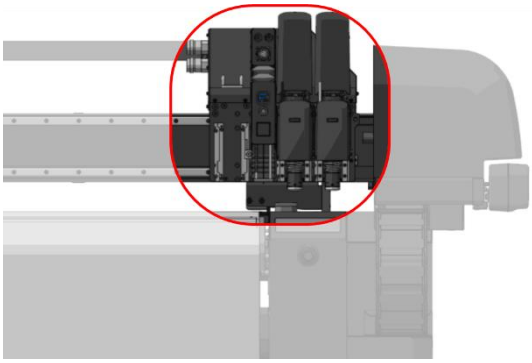
- Switching off the machine
- Performing a tool change strictly in accordance with the specified change procedure.

WARNING: When changing a module or a tool, always make sure that GoProduce Flatbed Edition is initiated and check if the machine is offline, this to ensure it won't move.

2.3.2 Safety precautions related to the laser pointer

WARNING:
Central unit contains a build-in laser pointer Class 2. Do not stare into the beam.

There's a laser pointer on the carriage to help define the position of the carriage and set the machine's working zone. The laser is in the central unit, pointing downwards to the conveyor.



Laser complies with CFR Title 21, Chapter I, Subchapter J, Sections 1010.2, 1010.3, 1040.10 and 1040.11 in effect at the manufacturing date. Use of any controls, adjustments or procedures other than those specified may result in hazardous radiation exposure.

2.3.3 Safety precautions related to tools

WARNING: The F series cutters use razor-sharp tools. Touching the tools with bare hands may cause injury. Do not touch the tools while the machine is cutting.

All knives and router bits should be handled with caution to prevent injury.

WARNING: Eye and ear protection is necessary when using certain power tools

Router options and tool holders using pneumatic air produce loud noises. When exposed for prolonged periods of time, the user must use ear protection. The router option may throw around debris, eye protection is needed when using the router option.

2.3.4 Safety Features

2.3.4.1 Controlled start-up

Before switching on the machine, it must be connected to the computer. The program GoProduce Flatbed Edition must then be running; otherwise, the machine will not start.

Shortly after the machine is powered on, an on-screen message will appear prompting the operator to confirm the startup.

2.3.4.2 Bumpers on top beam

For operator safety, bumpers with integrated trip switches are installed on both the left and right sides of the top beam. These switches detect contact with an operator or obstruction in the beam's path. When a bumper is activated, the top beam immediately stops to prevent injury or damage.

2.3.4.3 Light barrier

Optical sensors are mounted in the bumpers, safety beams are created alongside the top beam. If the light beam is interrupted, the machine stops. The interruption is a controlled stop. Within five seconds the machine will stop moving and hold its position. It's possible to resume the job after user confirmation.

2.3.4.4 Emergency buttons

There are emergency buttons on each corner of the flatbed, allowing to switch off the machine immediately. When pressed, power to the motors is cut, stopping the machine in an instant.

Current job information is lost when using the emergency stop. To unlock an activated emergency button, turn it clockwise.

2.3.4.5 Overcurrent

Electric current through the motors is monitored. When overcurrent is detected, power is cut off and a fatal error message will be displayed in GoProduce.

WARNING:
All the built-in safety features cannot prevent the high level of kinetic energy that can be released during an emergency stop or an unforeseen malfunction of the machine.

There are no guarantees safety features eliminate the risk of injury.

2.3.5 Personal protective equipment

The required safety equipment depends on the installed modules and the material that needs to be cut.

During operating or servicing the machine the operator should wear close-fitting clothing and use appropriate protective equipment.

Appropriate protective equipment include:

- Work clothes.
- Safety goggles, when large particles can be generated.
- Ear protection if the continuous sound pressure level is above 80dB.

WARNING: There is a risk of injury from being caught or trapped in moving machine parts. Keep hands, hair, clothing and jewellery away from moving parts. Do not wear jewellery, loose clothing or sleeves, scarves or open jackets.

2.4 Operating environment

Environmental conditions affect the machine's performance significantly. The restrictions or recommendations for the ideal operating environment are described in the site preparation document. The environmental conditions of the machine (without media) are as follows:

Operating Temperature	15 to 35° C	59 to 95° F
Storage temperature	-30 to 70° C	-22 to 158° F
Relative humidity	35 - 75 %, non-condensing	

It is possible that the environmental conditions of the used media are stricter than those of the machine. Please refer to the documentation about the used media.

Make sure that the material has had enough time to acclimatize.

3 MACHINE COMPONENTS

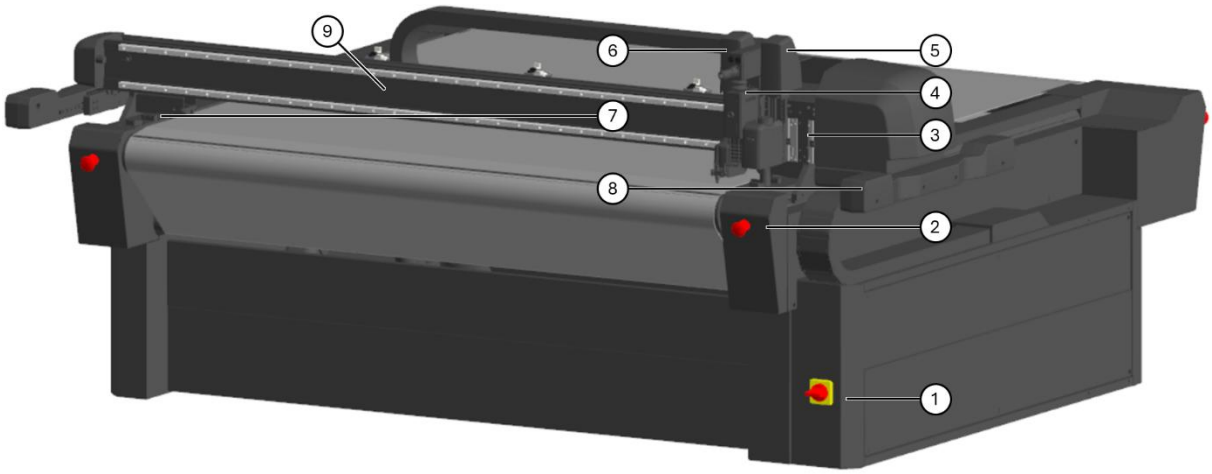
F series machines are delivered without power plug. The power cable is made on-site, guided through the power cable entry and connected inside the machine's electrical cabinet.

Machine orientation: The power switch is in the front right of the machine.

- X-axis: From front to back.
- Y-axis: From right to left.
- Origin: Situated on the front right side

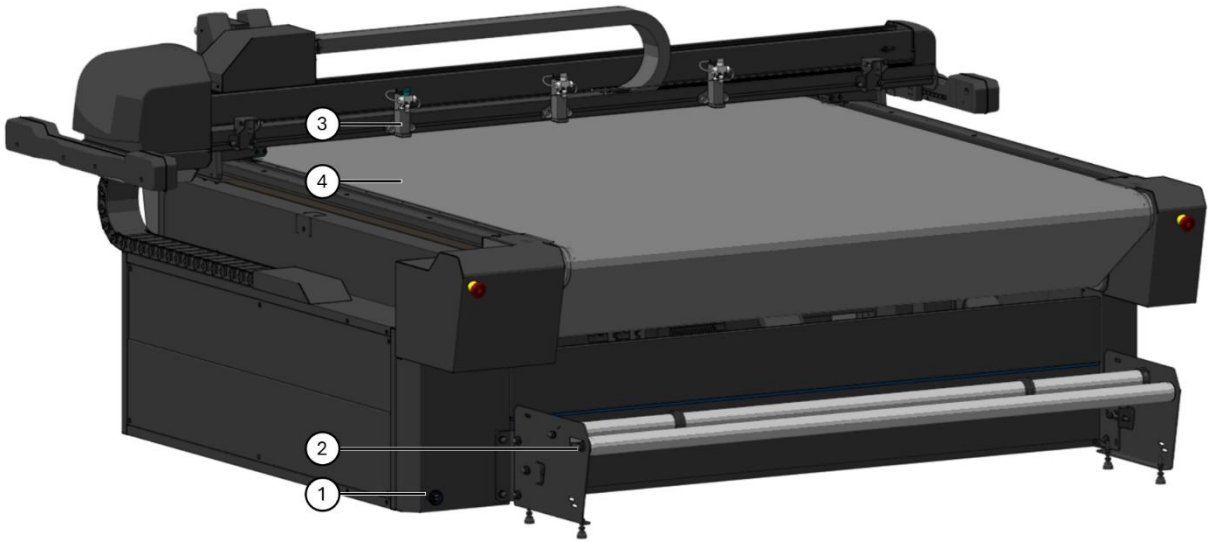
3.1 Flatbed Components

3.1.1 Front view



1. **Power switch:** This is used to switch the machine's power on or off. The OFF power switch position can be secured with a padlock
2. **Emergency button:** There are four emergency buttons on the flatbed. Once pressed, they stay in a safe locked position. Turn clockwise to release.
3. **Carriage:** The carriage can hold up to three removable modules and has a fixed central unit. The carriage moves across the top beam to cover movements in Y-direction.
4. **Central unit:** The central unit houses a positioning laser, depth sensor and an integrated camera system for fast and accurate registration mark recognition.
5. **Tangential module (optional):** The tangential module is used for the tangential tools.
6. **Drag head module:** The drag head module comes standard with the flatbed cutter for measuring the table profile. Additionally, it can be used to mount the pen or drag knife.
7. **ADC (Automatic Device Calibration):** On both sides of the machine an ADC is present. This is used for knife and hight calibrations of the installed cutting tool.
8. **Safety bumpers:** These bumpers have trip switches and optical sensors to detect any presence of obstruction to the top beam, making the machine stop in hazardous conditions.
9. **Top beam:** The beam moves back and forward over the table surface to perform operations in X-direction.

