

S Class 2 Series – High-end



S Class 2 S75

Standard cutting width 74.2 cm
Ext. Load cutting width 81.2 cm
Accepts media up to 84 cm wide
Stand, basket are included
OPOS X is included



S Class 2 S140

Standard cutting width 135 cm
Ext. Load cutting width 142 cm
Accepts media up to 145 cm wide
Stand, basket are included
OPOS X is included



S Class 2 S120

Standard cutting width 120 cm
Ext. Load cutting width 127 cm
Accepts media up to 130 cm wide
Stand & basket are included
OPOS X is included



S Class 2 S160

Standard cutting width 158 cm
Ext. Load cutting width 165 cm
Accepts media up to 168 cm wide
Stand & basket are included
OPOS X is included

Connectivity

- A 10/100 Ethernet connection is standard included.
- A USB A receptacle is available to connect USB flash drives.
 Stored cut files can be accessed without the use of a PC, provided they are stored on a flash drive and plugged into the USB A port.
- USB B 2.0 connection.



User interface

- A colourful and user friendly 3.5"
- Capacitive touchscreen provides the user quick and easy access to all the machine's internal functions and features
- The screen and interface will provide the user a more ergonomic interface
- Including informative tips or advice as screensaver
 - For example: "Lift handle to increase lifetime of pinchrollers"



Key features

Quality

Summa is renowned for its durable cutting machines. Quality is a major concern of the complete Summa team. With more than 30 years experience in building cutting plotters, Summa delivers products that are reliable and durable. But not only the product itself, also the output needs to fulfil Summa's quality levels, which are one of the highest on the market.

Design & Development / Production / Delivery / After Sales Support

Functionality

Summa developed the S Class 2 to fulfil the needs of every sign maker, with emphasis on the functions and performance needed in high volume vinyl and digital print shop environments. When tight deadlines loom and jobs require hassle-free, perfect cuts, the S2 truly shines.

Performance / Internal Intelligence / Contour Cutting / Software

Compatibility

Summa vinyl cutters enjoy worldwide popularity. Ensuring that our global customers can instantly start using Summa equipment right out of the box is of primary importance. Every Summa S Class 2 machine comes packaged with the tools necessary to connect your system quickly and easily.

Connectivity / Software / WinPlot / MacSign Cut / Drivers



Quality

For Summa, quality is NOT just a statement, it is an attitude that threads throughout every facet of the company, influencing each decision along the way. As actions speak louder than words, Summa includes a two year parts & labor warranty on S Class 2 machines.

Of course, many of Summa's competitors can deliver acceptable cutting quality on small cut jobs. But can they still deliver the same quality on jobs over 12 m long? And at full speed? And after hours of cutting at full speed? After years of intensive use? The S Class 2 does all of the above and what's more? Summa guarantees it! Every S Class 2 machine is built and tested to perform under these rigorous conditions.









Design Features

LCD Colour touch screen

The LCD colour touch screen control panel puts every advanced feature at the user's fingertips by way of a clear, crisp, high contrast back-lit display. The touchscreen is a unique interface that provides detailed cutter status information, while also allowing powerful and flexible control of the cutter configuration, making multiple menus a breeze to navigate.



S Class 2 cutters are equipped with adjustable tension pinch rollers. Selectable pinch roller pressure delivers superior tracking over a wide range of vinyl, screen-lithe, polyester and paper. Whether cutting thick or thin material, users get exceptional tracking. The number of pinch rollers on a machine is easily upgradable on the customer side.

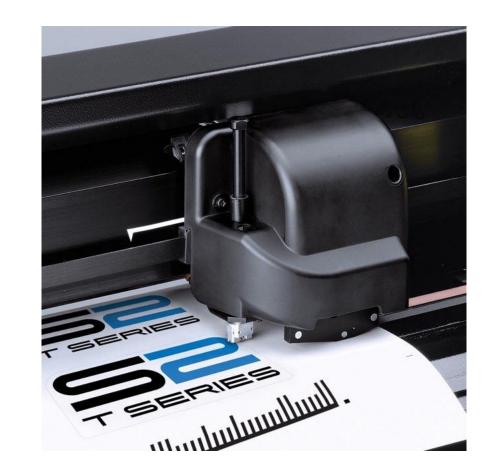




Design Features

OPOS X System

Summa's S Class 2 has been upgraded with an OPOS X sensor, which can be raised and lowered on the spot. No longer do we rely on brackets to raise or lower sensors.



Automatic Cut-off Head

Summa S Class 2 has a redesigned cutting head that incorporates an auto sheet cut-off knife, which users can optionally set to slice their media at the end of each job. The media cut-off system delivers a clean cut after the material is finished plotting, making hand cutting obsolete and keeping the machine free of accidental blade scratches.



