

Laser Systems for

→ **Signage, Display and Digital Printing**



Digital finishing of
printed materials
such as acrylic, paper,
card, MDF or Forex[®]

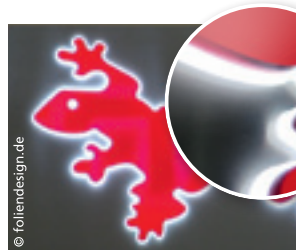
→ Perfectly shaped: creative finishing for added value

Unusual shapes for displays, signs or paper products make an end product more interesting and of higher quality. Print service providers and sign and display companies, who offer the contour cutting of printed materials as a service, are able to expand their business. The creative finishing gives a competitive advantage and leads to higher margins and additional sales.

A printed acrylic sheet or a sheet of paper only becomes a finished and therefore saleable product thanks to finishing. From simple rectangular signs to complex contours and markings, everything is possible: UV-printed, contour cut signs of high quality acrylic or intricate gift cards of paper: printed, laser cut and engraved.



Printed displays with unusual geometries



Contour cut illuminated acrylic signs



Even with small radii: flame polished cut edges without polishing



Laser cut and back-lit dimensional letters

→ The advantages of laser technology

The use of laser technology in signage, display and digital printing offers unbeatable advantages compared to other technologies:

Unbeatable on acrylic - no post-processing of the material is required

Flame polished cut edges on transparent acrylic for signs or displays make the cost- and time-intensive manual flame polishing unnecessary. Milled edges, which must be polished by machine in a second process step, may be given a crystal clear finish by a laser in half the time in only one process step.

No more cutting dies

The precise laser cutting of printed materials using an optical recognition system does away with the need for cutting dies. With short production runs of up to 1.000 units in particular, the use of a laser is the most economical option. This dispenses with the costs of production, maintenance and storage of cutting dies. It is also possible to work with great flexibility and react quickly to any design modifications.

Non-contact material processing

During laser machining, no pressure is exerted on the material (no clamping or other form of securing as with milling). Simply insert and laser. This saves time and money when preparing materials.

Unbelievable attention to detail on paper

Thanks to laser technology you can produce your own very detailed geometric shapes to a high level of precision and quality. A cutting plotter is unable to meet such standards. Delight your customers with new scopes for design and differentiate yourself from the competition. Not only can you cut the most delicate paper shapes without difficulty, it is also possible to engrave logos or pictures.

One tool for all materials

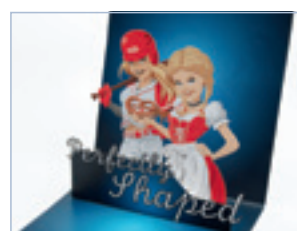
The laser beam is the universal "tool" for all geometric shapes and strengths of material. No matter whether the material is rigid or flexible, hard or soft - you need just one tool to optimally process a wide range of materials. For example textiles: The heat of the laser beam melts the synthetic material of the textile in a controlled manner giving a nice, clean edge.



Printed and cut cardboard displays



Intricate-finish book binding and cover



Pop-ups for impressive direct mails



Engraved and cut wedding invitations and greetings cards

→ Why Trotec?

Accurate contour cutting with i-cut®

The i-cut® camera system enables the precise contour cutting of printed materials. Even flexible materials such as banners and flags are cut with great precision. There is no need for elaborate positioning: distortions in the printed design are identified and the cutting path is adjusted dynamically. The combination of the optical registration mark recognition system and a Trotec laser can generate process cost savings of up to 30%.

Perfect cutting and engraving results

The precise axis drive and intelligent routing of air flow of the Trotec laser ensure consistent perfect cutting results. The system illustrates its strengths on acrylic in particular. Low reflective aluminium enamel layers always guarantee perfect workpieces.

Safe production environment

Special protection (laser safety specialist, shields, safety glasses) is required when operating open laser systems (Class 4). However, Trotec lasers are Class 2. The enclosed design of the Trotec laser systems enables the quick and efficient extraction of dust and gas.

Reliable system with maintenance-free components

Trotec lasers only contain the highest quality components of leading manufacturers. The precision guides and maintenance-free servomotors, for example, provide you with the best cutting results. Or there is our InPack Technology, which provides optimum protection for the optics, motors and electronics. Trotec lasers are therefore highly reliable and require minimum down-time. Even during peaks in production, when the deadline is tight, the machine runs reliably.

In safe hands

Trotec develops, manufactures and maintains its own systems. Members of the service team receive constant training and use the most up-to-date IT systems in order to ensure your success. The many years of experience of our employees in the applied technology laboratory guarantee you the best level of support and advice.

Flexible application

Many materials require different laser treatments in order to achieve optimum results. Trotec offers a range of useful and sophisticated accessories for its units. Vacuum table, pass-through hatch, various lenses, gas kit and much more.

Simple exchange of data

Import your data directly from your graphic or CAD software and off you go. Guaranteed to be quick and easy to operate with all file formats such as .pdf, .eps or even .ai.

More products, new services, added value:

Use the laser contour cutting of high quality printed materials to guarantee a competitive advantage.
Offer new products and services and achieve more profit!



© i-cut, Inc.

→ Rigid materials



Plastics:
acrylics, foam,
polystyrene



Wood:
MDF / MDO, plywood,
veneer



Composite panels:
Forex® (polystyrene),
polystyrene foam boards

→ Flexible materials



Paper:
cardboard,
corrugated card



Films:
polyester films,
polycarbonate films,
PET, adhesives



Textiles:
polyester, cotton,
canvas, carpet

→ Facts and Figures

Typical Trotec systems:	SP1500, Speedy 500, Speedy 300
Working areas:	Up to 1500 x 1250 mm
Laser power:	Up to 400 watts
Material thicknesses:	Up to 40 mm with 400 watts laser output
Feed:	6.000 mm/min on 3 mm acrylic and 400 watts laser output Max. 60.000 mm/min
Laser class:	Standard: Laser safety class 2 With pass-through hatch: Laser safety class 4
Software:	Controlled by TroCAM CAD/CAM (HPGL) and i-cut® or via printer driver in combination with Trotec JobControl
Camera system i-cut®:	Intelligent adjustment of the cutting path, reliable registration mark recognition, intelligent workflow, luminous LED light direct on the camera, simple to operate
File formats:	All current file formats, e.g. .AI, .EPS, .PDF, .PS, .CDR, .DXF, .DWG, .JPG, .PSD
Materials:	Acrylic, MDF / MDO, plywood, veneer, Forex®, polystyrene, foam, card, polyester, PET, cotton, canvas, carpet, corrugated card and many more

→ **Trotec Laser – developed and built in Austria.**



Printed acrylic advertising material



Displays and POP materials



Foam: cut and engraved



Printed signs: specially customised



Illuminated lettering and logos



Unusual displays: engraved and cut



Flame polished cut edges



Lasered lettering and logos