3.1.2 Rear View

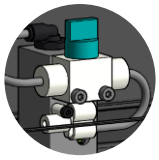


1. **Ethernet connection:** IP address range

WAN setup – Range 10.200.0/24	
Router	10.200.0.1
PC	10.200.0.2

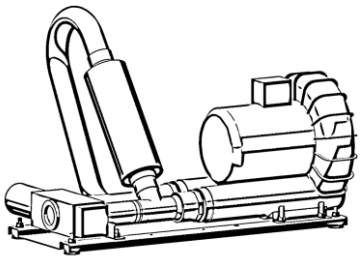
2. **Roll support:** Media roll support bars and a set of core holders for loading roll material.
3. **Pneumatic clamps:** Pneumatic media advance system. In order to work continuously, it clamps the media and holds it down while feeding it forward.

NOTE: The clamps hold the media down and can be moved from the left to the right. Enable or disable each clamp individually by turning the knob on top of each clamp.



4. **Conveyor belt:** The conveyor system feeds the media. The belt is powered by the top beam by pulling the conveyor forwards.

3.1.3 Vacuum pump



For the larger models, the vacuum pump(s) are not located under the table but externally placed. Depending on size, some models have one or two pumps.

3.1.4 Central unit

The central unit houses a positioning laser, ultrasonic material-thickness sensor and an integrated camera system.

Contour cutting uses registration marks (regmarks). The camera is used for fast and accurate regmark recognition.

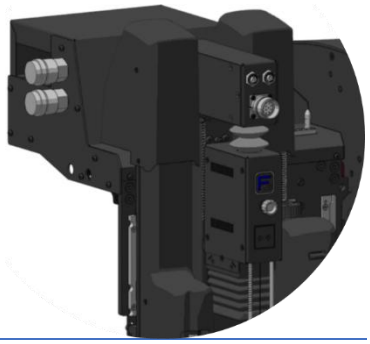
The unit has a dedicated connector for tools that require high electrical current.

Both the knob and black camera adjustment plate are part of the manual height adjustment mechanism. For contour cutting, the height needs to be adjusted each time another material thickness loaded

3.2 Modules

Up to three modules can be installed onto the carriage. The carriage also has a central unit, it is fixed to the carriage and cannot be taken off.

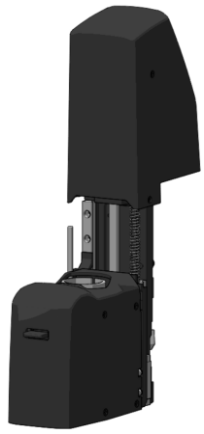
Some modules need compressed air. There are two connections on the side of the carriage. The higher connection with dry air and the lower with lubricated air.



ATTENTION: It is recommended to remove the module when not in use.

Tools for Versatile module	Single tool modules
Kiss cutting tool	Drag head module
Cutout tools	Rotary module
Corrugated tool	Standard router
Bevel cut tool	High-Frequency router
V-Cut tools	
Electronic Oscillating Tool	
Pneumatic Oscillating Tool	
Pneumatic Oscillating Tool Long	
Perforating Tool	
Creasing Tools	

3.2.1 Versatile module



The tangential module offers a vertical force up to 20kg and corresponds to a wide range of matching tools. Each tool has a barcode ID that ensures automatic recognition and separate parameter settings.

For each application, a corresponding tool can be installed into the tangential module.

The tangential module comes in two different versions:

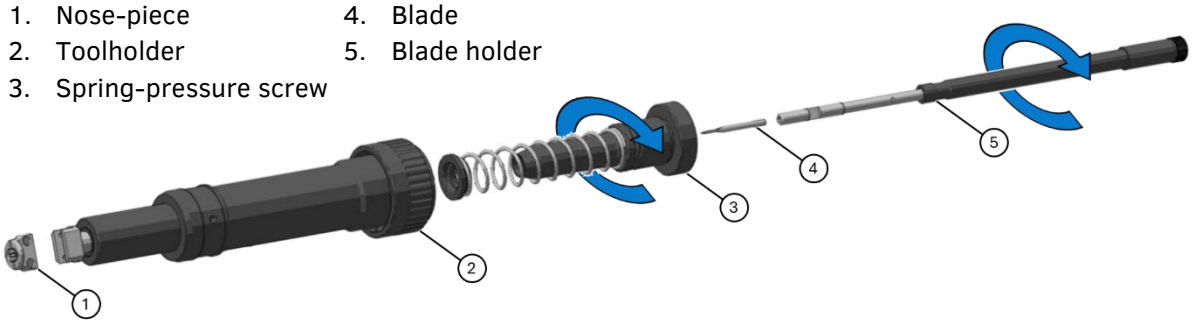
- CORE+ Tangential module:
  Speed and accuracy, on which Summa has built its reputation.
  20kg vertical downforce
- FAST+ Tangential module:
  Faster up-down movements without losing precision or cutting quality.
  10kg vertical downforce

3.2.1.1 Kiss-cutting Tool

The Kiss Cutting Tool is used to cut the materials down to their liner, up to 1,2 mm thick. It features mechanically controlled pressure, up to 2000 grams. The nose piece ensures precise depth control, delivering clean, consistent result.

Tool components

1. Nose-piece
2. Toolholder
3. Spring-pressure screw
4. Blade
5. Blade holder



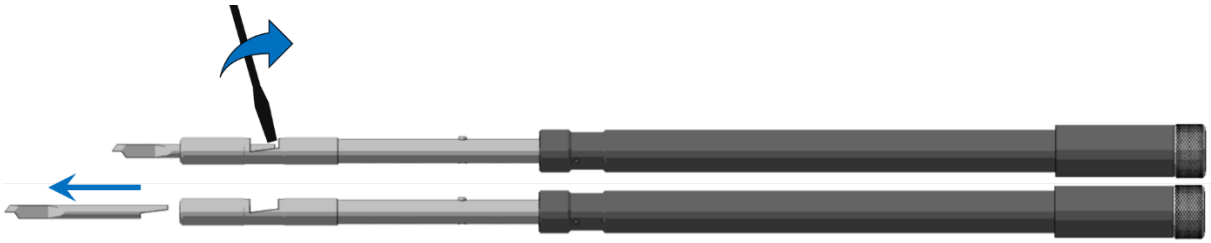
Knife pressure

Pressure on the knife can be adjusted by turning the spring-pressure screw. It comes in three different variants, each with its own range of pressure. Turning the screw out lowers the pressure until it comes out.

- 20-120 grams
- 50-650 grams
- 100-2000 grams

ATTENTION: Knife pressure is needed to pierce the material. It should not control the knife depth.

Replacing the blade



- Remove the blade-holder out the tool by turning it out the spring pressure screw. There is no need to remove the screw.
- Push the blade out the wedge of the knife holder with a flat screwdriver.
- Insert the new blade into the holder, the wedge keeps it in place. The blade should not be able to fall out.
- Put the blade holder back in the tool by turning it back in the spring pressure screw.
- Adjust the blade dept back and forward in the nosepiece by turning the knife holder left and right.

3.2.1.2 Cutout Tools

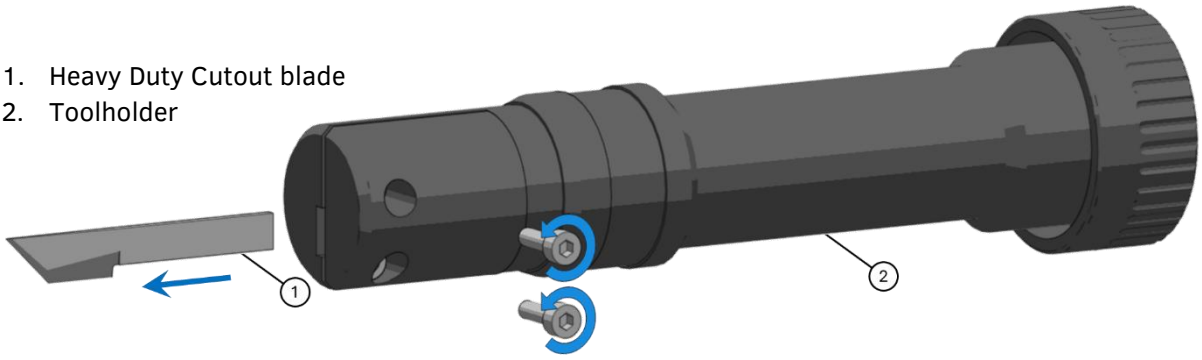
Cutout Tools uses a static blade to thru-cut the material. Summa features five different Cutout Tools for the tangential module. These tools may feature a gliding disk, used as an extra to keep the material down on the machine while cutting.