Cutting technology



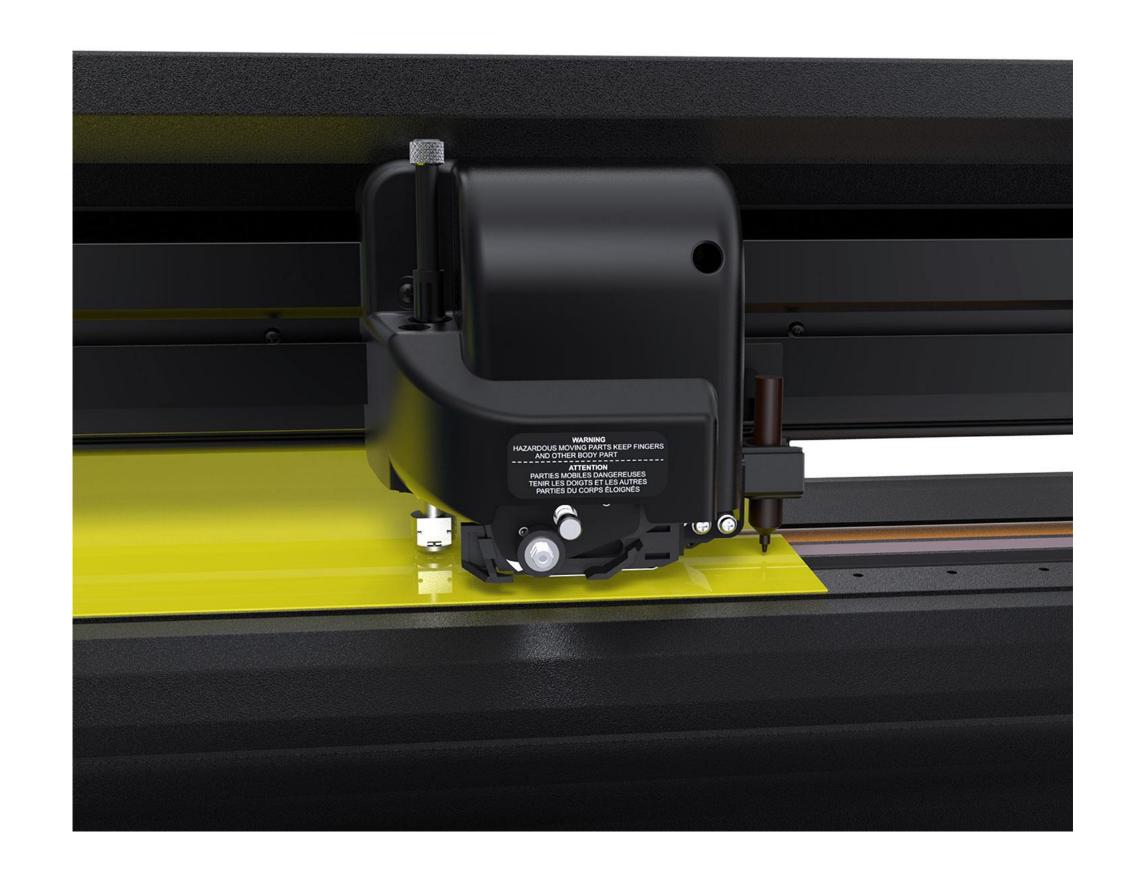


- The S Class 2 is available in drag-knife (D Series) and tangential (T Series) configuration.
- Both cutting heads are designed to facilitate changing blades quickly. In extended mode, the cutting head has the ability to move beyond the pinch rollers, allowing for a cutting area that spans the entire width of the material.
- The knife pressure is up to 400 grams of cutting force for the drag-knife and up to 600 grams for the tangential version.
- Advanced Summa internal programming delivers quality and versatility found in no other cutter, such as the exclusive OptiCut™ feature which eliminates flaws due to blade-wear.
- The FlexCut[™] feature enables precision die-cutting of labels and decals.

Cutting technology

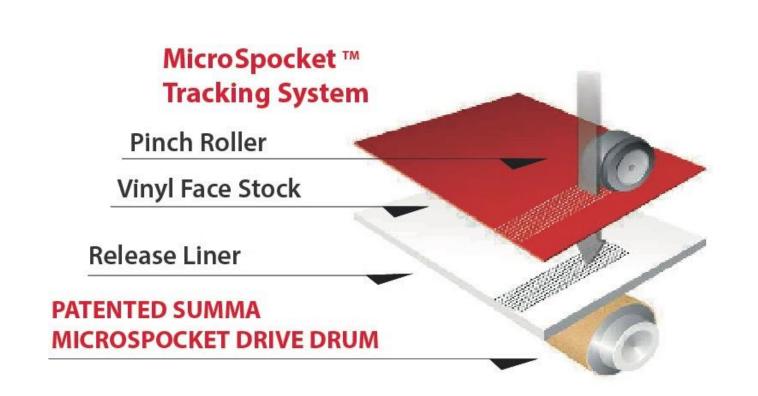
Dual Head

- Optional for S Class 2 T Series and SummaCut Series
- Dual functionality
- This head features a pen adaptor (instead of the OPOS sensor), allowing you to work alternately with the pen and knife.
- Other possibilities:
 - In the tool shaft (where the knife normally is), you can use a Roller Ball or a Fibre Pen.
 - In the pen holder/adaptor, you can use a Fibre Tip (black) or a Roller Ball (black or blue)



Precise Tracking

Summa S Class 2 guarantees the best tracking system available in the market. An integrated roll-feed system, consisting of 2 core holders that guide media straight through the machine, combined with a drive drum that features Summa's patented MicroSprocket™ technology, enable Summa S Class 2 to accurately cut long signs, up to 12 m, or several signs consecutively without reloading.







FlexCut

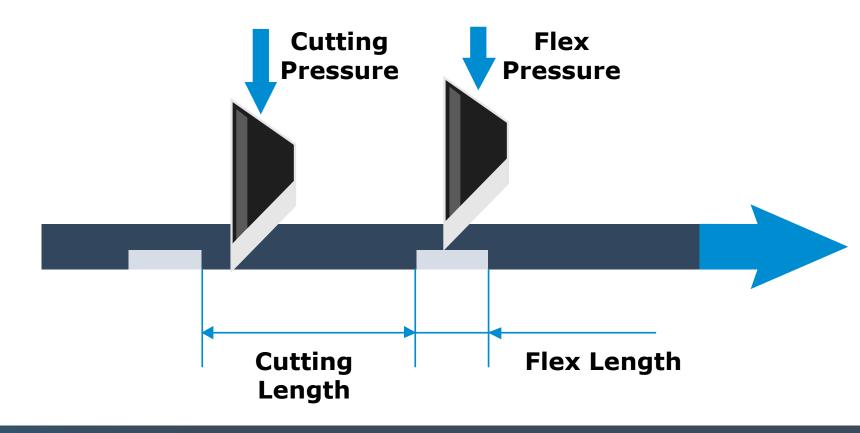
Summa's FlexCut feature makes it possible to perforate media, enabling to push out the design from its carrier. Alternating, one length is cut completely through the media, and one length is cut half through. This way a kind of tear-off line is created, which makes sure the carrier keeps a certain rigidity during transport through the cutter. At the same time, it is easy to take out the design afterwards.

