trotec®
laser. marking cutting engraving

Optical registration mark recognition for Trotec laser systems

→ i-cut® Vision

www.troteclaser.com

Perfect cutting results when processing printed materials such as acrylic, MDF, polyester, cardboard, paper, and many more.

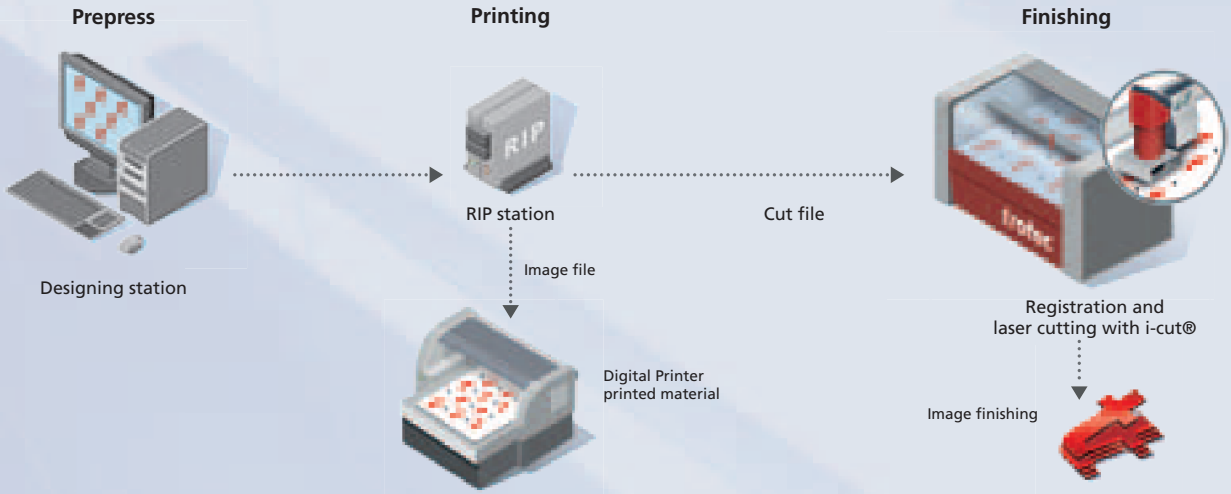
Perfect finishing of printed materials with i-cut® and Trotec laser systems

Printed signs, displays or POS materials can be cut on an individual basis using laser technology and i-cut®. The cutting line therefore follows the exact printed specification. With other methods, slight distortions of the printed design create unsatisfactory results. However, i-cut® is an intelligent, easy to use system which recognizes any distortions in the printed design. No matter whether it is a linear or non-linear distortion or a rotation, the cutting path is adjusted automatically and dynamically. The cutting lines therefore always perfectly match the printed design on both flexible and rigid materials.

How the i-cut® works

Registration marks are printed along the image. The camera is mounted on the processing head of the laser and registers the dimensions of the printed design by "reading" the registration marks prior to the cutting process. By comparing the "read" registration marks on the printed design and the target positions in the original cutting file, the i-cut® is able to recognize and compensate for any discrepancies. The software not only corrects rotations. It also adjusts the cutting path if the printed design is distorted or skewed. The i-cut® software is therefore very simple to operate. This guarantees a perfectly cut end product.

The i-cut® workflow



i-cut® compensation functions

Kind of distortion

Orginal print

i-cut® compensation

Rotation and offset

Image position and offset are compensated. Size and shape remain unaltered.

Linear distortion

Applies a linear scaling factor based on the collected information. The size, shape, offset and rotation of all objects are altered in a l inear fashion.

Non-linear distorion

Adjusts each individual point on every curve according the positions its of three closest register marks. This process offers the highest level of compensation available and provides the closest possible match of the cut path to printed graphic.

The advantages for you

i-cut® is simple to operate.
The software user interface is effortless and !intuitive. This gives you the confidence that your results will always be flawless. Simply place the material in the laser and away you go!

Intelligent adjustment of the cutting path.
i-cut® reliably corrects the cutting path. No matter whether the distortion or rotation is linear or non-linear.

Reliable registration mark recognition.
The camera reliably captures the registration marks or barcodes printed on the majority of materials.

Intelligent workflow.
Customer data, design, prepress (RIP), printing and finishing are perfectly aligned to one another and therefore guarantee perfect results. This flow is fully automated using i-script®. This prevents misprints, miscuts and missed deadlines. This saves time and money.

Luminous LED lights and high-grade optics on the camera itself.
The registration marks are therefore reliably recognised no matter how well the surrounding environment is lit.

i-cut® supports all common file formats.
Such as .PDF, .DXF, .DWG, .AI. or .EPS

i-cut® offers a wide range of intelligent functions to make your work easier:

Alignment of cutting paths and registration marks
When aligning cutting paths it is possible to invert, scale, mirror, rotate and reposition cutting paths at any time using the i-cut® software. Open paths may be closed. The productivity of your laser system can be raised by skipping small paths. It is also possible to process registration marks individually.

Cutting path preparation
For the perfect accuracy of fit of cut parts it is possible to correct the width of the laser cut. Perfect cutting edges (esp. with acrylic) are obtained using alternative start and stop strategies (no visible laser penetration).

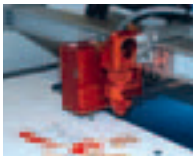
Material database
Store information such as type of material, thickness of material, laser parameters and details such as focus lens for maximum productivity.

i-script™ workflow
i-script™ is the standard workflow solution for digital Hprinting and digital finishing. RIP software packages utilise i-script, to transfer the information on the cutting path directly from the original file to i-cut®. A variety of manufacturers have integrated i-script in their RIP software.

ai-Cut™ and i-cutCDR™
This plug-in dramatically increases the speed of the design process. Registration marks are positioned automatically and intelligently directly on the material. ai-Cut™ (for Adobe® Illustrator®) and i-cutCDR™ (for CorelDRAW®) are included in every i-cut® package as standard.

... and much more.

The i-cut® product guide

	SP1500	Speedy 500	Speedy 300
			
Software	i-cut® Vision Pro	i-cut® Vision Pro	i-cut® Vision Pro
Camera, lens and video capture board	High-resolution Sony CCD compact camera with Pentax lens and Epix® PIXCI video capture board	High-resolution Sony CCD compact camera with Pentax lens and Epix® PIXCI video capture board	i-cut® Micro camera and Epix® PIXCI video capture board
i-script® workflow supported	Yes	Yes	Yes
DELL® Mini Tower PC (without keyboard and monitor)	Included	Included	Included
Working area	1500 x 1250 mm	1245 x 710 mm	702 x 411 mm

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