No gliding disk	Narrow gliding disk	Large gliding disk
Heavy Duty Cutout Tool	Single Edge Cutout Tool	High Precision Cutout Tool
	Double Edge Cutout Tool	Rigid Material Cutout Tool

3.2.1.2.1 Heavy Duty Cutout Tool

Tool components

1. Heavy Duty Cutout blade
2. Toolholder



Removing the blade

- Loosen the two screws a few turns
- Carefully take out the blade

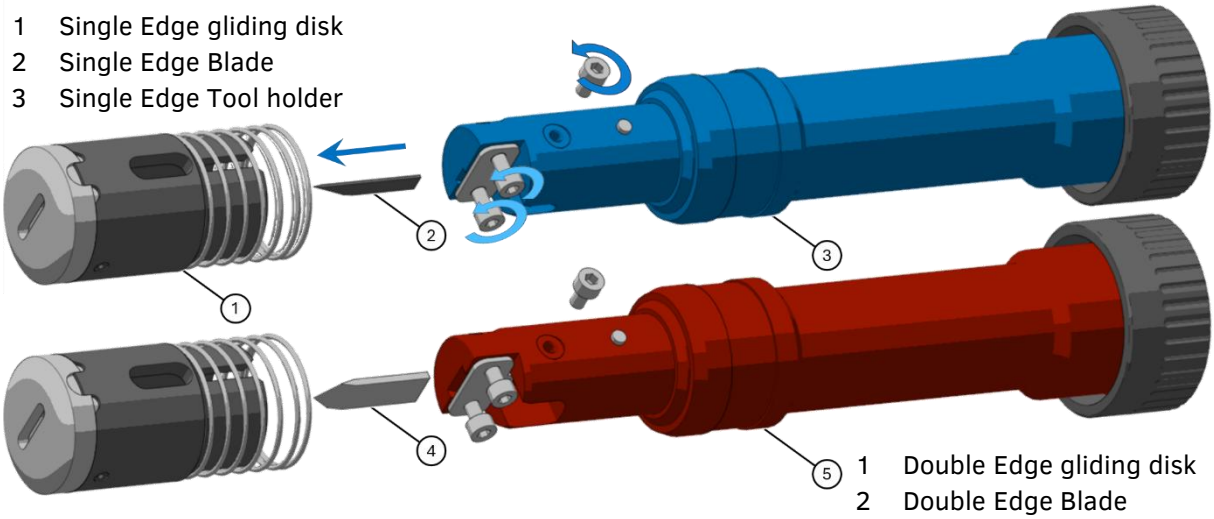
Installing the blade

- Loosen the two screws a few turns
- Gently slide the blade into the tool
- Tighten the two screws

3.2.1.2.2 SINGLE & DOUBLE EDGE CUTOUT TOOLS

Tool components

1 Single Edge gliding disk
2 Single Edge Blade
3 Single Edge Tool holder



1 Double Edge gliding disk
2 Double Edge Blade
3 Double Edge Tool holder

Removing the blade

- Take out the screw of the gliding disk
- Remove the gliding disk
- Loosen the two screws of the blade
- Carefully take out the blade

Installing the blade

- Loosen the two screws of the blade
- Gently slide the blade into the tool
- Tighten the two screws
- Put the gliding disk over the tool holder
- Put gliding disk screw back in

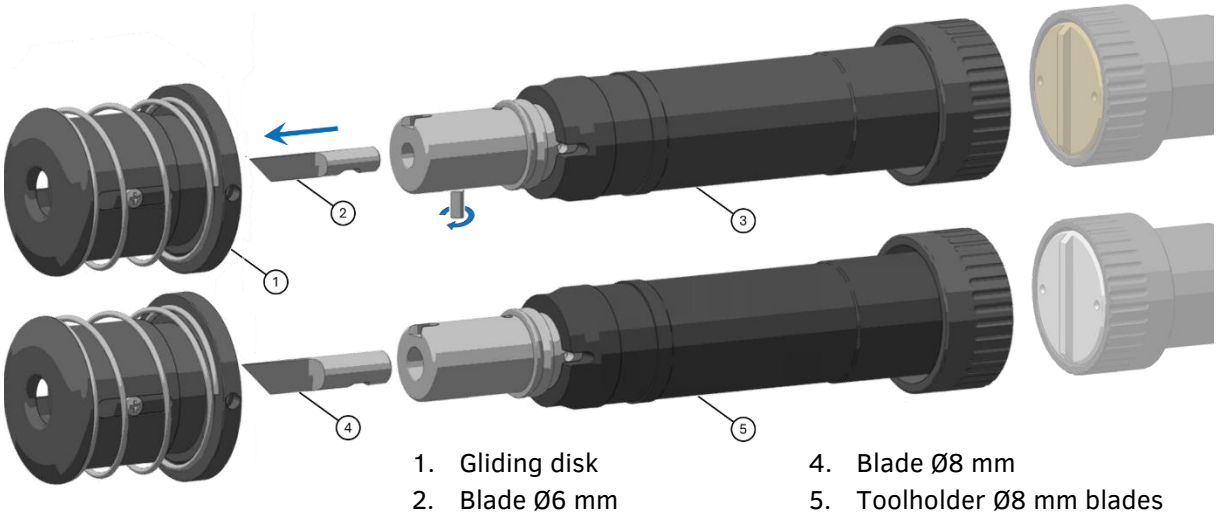
3.2.1.2.3 High Precision Cutout Tool & Rigid Material Cutout Tool

Universal Cutout Tool comes in two versions, Precision and Rigid. Precision blades are better suited for fast, nimble and precise jobs. Rigid blades are better suited for thicker materials and jobs where other Cutout Tools would break.

High Precision Cutout Tool
- Gold tool
- Ø6 mm blades

Rigid Material Cutout Tool
- Silver tool
- Ø8 mm blades

Tool components



1. Gliding disk
2. Blade Ø6 mm
3. Toolholder Ø6 mm blades
4. Blade Ø8 mm
5. Toolholder Ø8 mm blades

Removing the blade

- Push the gliding disk off with your thumbs while pointing the tool away from you
- Loosen the screw holding the blade in place
- Carefully take out the blade

Installing the blade

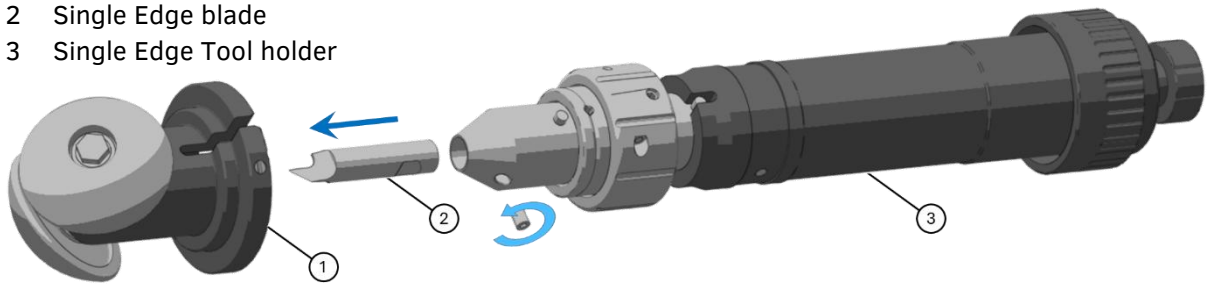
- Loosen the set screw of the blade
- Gently slide the blade into the tool. Note the keyway of the blade points to the set screw
- Tighten the set screw
- Point the tool away from you. Put the gliding disk over the tool holder, turn while pulling until it snaps in place.

3.2.1.3 Corrugated Tool

The Corrugated Tool is ideal for cutting packaging materials. Its patented wheels provide a smooth, die-cut-like finish by pressing down the material, ensuring precision cuts with a high-quality finish.

Tool components

1 Single Edge gliding disk
2 Single Edge blade
3 Single Edge Tool holder



Removing the blade

- Push the wheels off with your thumbs while pointing the tool away from you
- Loosen the screw holding the blade in place
- Carefully take out the blade

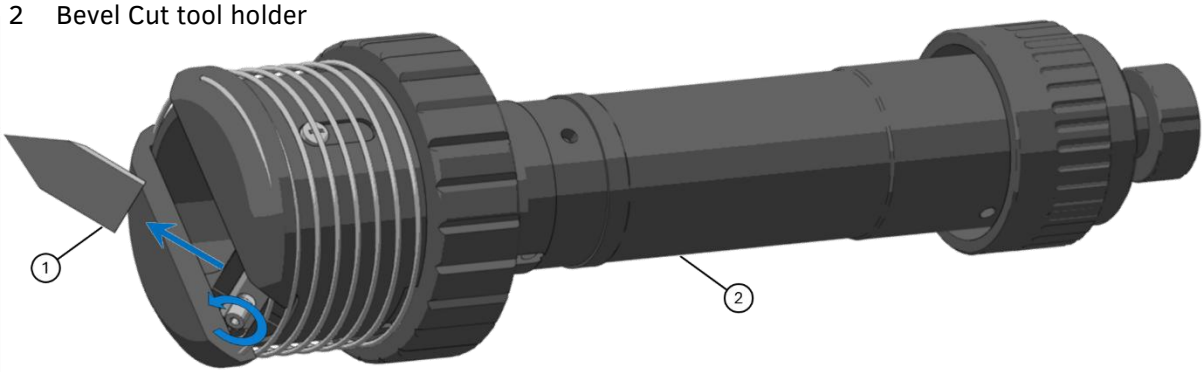
Installing the blade

- Loosen the set screw
- Gently slide the blade into the tool. Note the keyway of the blade points to the set screw
- Tighten the set screw
- Point the tool away from you. Put the wheels over the tool holder, turn while pulling until it snaps in place.

3.2.1.4 Bevel Cut tool

The Bevel Cut Tool features a short, stable blade ideal for cutting V-shaped grooves into rigid materials like deco felt and rubber. It also creates clean, accurate fold lines in solid board, which is perfect for creating high-end packaging. When precision and presentation matter, this tool delivers a premium finish.