Summa's FlexCut feature has optimizations, increasing reliability for the use on a wide range of materials.

 In order to use FlexCut you do not need to switch the knife position, as everything is handled by the internal programming.

Watch the tutorial: How to use FlexCut





Options

Motorized roll-up system

A motorized roll-up system can be added to the S Class 2 Machine in order to add more productivity. Roll-to-roll cutting of printed or non-printed graphics is easy with this useful productivity option.

Media Rack

The Media Rack is a wonderful addition to the S Class, giving users the ability to store a plethora of media rolls on a quick-access, multi-layered rack.





Performance

- The Summa S Class 2 cutter is one of the fastest cutters available.
- S Class 2 machines have a dual servo motor to perform at high speed for many hours without overpowering the motors.
- In sharp contrast to most of Summa's competitors, producing at high speed does not mean sacrificing quality. The Summa S Class 2 cutter can cut at full speed with higher quality than the one many competitors manage to reach whilst cutting at only half the speed.
- The S Class 2 cutter uses advanced, vector look-ahead technology that cuts complex images and small font types with improved efficiency. Plus,
 the distinctive overcut feature makes weeding easier, thus accelerating your sign-making projects at every phase of production.
- The S Class 2 cutter has one of the richest feature list of all sign-making cutting plotters.
- State-of-the-art engineering, sophisticated software programming, and versatile enhancement options combine in order to deliver unmatched performance.

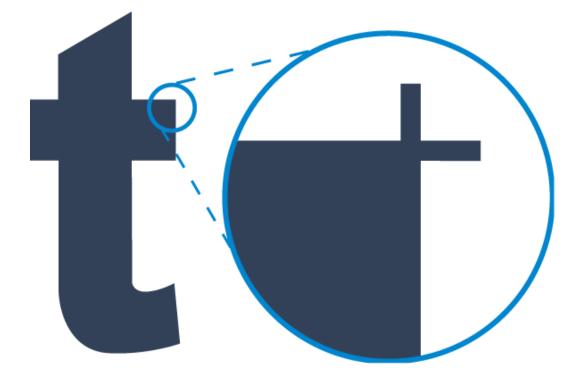
G-Performance

- Higher throughput
- This mode boosts performance up to 40%
- The advantages include:
 - Faster cutting speeds on wider substrates
 - Faster reading of the registration marks
- Especially within large industrial environments this new feature will proof its worth
- This feature will 'G-force' the performance of digital finishing operations on the S2 roll cutter!
- Youtube video: www.summa.eu/video/GP
- Note: These higher speeds are only usable if the used material can handle the higher acceleration.

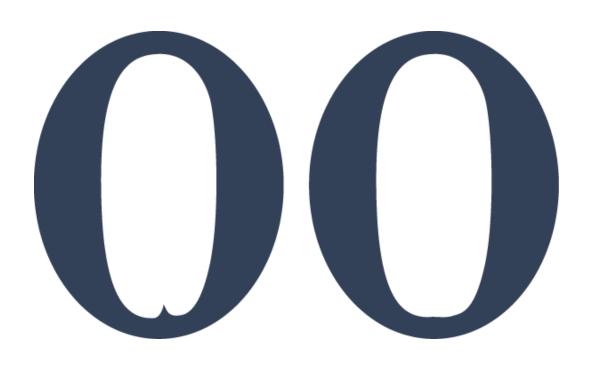


Internal Intelligence

- Summa S Class 2 machines are loaded with several intelligent routines that optimize cutting data. Based on the proven knowhow of the highly successful SummaGraphics cutters and combining cutting-edge technology with years of expertise, the S Class cutter has become an industry leader.
- Advanced vector look ahead technology offers extensive benefits. Cutting time is reduced considerably, curves are much smoother, and the motors are under less strain, all of which increase the lifespan of the plotter.
- The Overcut feature makes weeding a snap, while the OptiCut feature, by simulating tangential cutting, compensates for knife wear. Routines like 'Smoothing', 'Concatenation', and 'Bundling' are able to recalculate and improve the cutting data. These are all very important features if your software is not optimised for cutting.



