

## → Acrylic processing



Displays  
Sign industry  
POS materials  
Shop fitting  
Design

## Advantages of

# → Laser technology

The use of lasers in acrylic processing offers unbeatable advantages in comparison with other technologies:

### → No material finishing is necessary

Manual quality flame polishing of milled edges is cost and time intensive. And it conceals the risk of the work piece being damaged or even destroyed during incorrect handling. The laser cut produces glass-clear cut edges and interior contours without additional material finishing. Besides, cast PMMA cuts burr free. Costly deburring is omitted.

### → One tool for all geometries and materials

During milling, a distinct tool is needed for different materials, geometries, and material thicknesses. The laser beam is the universal "tool" for all geometries and material thicknesses. In addition, the beam is always "laser sharp". So forget about tool or grind costs.

### → Non-contact material processing.

When milling acrylic, the sheet material has to be clamped securely and often retained with vacuum. During laser processing, no pressure is exerted on the material (no clamps or other fasteners). Just insert and laser away. That saves time and money in material preparation.

### → More sales volume through new applications.

Even the finest geometries are possible with lasers. Besides, you can also use the laser for high-quality photoengravings. Combined with flame polished interior edges, doors to new applications and sales volume open for you.

### → Less waste.

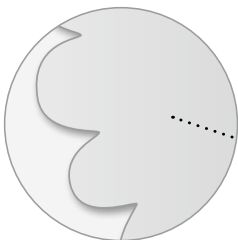
No swarf, needing expensive disposal, accumulates during laser processing. Vapors are exhausted and filtered directly in the working cabinet. In addition, you save time for system cleaning.

### → Best fitting and repeat accuracy.

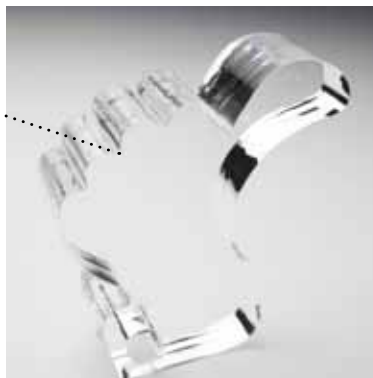
The fine laser beam allows wear-free work with the highest precision. All parts are thereby reliably precise. You avoid costs from rejects and repeated production.



Laser cut  
Inner radius  
approx. 1/10 mm



CNC routing  
approx. 1 mm



Cut edge  
Laser cut



Cut edge  
CNC routing

## → Why Trotec?

### → Perfect cutting results

The Trotec laser's precise axis drives and intelligent air guide provide constant, optimal cutting results. Reduced-reflection aluminum support lamellas always guarantee perfect work pieces.

### → Maintenance-free components

Only the highest quality components from leading manufacturers are built into Trotec lasers. You get the best cutting results using precision guides or maintenance-free servomotors, for example. Or our InPack Technology, which protects optics, motors, and electronics. These make Trotec lasers real "workhorses".

### → TroCAM CAD/CAM software

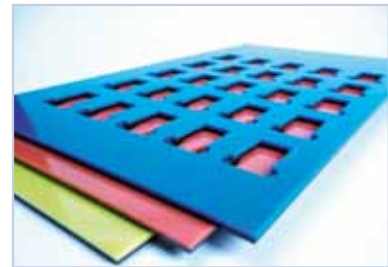
TroCAM is a fully equipped, integrated CAD/CAM software solution for controlling your Trotec laser. It is has been developed to give you perfect quality, improved productivity, the highest reliability, and additional flexibility.

### → Adherence to statutory environmental regulations

Vapors arising from open laser systems can only be inadequately aspirated. These vapors can thereby end up in the production surroundings. Trotec lasers, on the other hand, comprise a closed system. A well-engineered air circulation concept vacuums acrylic vapor off quickly and efficiently. And vapors remain in the device due to the closed system.

### → Adherence to statutory work safety regulations.

Open laser systems (safety class 4) may only be operated with special protections like a laser protection representative, shields, and protective glasses. Trotec lasers, on the other hand, conform to laser class 2. Operating personnel are thereby optimally protected.



## Laser technology in acrylic processing – always an advantage!

Our customers confirm: Acrylic processing with laser technology is up to 88% more economical than CNC routing!

(This is due to considerably lower processing costs like work time for material clamping and finishing, and tools.)

### Acrylic processing – material preparation processes by comparison



## → Facts & Figures

<b>Typical Trotec systems:</b>	SP1500, Speedy 500, Speedy 300
<b>Working areas:</b>	Up to 1500 x 1250 mm
<b>Laser power:</b>	Up to 400 watts
<b>Material thicknesses:</b>	Up to 40 mm at 400 watts laser power
<b>Feed:</b>	6000 mm/min. for 3 mm acrylic and 400 watts laser power Max. 60.000 mm/min.
<b>Laser class:</b>	standard: laser safety class 2 with pass-through: laser safety class 4
<b>Software:</b>	Control via TroCAM CAD/CAM (HPGL) or via printer driver combined with Trotec JobControl
<b>File formats:</b>	All popular file formats like .DXF, .DWG, .AI, .EPS, .CDR, .JPG, .PSD
<b>Additional materials:</b>	Textiles, wood, veneer, plastics, cardboard, paper, foams, foils and many more.



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

Send us your materials and samples: Our application technicians will support you in looking for the optimal laser system for you.



[www.troteclaser.com](http://www.troteclaser.com)

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