1 Bevel Cut blade
2 Bevel Cut tool holder



Removing the blade

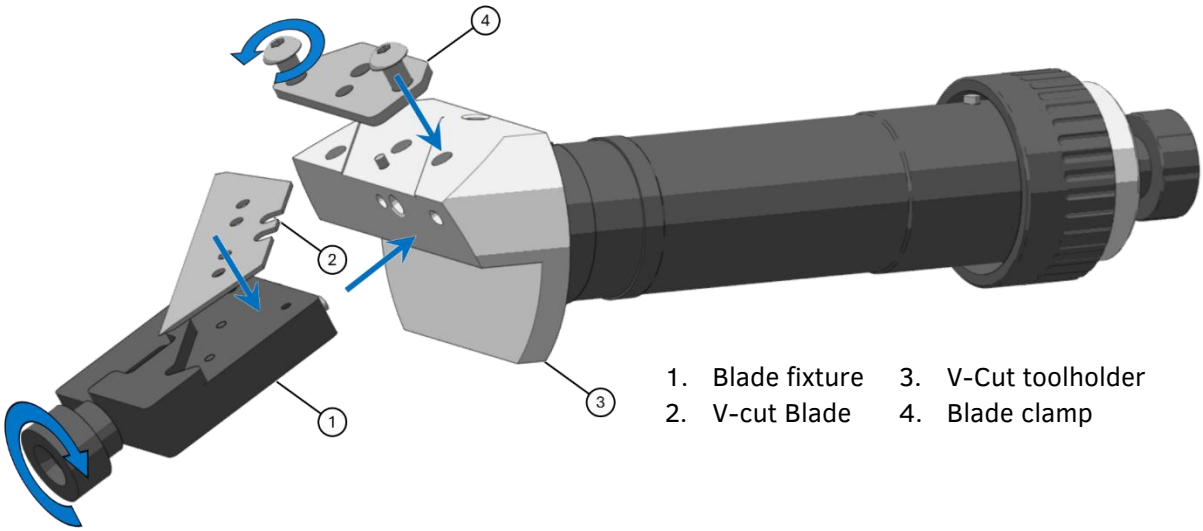
- Pull back the gliding disk and loosen the set screw
- Carefully take out the blade

Installing the blade

- Pull back the gliding disk and loosen the set screw
- Carefully put in the blade and tighten the screw

3.2.1.5 V-Cut tools

The V-Cut Tools are available in five angles and are designed to cut a V-shaped groove in rigid sandwich and foam composite boards up to 27 mm thick.



1. Blade fixture
2. V-cut Blade
3. V-Cut toolholder
4. Blade clamp

Removing the blade

- Loosen the screws of the blade clamp
- Carefully take out the blade

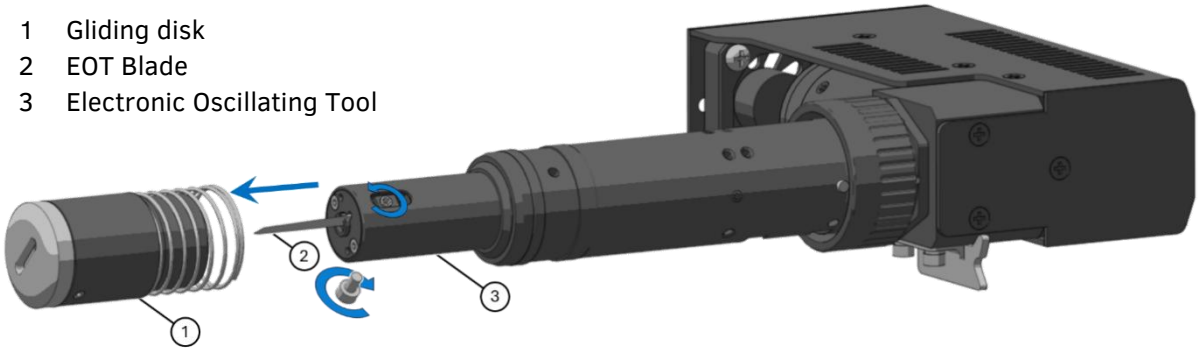
Installing the blade

- Put the blade in the fixture
- Fasten the fixture into the toolholder
- Screw the blade clamp in place
- Take the fixture of the toolholder

3.2.1.6 Electronic Oscillating Tool

Cut soft and medium density materials such as corrugated board and foam up to 18 mm thick. The EOT is driven by an electric motor, producing up to 12,000 rpm and moves a blade up and down over a stroke of 1 mm.

1 Gliding disk
2 EOT Blade
3 Electronic Oscillating Tool



Removing the blade

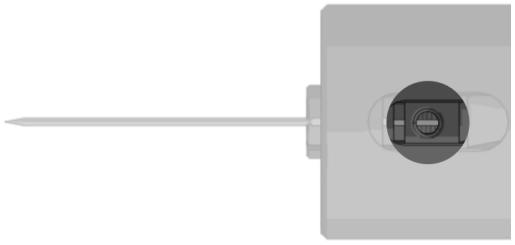
- Remove the cylinder head screw from the gliding disk
- Take of the gliding disk
- Loosen the setscrew from the EOT
- Carefully take out the blade

Installing the blade

- Take out the setscrew of the EOT
- Put the blade in the toolholder*
- Put the set screw back in
- Install the gliding disk

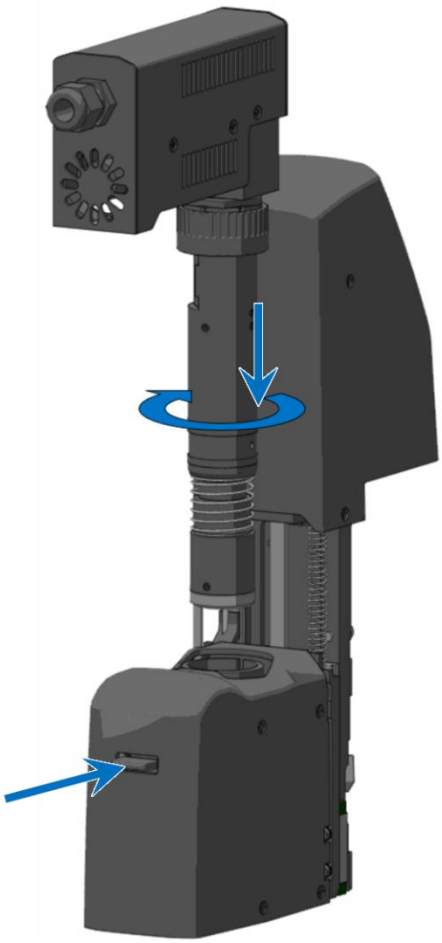
*Mark that the back of the knife is installed completely until the end of the tool. This can be checked by looking through the hole of the setscrew.

*Mark that the back of the knife is installed completely until the end of the tool. This can be checked by looking through the hole of the setscrew.

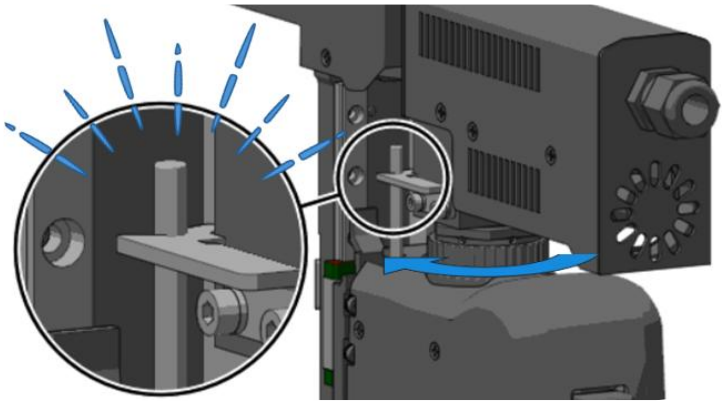


ATTENTION:
Never use the tool or fasten the setscrew without an installed blade.

Change tool



- Put the tool into the module
- Turn the tool whilst holding the front knob of the module until the pin of the tool falls into the slot of the module.
- Turn the black ring until the tool is fixed in place
- Position the tool straight. It snaps onto the metal rod



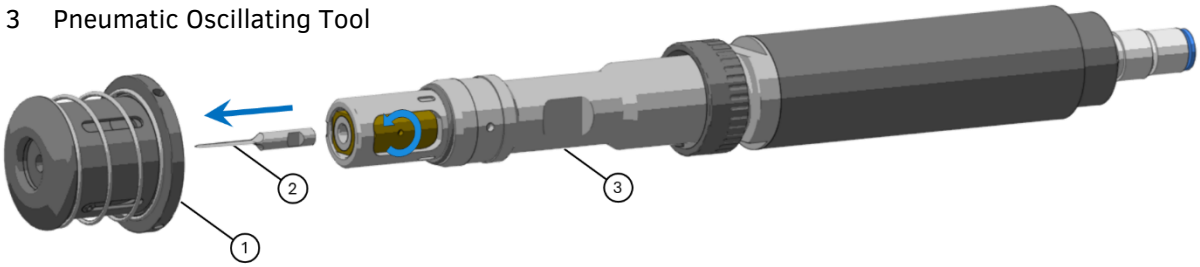
WARNING: If the blade is not in use and it is not completely protected by the gliding disk, it has to be removed from the machine and capped with a safety cap. Do the same when shutting down the machine in the evening.

ATTENTION: Do not overtighten the tool in the tangential module.

3.2.1.7 Pneumatic Oscillating Tool

The standard Pneumatic Oscillating Tool, powered by compressed air, moves its blade up and down over a stroke of 8 mm. The robust construction of the tool makes it suitable to cut thick material, such as honeycomb board, corrugated board, and foam board.