OverCut



Without OptiCut

With Opticut

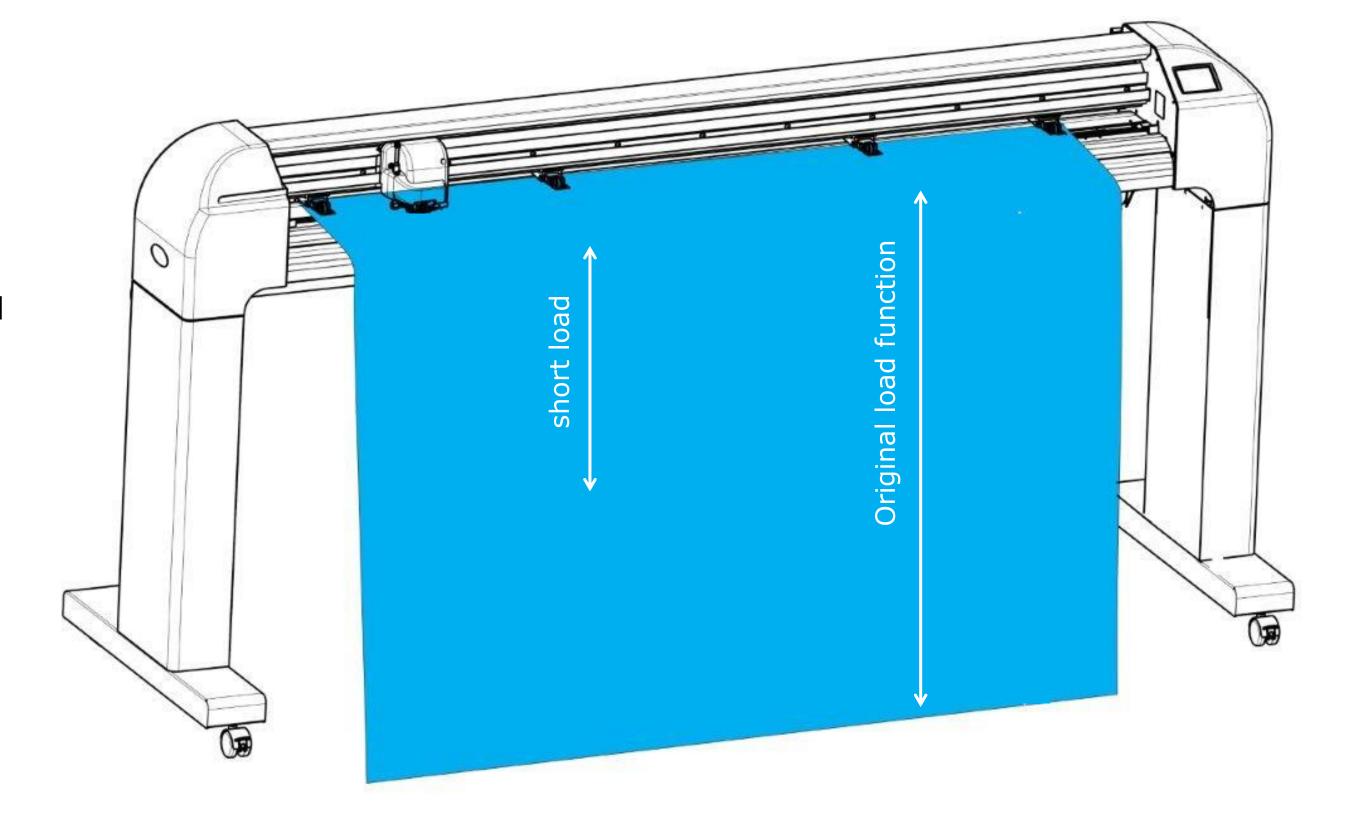
5 mm character

Short Load

A shorter media length will be autoloaded (fixed size of 80 cm)

Advantages:

- Less material is loaded and the loading time will decrease
- The material will not touch the floor and will not be hindered by obstructions



Dog Ear

- Dog ears in the substrates will be avoided during loading
- Before, the cutting head would immediately start on the right side of the media during loading
- With the dog ear function, the head positions itself on top of the media during loading and will position itself on the right side afterwards



Contour Cutting: OPOS X

- All S Class 2 cutters have accurate alignment methods to guarantee precise contour cutting. S Class 2 machines are equipped with the latest evolution of Summa's Optical Positioning System, OPOS X, which brings contour cutting to an entirely new level.
- The automated contour alignment system OPOS stands for Optical Positioning System. The OPOS X sensor technology senses marks on a wide range of materials. Some of its features include a fullyautomated workflow using OPOS barcodes, enabling you to contour cut multiple jobs without intervention.
- S Class 2 plotters also feature **manual alignment** methods. By indicating the position of the cross-marks with the tip of the blade, the S Class 2 cutter knows the position of the image and can recalculate the cutting data in order to match the printed image. The different alignment functions gives you the possibility to work faster, and more precisely with the ability to compensate for rotation, skewing and scaling variances
- One of the strengths of OPOS is the unique ability to register multiple marks: a minimum of 4 and a maximum of 128 marks along a job and an OPOS XY-line in front of the job. The OPOS XY-line makes it possible to compensate deformations along the width of the machine as well.
- This combination allows our system to contour cut large jobs more accurately.