1 Gliding disk
2 POT Blade
3 Pneumatic Oscillating Tool



Removing the blade

- Push the gliding disk off with your thumbs while pointing the tool away from you
- Loosen the screw holding the blade in place
- Carefully take out the blade

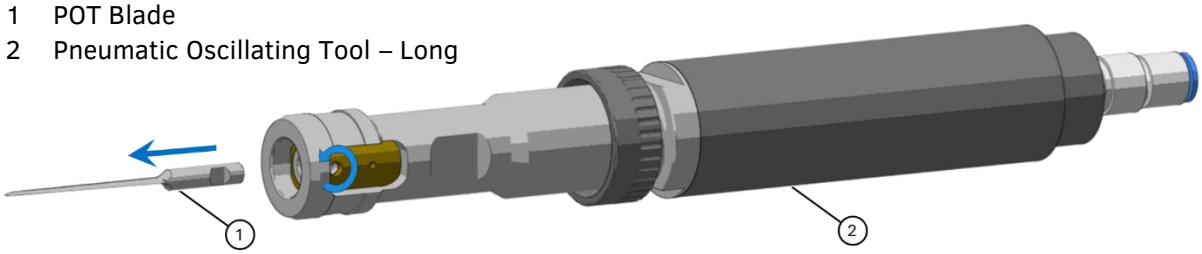
Installing the blade

- Loosen the set screw
- Gently slide the blade into the tool. Note the keyway of the blade points to the set screw
- Tighten the set screw
- Point the tool away from you. Put the gliding disk over the tool holder, turn while pulling until it snaps in place.

3.2.1.8 Pneumatic Oscillating Tool – Long | POT-L

The Pneumatic Oscillating Tool-L (POT-L) is an addition to the standard POT and is used with a longer type of knife. The POT-L is able to process thick, soft foams with a maximum thickness up to 42 mm. The robust construction of the tool makes it suitable to cut material, such as honeycomb board, corrugated board and foam board.

1 POT Blade
2 Pneumatic Oscillating Tool – Long



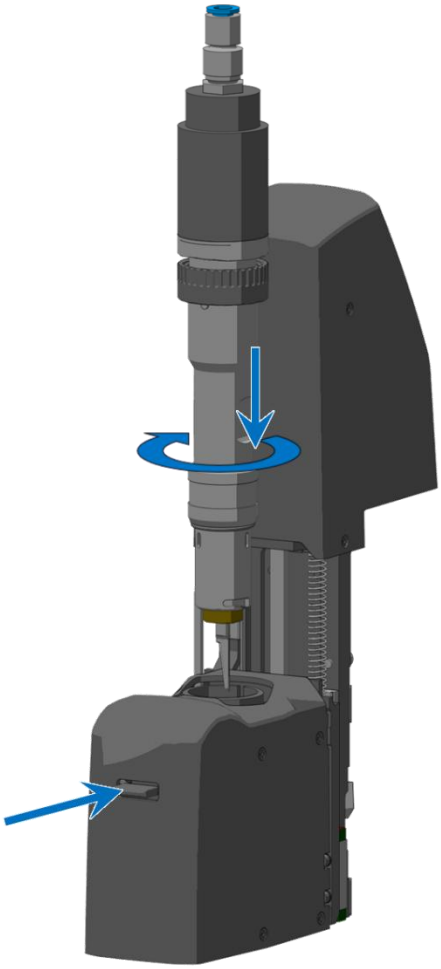
Removing the blade

- Loosen the screw holding the blade in place
- Carefully take out the blade

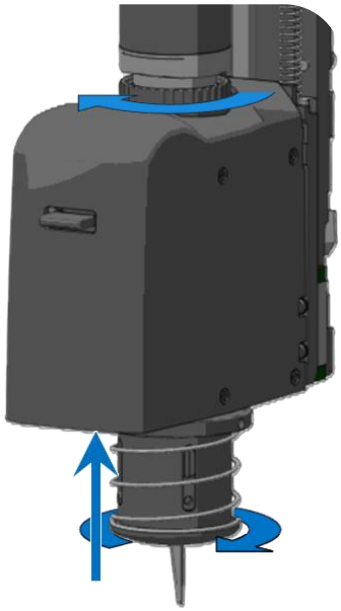
Installing the blade

- Loosen the set screw
- Gently slide the blade into the tool. Note the keyway of the blade points to the set screw
- Tighten the set screw

Change tool



- Put the tool into the module
- Turn the tool whilst holding the front knob of the module until the pin of the tool falls into the slot of the module.
- Turn the black ring until the tool is fixed in place
- Put on the large gliding disk by pushing it whilst turning until it snaps in place.



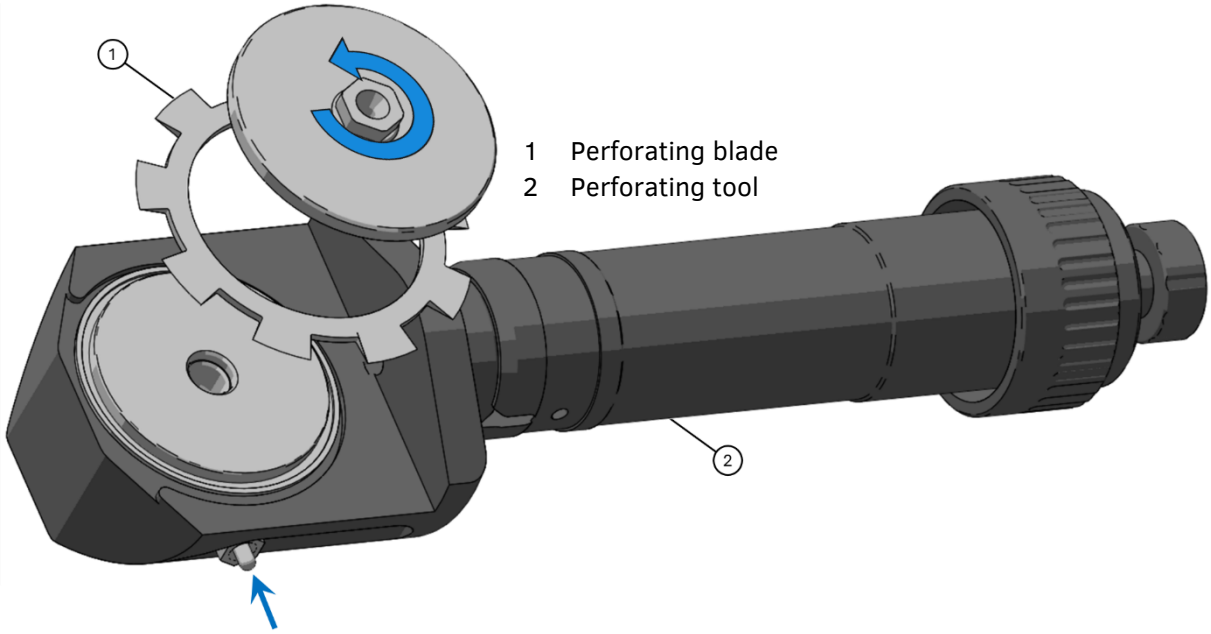
WARNING: Never leave the POT on the machine without the gliding disk. Mount the gliding piece immediately after the POT is mounted in the tangential module.

WARNING: The POT-L has no gliding disk, so do not leave it in the machine if it is not used. If it must stay in the machine, then put a warning sign on the machine

ATTENTION: Do not overtighten the tool in the tangential module (see usage of the tool wrench).

3.2.1.9 Perforating Tool

The Perforating Tool creates clean, efficient perforations, making materials easier to bend or fold with sharp 90° edges for a polished finish. It's ideal for boxes, as it speeds up assembly time while enhancing overall presentation.



1 Perforating blade
2 Perforating tool

Removing the blade

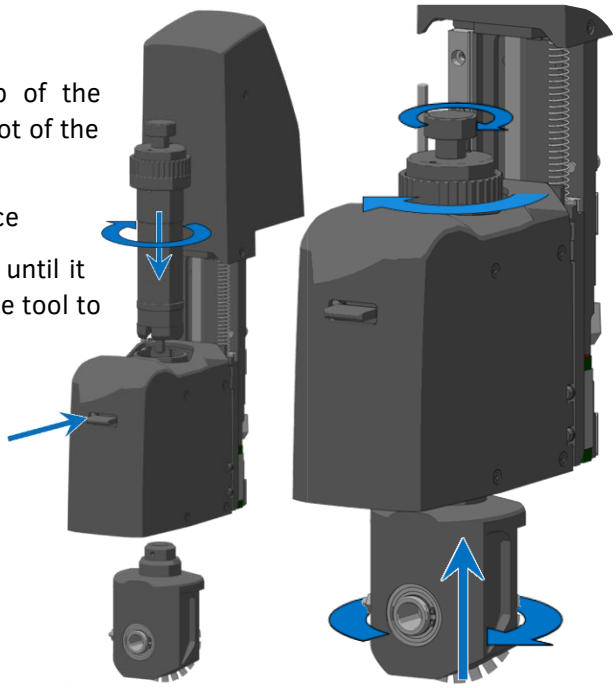
- Push the button on the side
- Turn off the wheel using a 10mm wrench
- Carefully take off the blade

Installing the blade

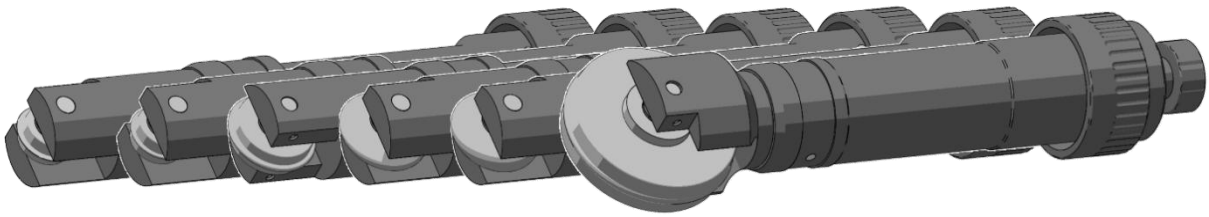
- Put the blade on the toolholder
- Turn the wheel on
- Push the button on the side while tightening the nut with a 10 mm wrench

Change tool

- Put the tool into the module
- Turn the tool whilst holding the front knob of the module until the pin of the tool falls into the slot of the module.
- Turn the black ring until the tool is fixed in place
- Put the blade on by inserting it whilst turning until it slots in place. Turn the small knob on top of the tool to secure it in place.