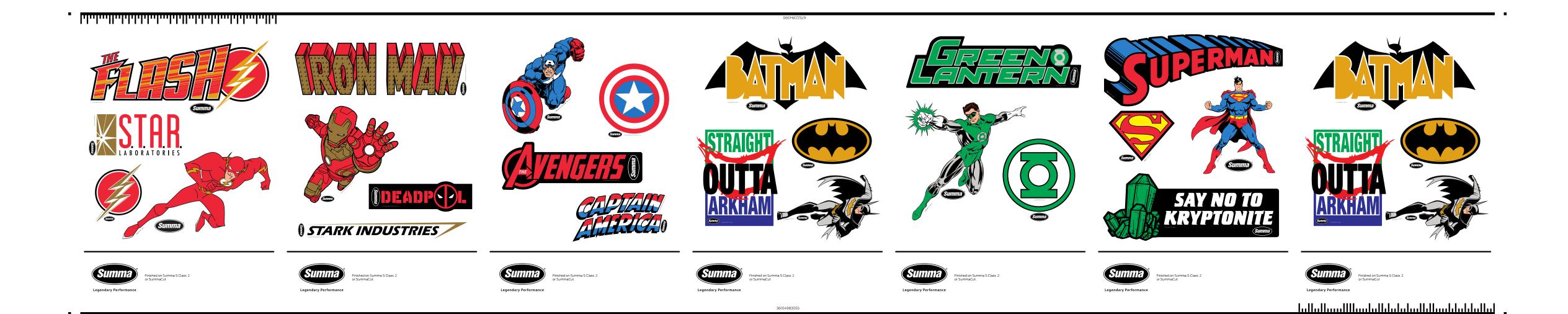


Without OPOS



With OPOS

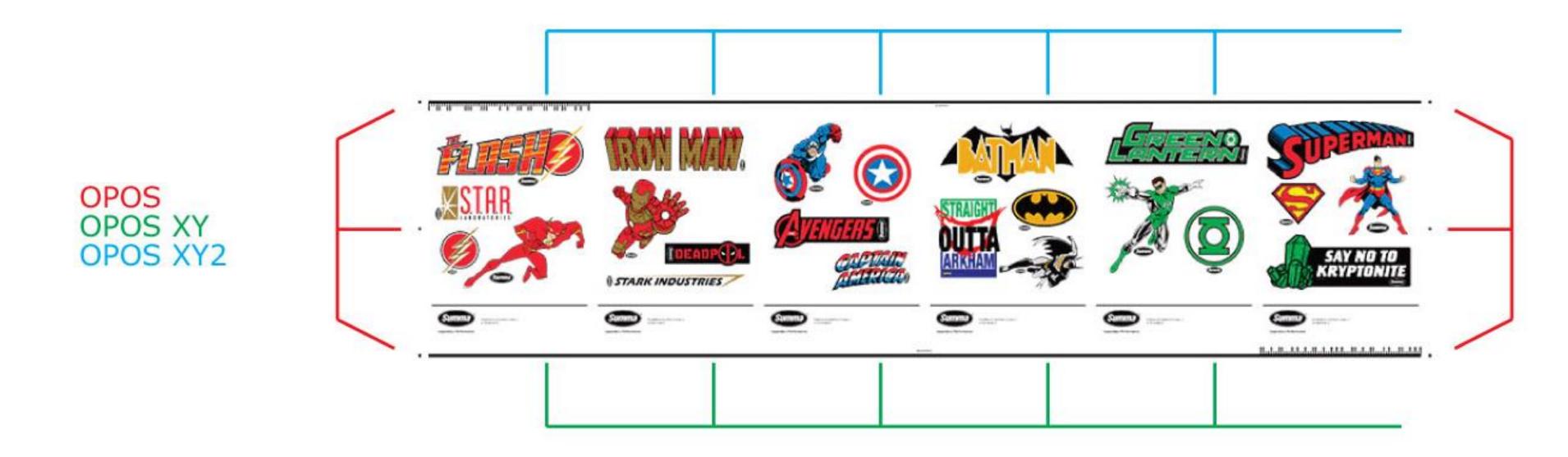
Barcode for OPOS X



- The barcode reading functionality is a productivity tool.
- It is available on all S Class 2 Cutters (also, on OPOS CAM!)
- Every job has its own unique job-number indicated by a barcode in the front of the job.

- The OPOS X sensor reads the barcode and send the job number to the computer.
- The computer returns the matching cutting information which is processed by the cutter.
- When the job is finished the cutter automatically starts looking for the next job and its barcode.
- This way multiple jobs can be processed without the operator's intervention. Also the risk of sending the wrong data to the wrong print is excluded.

OPOS XY2

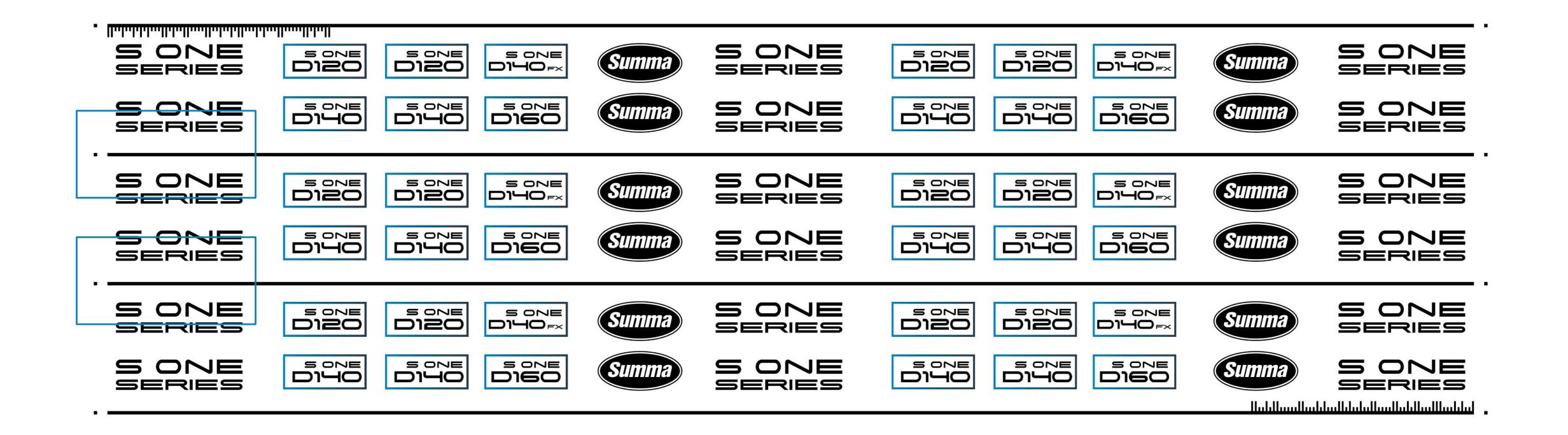


- The OPOS XY2 function also reads the additional XY line at the end of the job
- These marks, in combination with the front and back XY-line, allow our system to contour cut large jobs more accurately
- It leads to more compensation possibilities in deformation and even more contour cut accuracy than before
- *RIP support required
- *Not available on S Class 2 OPOS CAM Series



Contour Cutting – OPOS Xtra

• A next evolution in OPOS is OPOS Xtra. This alignment mode is designed to handle irregular material deformation over the length of the print by adding additional XY lines between the designs. This increases the accuracy and alignment methodology for smaller stickers.