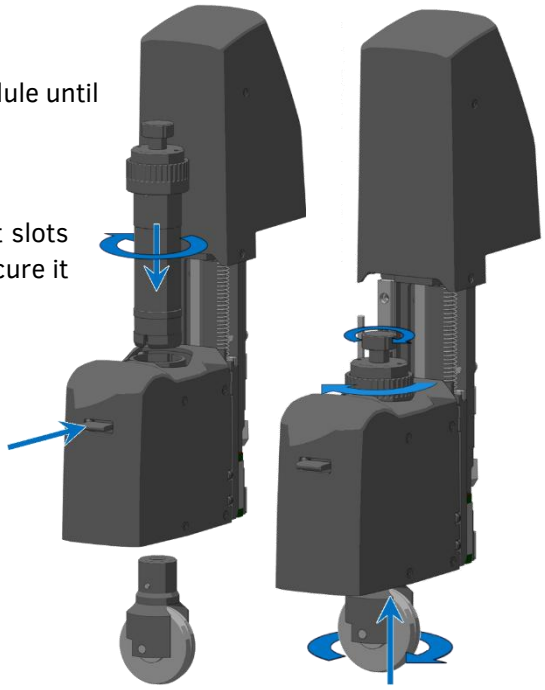
3.2.1.10 Creasing Tool



Several creasing wheels, designed in different depths and radius sizes, are available for creasing and scoring paper, cartons, polypropylene and PVC material.

Change tool

- Put the tool into the module
- Turn the tool whilst holding the front knob of the module until the pin of the tool falls into the slot of the module.
- Turn the black ring until the tool is fixed in place
- Put the blade on by inserting it whilst turning until it slots in place. Turn the small knob on top of the tool to secure it in place.

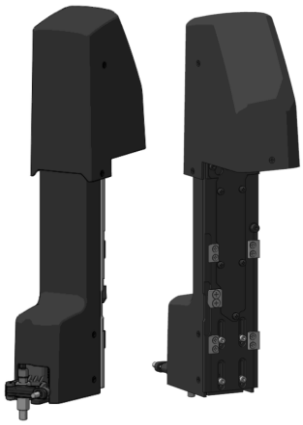


3.2.2 Single Tool Module

Single tool modules are modules with a fixed tool unlike the versatile module where one module can carry a range of tools.

- Drag head module
- Rotary knife module
- Standard router module
- 3.7kW High Frequency router module

3.2.2.1 Drag head module



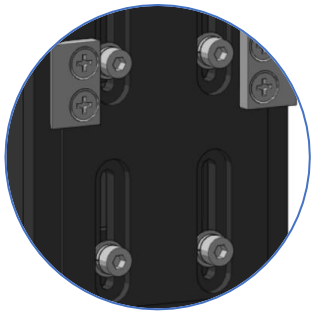
The drag head module comes standard with the machine.

The module is a fast-moving drag knife and pen holder for making kiss-cuts or notations on a wide range of adhesive vinyls. For writing, the height needs to be adjusted.

It can output up to 600 grams of downforce.

The clearance between the standard drag knife holder and the flatbed base is approximately 3 mm (0.11”). When thicker materials are used, it must be removed.

Adjust module height:



1. Remove the drag head module from the flatbed.
2. Loosen the 4 screws in the back.
3. Move the head to the desired height.
4. Fasten the 4 screws again.
5. Install module on the flatbed and verify the new height.

3.2.2.2 Rotary Module

The Rotary Module has a decagonal blade, tangentially controlled, which is driven by an electronic motor.

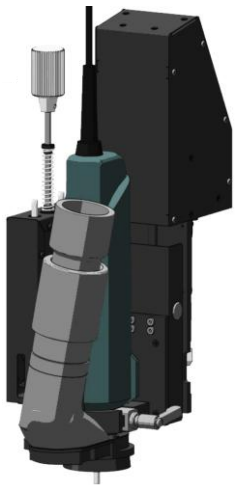
Depending on the used speed and blade diameter, all kinds of materials can be cut with its rotary blade, this up to thickness of 5 mm.

The main focus is on single-layered textiles, certain types of fibre are hard to cut with other types of tools. Ideal materials to cut with the rotary module are flag & banner material, felt, technical textiles, fabric, foams, etc.

The module allocates slots 2 & 3 on the carriage and requires dry compressed air.

Blades must be mounted directly in the module; there are no tools available for this module.

3.2.2.3 Standard router module



The router module has a motor capable of handling most solid boards used in the graphic and sign industry.

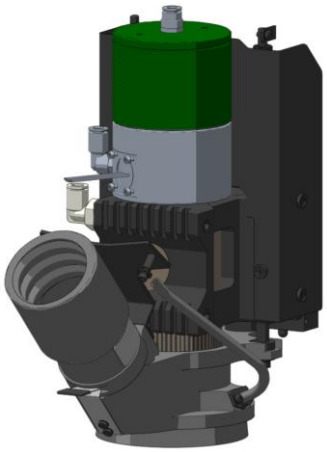
To take away chips and dust, the router system comes with a vacuum cleaning kit. The kit includes a brush assembly, a hose and a mounting pole. The vacuum cleaner is optional.

The module allocates slot 2&3 of the head. The module can easily be dismounted and parked on the pole of the gantry, making the two slots available again.

ATTENTION: Use of a routing mat is mandatory.

NOTE: The actual router module may differ from picture. Different types of routers are available.

3.2.2.4 High-Frequency router module



The HF Routing Module features a high-frequency spindle with an increased power output up to 3.7kW, enabling higher processing speeds. The well-balanced high-frequency spindle ensures smooth and precise finishing on rigid materials. Changing the routing bit is pneumatically controlled and is easily replaced. The brush assembly height is adjusted automatically.

ATTENTION:
Use of a routing mat and chiller is mandatory.

NOTE: To use the HF-router the chiller must be switched on.

4 SETTING UP MODULES AND TOOLS

4.1 General

There are four kinds of modules used for cutting:

1. The drag module. It cannot automatically recognize whether a pen or drag knife is installed.
2. The tangential module automatically recognizes which tool is mounted.
3. The router modules have different types of bits and are used for routing
4. The rotary module has no tools. Its knife is mounted directly in the module.

The flatbed has no control panel or screen. Everything is done with the attached computer and use of the program GoProduce Flatbed Edition.

Each module is calibrated to the central unit. Settings are stored within a chip of the module. When putting a module onto the carriage, it's position is recognised and settings are loaded.

After installing a tool, the ADC calibrates the knife or bit automatically. Setting the parameters correct makes sure that the cutting quality is optimized and contour cutting jobs are more precise.

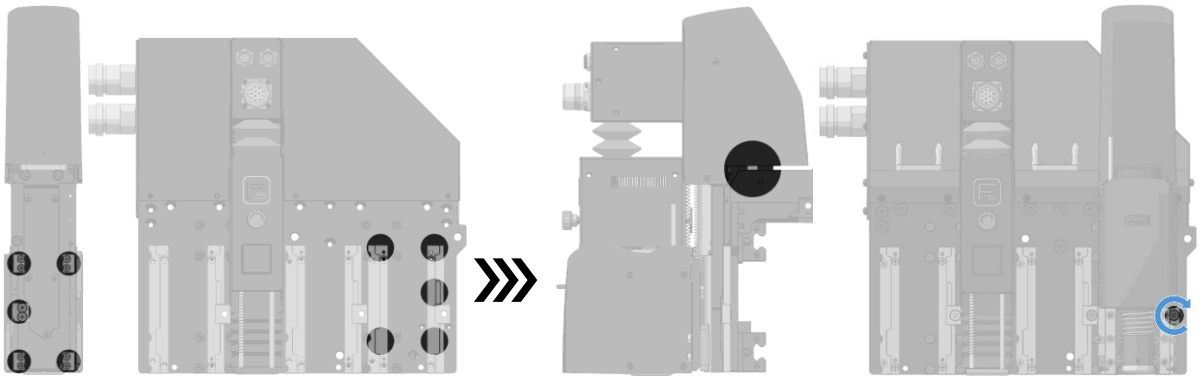
4.2 Installing and removing a module

WARNING: For safety reasons, always ensure that no tool is installed in the module before installing it. Only install a module when the flatbed is switched off or after selecting 'Change Tool' in GoProduce.

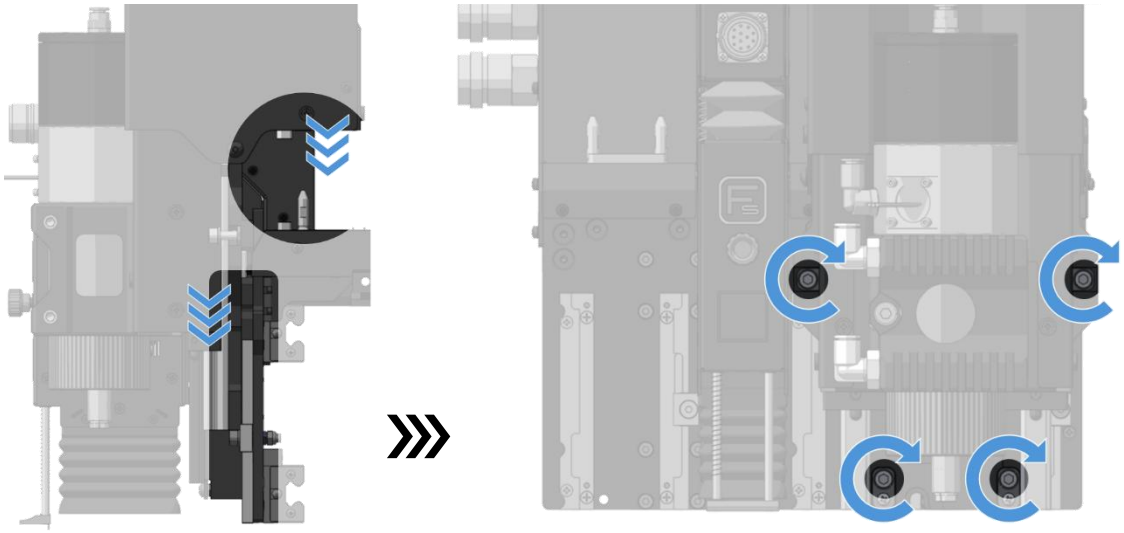
4.2.1 Installing a module

To install a module, line up the five highlighted dovetails of the module and slide them in the guiding of the carriage. Check the alignment, do not use excessive force, this could damage the connector. The module must be pushed down approximately 15 mm (0,6")

The module is secured with one screw on the right side. Check if the connector of the module is completely seated in the connector of the carriage.



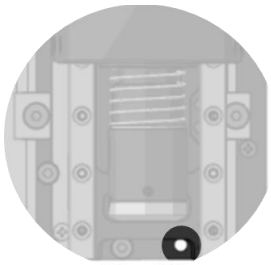
Installing the HF-router:



NOTE: In conjunction with other modules, the HF-router has two dovetail pieces and four screws, securing it firmly to the carriage.

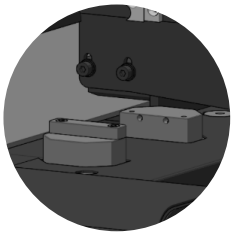
4.2.2 Removing a module

To remove a module, loosen the screw at the right side of the module counterclockwise by one turn with the hex screwdriver. Put this screwdriver in the hole on the right side under the module. Gently lift the module with the screwdriver 3 to 4 mm (0.12 to 0,16”). Guide the module manually for an extra 10 mm (0,4”) and remove it from the carriage. The drag module does not have such a hole.



NOTE: Unused modules should be removed from the carriage. Leaving unused modules installed can reduce cutting quality.

4.3 Automatic Device Calibration (ADC)



The ADC measures the tip of the knife or bit accurately and sets its down position to the table. Additionally, it measures the knife shape parameters, longitudinal, lateral and origin. This eliminates manual calibration.

To avoid operator errors, on machine startup or tool change the ADC measures the down position of each installed tool

A full knife calibration is done automatic when you change to another tool or when the operator calls for it.

ADC exceptions

- Drag knife cannot be measured by the ADC.
- Kiss-cut knife cannot have its nosepiece for an ADC calibration.
- Corrugated tool needs its wheels turned up completely for an ADC calibration.

The ADC works by interruption of a laser. The right side ADC is measures tools in slot 2 & 3. The unit on the left side measures tools in slot 1.

NOTE: The drag module in slot 1 can't pass over the ADC. To avoid collision, the front margin of the working area is moved 80 mm to the rear.

5 GOPRODUCE FLATBED EDITION

Summa GoProduce Flatbed Edition is software that integrates the flatbed cutting table into the production workflow. It connects the design computer, to the cutting device.

After the workflow is set up, macros automate the process, reducing the need for operator intervention and minimizing machine downtime.

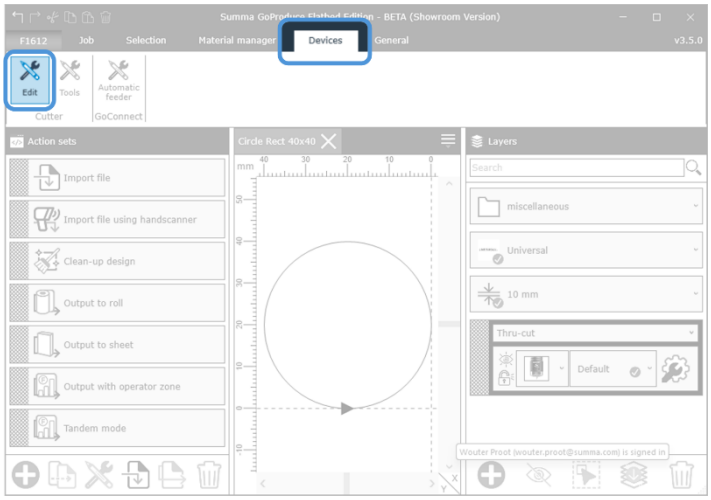
5.1 Connect your device

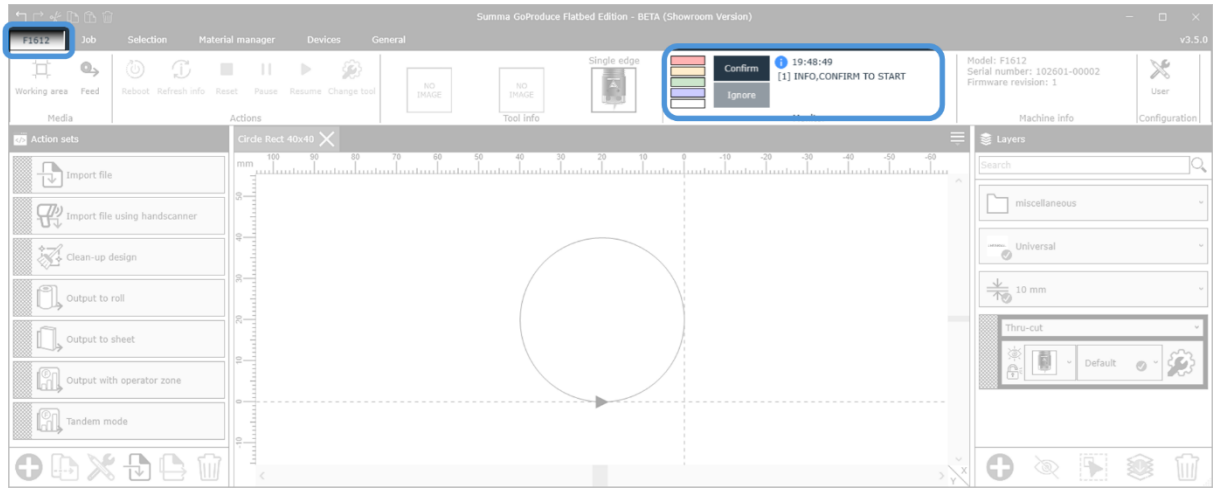
Connect your computer to the machine using an ethernet-cable or ethernet-usb-cable.

Conduct following on-screen clicks:

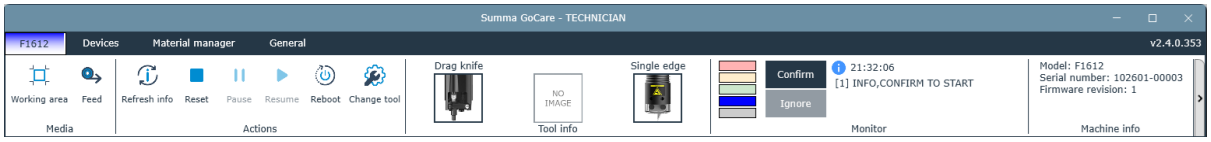
- Click *"Devices"* – *"Edit"*
- Select the device and confirm *"OK"*
- Click *"Fxxxx"* and *"Confirm to start"*

  The LED strip turns green and the machine starts homing





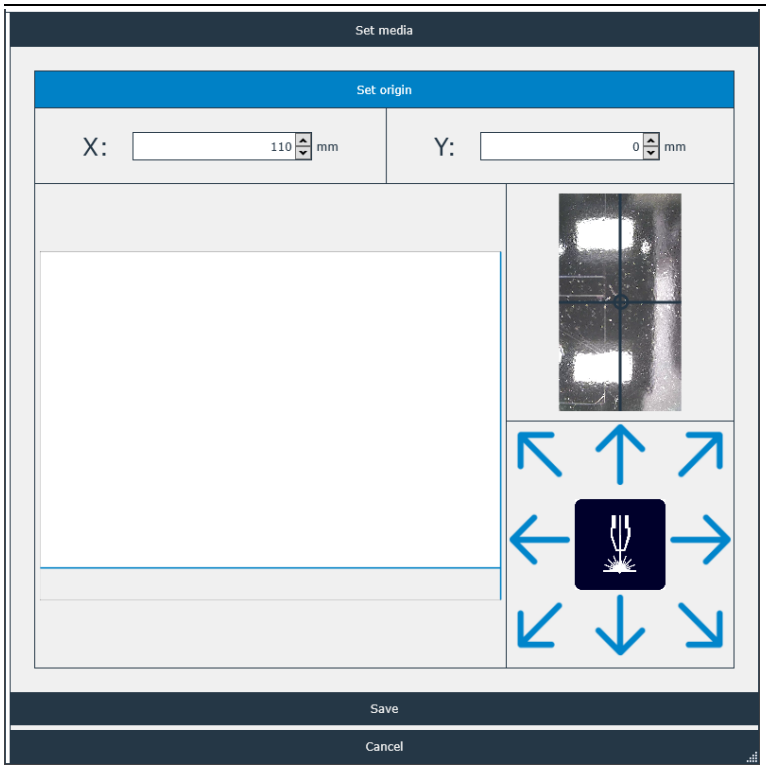
5.2 Ribbon



5.2.1 Working Area

The button *"Working area"* is used to set up media size. First the origin is set, then the media size.

NOTE: The drag module in slot 1 can't pass over the ADC. To avoid collision, the front margin of the working area is moved 80 mm to the rear.