Contour Cutting: OPOS CAM

Summa's fourth generation contour cutting device, is now greatly enhanced to increase workflow productivity when contour cutting printed graphics, signs, labels, vehicle wraps and more. OPOS CAM technology delivers lightning-fast marker recognition for complex images and over very long contour cut job runs, by combining camera quality optics with highly intelligent recognition software, called Summa Camera Control.

Customers are now able to contour cut graphics at speeds of up to 10 times faster than our competitors.

Summa Cutter Control includes marker recognition by the camera. (See slide Cutter Control)

OPOS CAM is compatible with traditional OPOS-drivers. This means that all software, that supports OPOS, will be compatible with OPOS CAM. In order to achieve this, Summa Camera Control must be used.



The OPOS CAM data can also be analysed by third party software.

It is only available with Tangential cutting and the following models S275 and S2160.

Tangential Cutting Technology

- With the drag/swivel knife technology plowing may occur. The head-lift in every corner, performed by the tangential cutting technology, will avoid this.
- The thicker the material, the more obvious the advantage will be. Traditional are the sandblast and thick flock materials.
- Also, tougher floor laminates are handled more easily.
- Although standard laminates may not always need tangential technology, the T Series will do a much better job in case more detailed jobs (small stickers) are requested.
- Watch the Youtube video: <u>True Tangential Technology</u>



True

Tangential

Technology

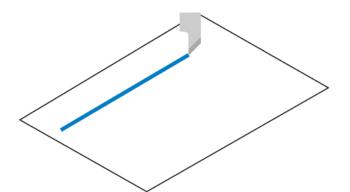
Thick Materials

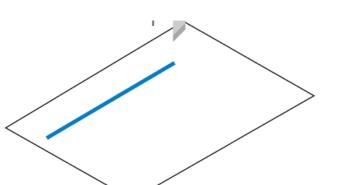
Tough Materials

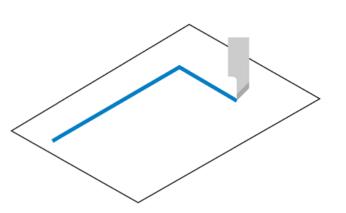
Thin Materials

Tiny Details

Through Cut







Tangential Cutting Technology

- The accurate and stable Depth Control (thanks to the nose piece) allows using slightly higher knife pressures, resulting in a constant cutting quality.
- Traditionally, screen-print masking film (Rubylith) doesn't allow scratches in the liner.
- When cutting at the highest speeds, the media may slightly lift in the cutting devices. This may cause pressure variations. In the T Series this is avoided.
- When cutting thin, soft materials (thin cast vinyl), the slightest variations in pressure results in weeding issues. In combination with the head-lift, the T Series will also produce much **sharper corners**.
- Also, FlexCut is much more stable and needs less adjustment, which
 makes it more reliable in a production environment. The tangential
 technology also allows using more solid (less sharp) knives, which wear
 out less rapidly (=less adjustment less knife changes).
 - The S Class 2 is focused on high production environments.





Close up /nose piece

Compatibility

- Nothing is more frustrating than having a fully featured plotter and not being able to use it. Summa offers a suite of tools to connect your S Class 2 cutter easily and straighforwardly.
- The S Class 2 cutter has **two communication ports** (USB, Ethernet) to ensure that setting up a reliable hardware connection is a trouble-free operation.
- Summa includes WinPlot and MacSign Cut free of charge with every S Class machine.
- Several drivers are included to support the S Class 2 cutter across different platforms.
- Summa has a collection of unique tools to control an S Class 2 cutter directly from a computer.
- The S Class 2 cutter can also be used without connecting it to a computer by means of USB Flash drives.



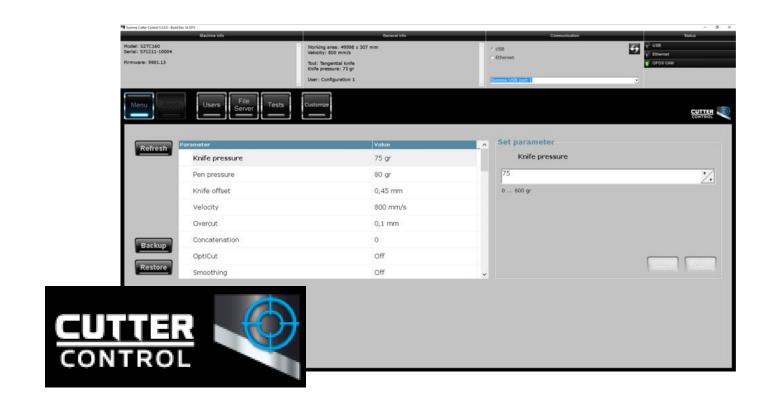








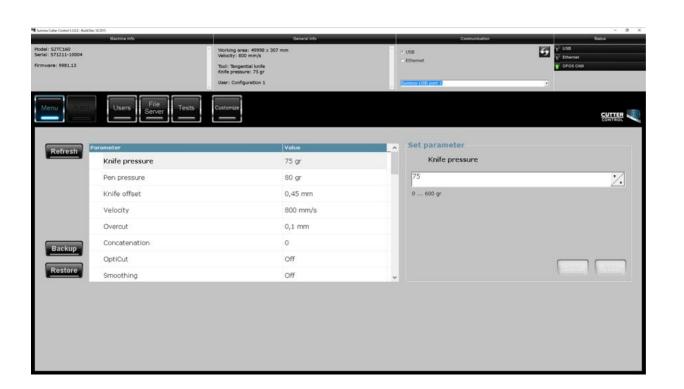
Drivers



The S Class 2 cutter accepts DMPL commands. DMPL was the first language of its kind that supported curve data and improved smoothness when cutting curves. The DMPL language is well known for driving vinyl cutters and therefore most signmaking packages support it.