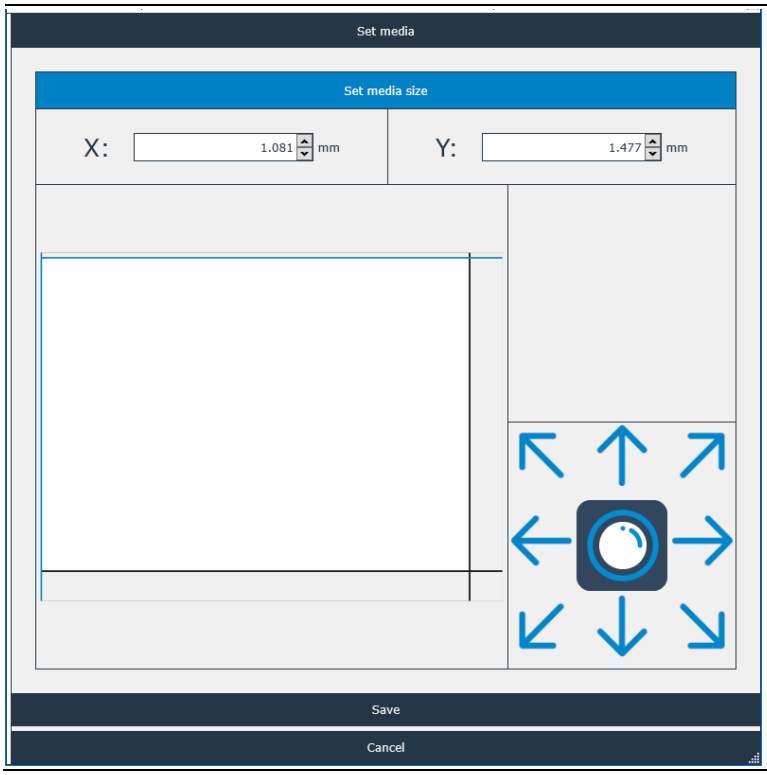


Set origin by using the arrows, filling in the fields or clicking into the white media area.

Click to activate camera

Click to activate laser pointer

Click *"Save"* to continue



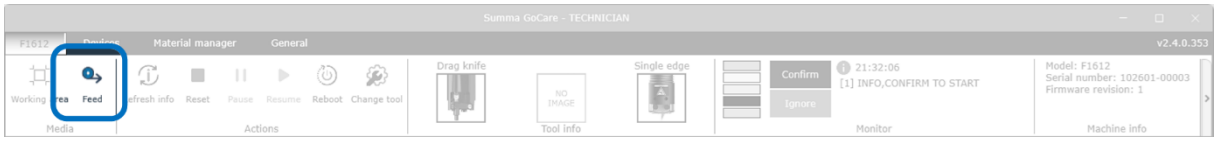
Set media size by using the arrows, filling in the fields or clicking into the white media area.

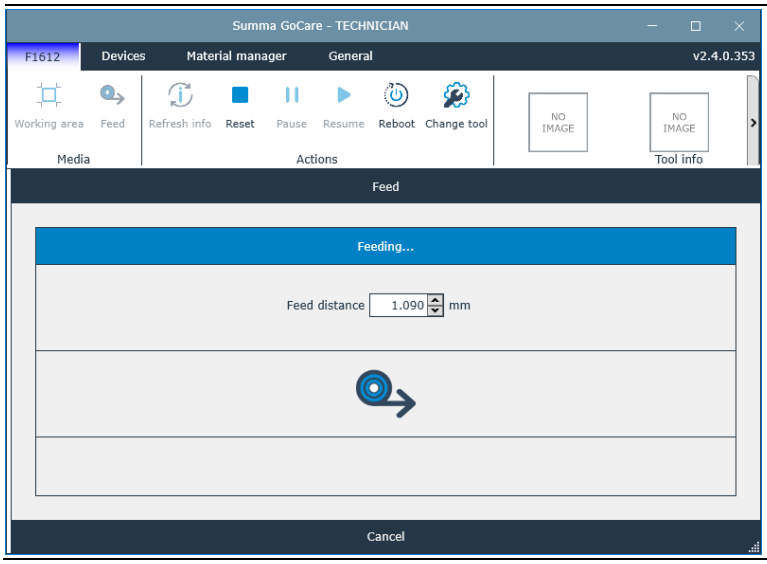
Click to activate camera

Click to activate laser pointer

Click *"Save"* to finish

5.2.2 Feed





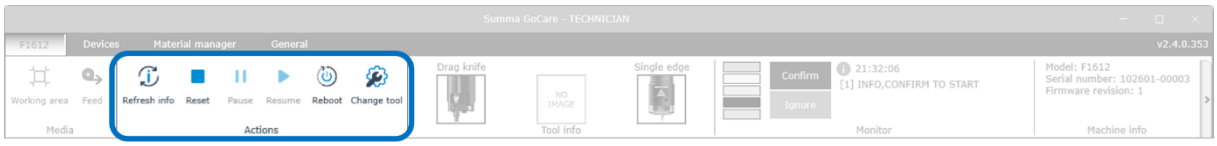
Enter the distance you want the conveyor to be fed

Click to start feeding

Max feed dist.: 50 000 mm

Click *"Cancel"* to leave

5.2.3 Actions



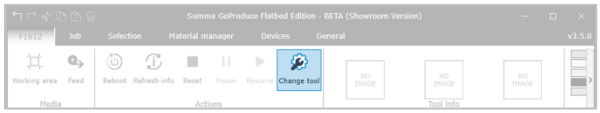
Refresh info	When no "Tool info" or Machine info is displayed, click this button	Resume	Resume after *"Pause"* or *"Change tool"*
Reset	Does the same as *"Cancel"* when possible	Change tool	Initiate Change tool
Pause	Wen the machine is cutting, pause the job		

5.2.4 Change tool

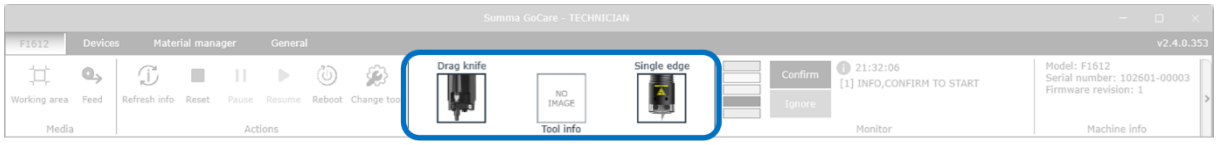
The change tool button must be used when a module or tool is changed on the flatbed. If a tool or module is changed without using the button, the machine will not detect the change. Using the machine or tool like this could damage it irreversibly.

Steps to install or remove a cutting tool or module:

- Click *"Change tool"* – Machine parks itself, LED strip turns from blue to green to yellow
- Perform the physical tool change
- Click *"Resume"* – Tool gets measured by the ADC, LED strip turns green, when finished to blue.

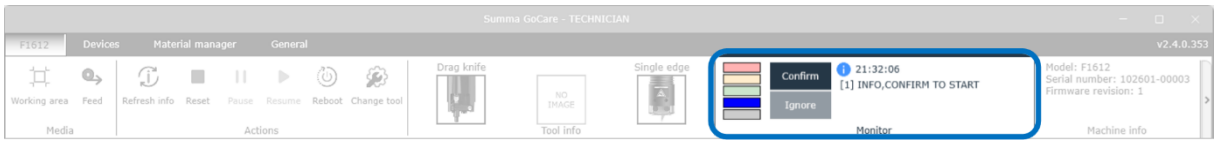


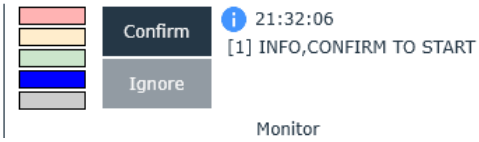
5.2.5 Tool info – Start ADC calibration



Drag knife / NO IMAGE / Tool info / Single edge	Shows the installed tool on the machine Click the tool to initiate ADC tool calibration

5.2.6 Monitor



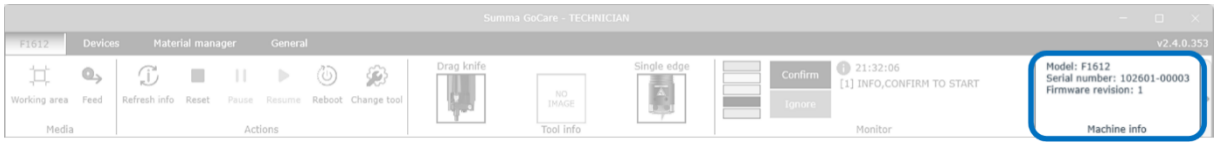


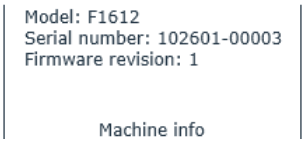
Shows the machine status colour

Gives information when action is needed to operate the machine

- Error, something unexpected happened – Safety tripped, activated, axis blocked, etc
- Machine is waiting for confirmation
- Machine is operating or moving
- Machine is idle and safe to approach
- Machine is waiting for *"Confirm to start"*

5.2.7 Machine info





Shows machine information:

Model – Serial number – Firmware revision

6 CERTIFICATES

The F-Series Vantage Flatbed Cutter fulfils all the relevant provisions of the applicable legislation:

- 2006/42/EC on machinery
- 2014/30/EU on electromagnetic compatibility
- 2011/65/EU + (EU) 2015/863

On the restriction of the use of certain hazardous substances in electrical and electronic equipmentand that the following standards have been applied:

- EN ISO 12100:2010
- EN 60204-1:2018
- EN IEC 62368-1:2020 + A11:2020,
- EN 55032:2012 + A11:2020,
- EN 55035:2017 + A11:2020,
- EN 61000-3-2:2014 / EN 61000-3-12:2011,
- EN 61000-3-3:2013 / EN 61000-3-11:2000,
- EN IEC 63000:2018.