- Upgrading from older Houston Imstruments, SummaGraphics, or Summa vinyl cutters is a cinch since Summa's current machines are still compatible with the older drivers.
- If a user's software does not have native support for Summa drivers, the S Class cutter also accepts an extensive subset of HPGL and HPGL\2 commands.
- Summa cutters have a native control language by which all parameters can be read and changed from the computer. This open architecture ensures sign-making programs can develop user-friendly interfaces and drivers for Summa products.
- Summa plotters are supported by most sign-making packages on both PC and Macintosh platforms. In order to receive the latest information, please contact Summa or the software manufacturer.
- Scanvec Amiable: Flexi-Family (PC & Mac) / Cadlink: Signlab (PC) / Eurosystems: CoCut, EuroCut (PC) / Converter
 Solution: EasyCut (PC) / NCD: EasyCut (PC) / Softeam: Macsign (Mac) / FreeSoft: FreeSign (Mac) / Gerber Omega,
 Advantage (PC)
- Also more and more RIP's are supporting our products for contour cutting: Onyx / Ergosoft / Caldera / Wasatch / Colorgate / GMG / Aurelon / EFI / PerfectProof /...

Control Software



Summa Cutter Control is a powerful and practical tool that provides full control over the parameters of Summa vinyl cutters. The software also has the ability to diagnose, upgrade, or calibrate a cutter. Cutter Control is like having a full screen remote control panel for your cutter.

- Summa Cutter Control can save your settings onto a hard-disk, enabling to further expand the 4
 internal configuration settings for different types of jobs.
- Cutter Control can calibrate media in both X and Y directions.
- The software has several service capabilities, making support over the phone a simple and straightforward process.
- Cutter Control facilitates upgrading cutters with the latest intelligence, all of which can be downloaded free of charge anytime from the Summa website.

Summary

Model	75(T)	120(T)	140 (T)	160 (T)
Height	1110 mm	1110 mm	1110 mm	1110 mm
Width	1400 mm	1870 mm	2020 mm	2250 mm
Depth folded basket	680 mm	680 mm	680 mm	680 mm
Depth open basket	1080 mm	1080 mm	1080 mm	1080 mm
Weight	_	_	_	_
Media Width	60-840 mm	110- 1305 mm	170 - 1400 mm	170 - 1685 mm
Max. Cutting Width	742 mm	1200 mm	1350 mm	1580 mm

Tracking Performance

+/- 0.1 mm up to 12 m (Media < 760 mm) +/- 0.1 mm up to 4 m (Media > 760 mm)

GoSign Workflow



GoSign is included free of charge with all Summa roll cutters. This software enables to import PDF, SGP, OXF and DXF files. It scales, rotates and prepares the design for cutting. GoSign can add a weeding box and it can also automate certain tasks you to make your designs ready to cut. Gosign software includes the following features.

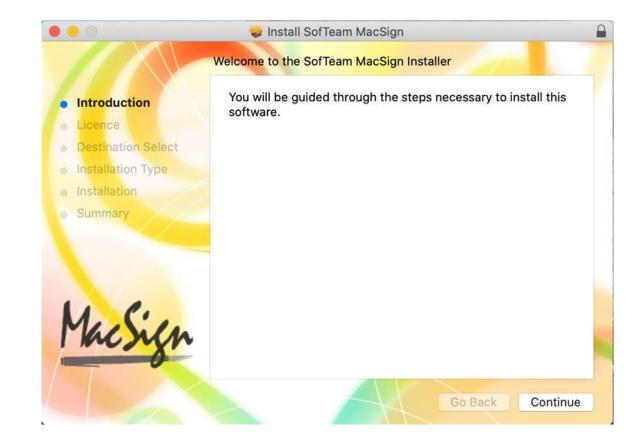
- <u>Material manager</u> to save various material settings such as speed, pressure, camera profile for OPOS CAM
- Ability to create your <u>own action sets</u> to automate workflows
- Available in several languages: English, German, French, Italian, Spanish,
 Polish and Dutch
- Available as a <u>plug-in</u> for CorelDRAW & Illustrator
- Capable of controlling multiple Summa devices simultaneously
- Network-friendly and able to function similarly to any other network printer
- Able to cut based on colours
- Includes support for Summa's dual cut feature, which combines the <u>Kiss-Cut</u> and FlexCut feature in one job
- Includes the sorting functionality to increase productivity

- The <u>extra DXF import filter</u> makes GoSign a handy software for CAD users
- GoSign recognizes OPOS marks, ensuring the required information is sent to the cutter to activate the system
- <u>PLT file reading</u>, enabling to use and adapt pre-generated plt cut files
- Pro Pack: Hot folder system, to drop cut files in a hot folder and automatically send them to the cutter. This system also allows you to add certain action to the job before output
- Pro Pack: OPOS CAM Twin workflow, combining the strengths of an OPOS X (standard) roll cutter and a Summa flatbed cutter in one single workflow (not applicable on S One)
- <u>Pro Pack: Barcode functionality</u>, enabling to modify cut files and optimise cutting requirements

MacSign

MacSign Cut is a collection of plug-ins and functions for Adobe Illustrator. The functionality added includes a direct output from Illustrator towards your roll cutter.

- The ability to add OPOS marks to your design and output this as a cut file for printed material, including OPOS marks.
- Download the software bundle on <u>www.summa.com</u> in the Support and downloads section and register on the <u>SofTeam</u> <u>Website</u>. The registration is required to make full use of the MacSign software and to receive a license key.
- For Mac OSX (10.6 10.15): included with every Summa cutting plotter.



Target Markets

The target markets can be categorised by the usage of different types of materials:

Vinyl

Vinyl cutting is, of course, the main application on the S One Series. But not only the traditional sign maker is cutting vinyl. Increasingly more industries integrate vinyl cutters into their production workflow and reap the benefits of it.

Textile

Besides vinyl, flock and flex materials are probably the secondly most used materials. Continuous improvement of durability of flock material and the growth of customisation in the textile market reflect the importance of these material types.

Sandblast

Cutting sandblast foils used to be processed exclusively by heavy-duty tangential machines. Today, the sandblast foils have been developed in such a way even the S One Series can handle a wide range of these foils.

<u>Others</u>

Customers can be quite inventive. So, on a regular basis we receive requests to cut the most diverse materials. In most cases, Summa can provide a solid cutting solution to process a multitude of innovative materials.









Vinyl

Increasingly, people start to cut vinyl. Not only the traditional sign maker but also other industries enjoy the benefits of a user-friendly vinyl cutter. Moreover, the price of the machine dropped over the last years. The ease of use, the pricing and simplicity of graphical software packages have enlarged the diversity of S One users.

- Shopping chains, local authorities or larger companies produce sign making in-house for their indoor and outdoor decorations
- Businesses that were already active in the graphical market such as copy shops, screen printers, stand constructors, and so on offering extra sign making services to their customers.
- Companies with a large fleet maintaining their fleet-marketing with in-house sign making, which makes them more flexible to react on temporary promotions
- The in-house use of a vinyl cutter to create product labels results in a more flexible production planning
- The growing contour cutting possibilities make the S One cutter an attractive investment for screen printers because it saves the mold cost for die cutting. This is especially beneficial for smaller production runs.



Textile

Textile is a growing market. Requests increase for custom labelling to promote events, brands, sponsors, etc. Flock and Flex materials are a cheap and durable solution for small batches.

- The most significant application is sportswear. In major sports competitions, T-shirts are made for one simple game only (e.g. because an extra sponsor is added)
- All kinds of promo teams are wearing clothes made for just one event. The increasing requirements for customisation or personalisation enlarges the sales of the S One in this segment significantly
- Summa's cutting plotters are popular in the apparel market to cut stencils of clothing designs in thin cardboard paper. This is a totally different application, but it indicates that the textile market is truly a market to focus on.



Sandblast foil

- A wide range of masking materials for the sandblast industry can be cut with our drag knife cutting head.
- Sandblast material varies in thickness and strength, depending whether the application is done on glass, wood, stone, etc. With the optional knife and knife holder for thick material, materials up to 0.8 mm thickness can be cut. However, not all materials of less than 0.8 mm thickness can be cut. Material types thicker than 0.8 mm will undoubtedly result in inferior quality.
- With up to 600 grams of cutting force, the affordable S One cutter outperforms many manufactures' Pro cutters. We would like to emphasize that our cutting head is built and tested to sustain this high pressure. The 600 gram is, therefore, not just a peak value.
- Especially when cutting sandblast foil, Summa's extensive drag movement, which simulates a tangential movement, proves its benefits.



What's in the box (D Series)

USB cable (#399-111)



2x Standard drag knives



Power cord (#MC1184)



2x Cut- off blade (#1NC40-67035)

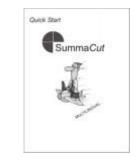




Pair of Core Holders (#1NC40-67034)



Summa Driver CD and cutting software for PC & MAC multilingual Quickstart





Standard knife holder (#9TL89-67033)



What's in the box (T Series)

USB cable (#399-111)



Power cord (# MC1184)



Pair of core holders (# 391-510)



Tangential knife holder (# 395-322)



Tangential Drag Knife holder (# 395-323)

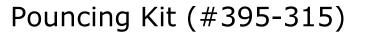


(#395-325 & #395-324)



Blade Install Tool (#390-553)

Ballpoint & Holder





2x Standard 36° tangential knives



1x 60° Tangential sandblast knife (#390-550)

Standard Nose Piece (#395-348) And Low Nose Piece

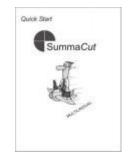




2x Cut- off blade (#1NC40-67035)



Summa Driver CD and cutting software for PC & MAC multilingual Quickstart









Consumables (D Series)

Knife Holders

Universal Pen Holders

Blades

Pens

Accessories











Standard drag knife holder Dia: 1,5 mm Universal Pen Holders D-Head Standard drag knives 36° (5X) #9TL89-67033

(2pcs - Black/Copper) #395-434

#9TL89-67041

Fiber-tip pens for D-Series # MPO6BK

Cut-off Knife # 1NC40-67035 Blades # 391-146



Drag knife holder for 55° (Copper) # 391-363



Drag knives 60° For 9TL89-67033 # 391-231



Roller Ball Black (5X)

395-430



Roller Ball Blue (5X) # 395-431

Drag knives 55° (5X) For 391-363 # 391-358

Consumables (T Series)





CONTINUOUS IMPROVEMENT

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