

Laser systems for

→ Architectural model making



© Peter McCann, Canada: Panorama

www.troteclaser.com

**setting
new
standards**



High-precision, detailed models
from wood, acrylic, cardboard,
plastic, and many other materials

The advantages of

→ laser technology

The use of laser technology in the construction of architectural models offers unbeatable advantages over other technologies:

→ **High-precision and attention to detail.**

Using laser technology you can produce your own very detailed geometric shapes to a high level of precision. This allows you absolute freedom when designing your own models. The quality of engraving of surface textures and facades also enables you to produce presentation or competition models of high quality and great detail.

→ **Unlimited choice of materials.**

A range of materials are used in the construction of architectural models: textiles, wood, veneers, MDF, cardboard, paper, foam, polystyrene, films and many more. Laser technology handles all of these materials with ease. This allows you absolute freedom when designing your own models.

→ **The finest details.**

The fine laser beam lets you work to a high level of precision. All parts are therefore reliably precise. Filigree designs and the most detailed geometric shapes can be created to the nearest tenth of a millimetre without needing to consider the type of tool used.

→ **Less waste.**

Laser processing does not produce any swarf or shavings which are expensive to dispose of.

→ **One tool for all geometries and materials.**

Milling various materials, geometric shapes and thicknesses of material requires different tool heads. The laser beam is the universal "tool" for all geometric shapes and materials. Not only that, the beam is always "laser sharp". You therefore no longer have to think about the cost of tools or sharpening.

→ **No post-processing of material required.**

PMMA is often used in architectural model making. However, the manual flame polishing of the milled edges of the acrylic parts is costly and time-intensive. There is also the risk that the work piece may become damaged or even destroyed if mishandled. Laser cutting produces crystal-clear edges and inner contours without the need for further processing.

→ **Non-contact material processing.**

During milling, the sheet material has to be clamped tightly and often fixed in place with a vacuum. During laser processing, no pressure is exerted on the material (no clamping or other form of fixing). Simply insert and laser. This saves time and money when preparing the material.



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Laser technology in architectural model making - always an advantage!

Our customers can confirm this: the considerably shorter production times achieved when cutting individual components using the Trotec laser system save 80% compared to manual production methods.

→ Why Trotec?

→ Ease of handling.

A Trotec laser system is as simple to operate as a printer. Layouts are printed directly from the construction program and the laser parameters are added. This ensures that your layout is placed on the material quickly and reliably without any need to take the type of tool into consideration.

→ Perfect cutting and engraving results.

Trotec lasers can be used for high-precision cutting as well as engraving. The high quality axis drive and intelligent routing of air flow on the Trotec laser ensure consistent optimal engraving and cutting results.

→ Flexible application.

Many materials require different laser treatments in order to achieve optimal results. Trotec offers a range of useful and ingenious accessories for its units. Vacuum table, pass-through, various lenses, gas kit and much more. You are therefore best equipped to handle all applications.

→ Safe production environment.

Special protection (screens, safety glasses) must be used when operating open laser systems (Class 4). However, Trotec lasers are Class 2. This means your staff are well protected. This closed design also means that dust and gas are extracted quickly and efficiently.

→ TroCAM CAD/CAM Software.

TroCAM is a fully-equipped, integrated CAD/CAM software solution for controlling your Trotec Laser. It has been developed to provide you with perfect quality, greater productivity, the highest level of reliability and additional flexibility. Importing data from all major CAD programs is a simple process.

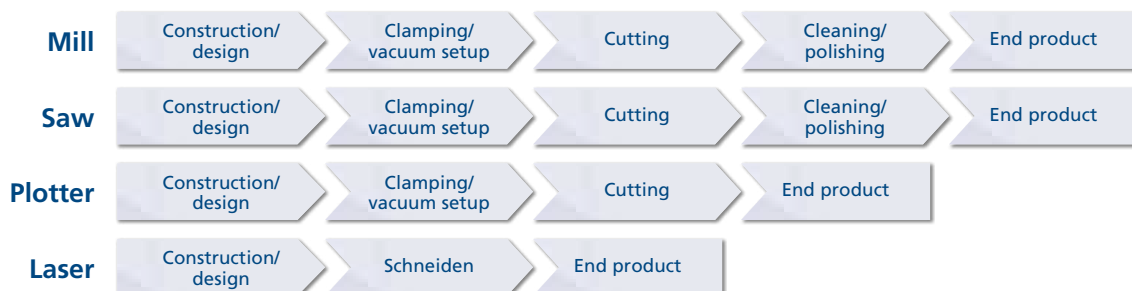
→ Maintenance-free components.

Trotec lasers only contain the highest quality components of leading manufacturers. The precision guides or maintenance-free servomotors, for example, provide you with the best cutting results. Or there is our InPack-Technology, which protects the optics, motors and electronics. Trotec lasers are therefore highly reliable and require minimum downtime. Even during production peaks such as deadlines or the end of a semester.



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Laser technology in architectural model making – material preparation by comparison



→ Important 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
Laser class:	Laser safety class 2 (with pass-through class 4)
File formats:	All popular file formats like .DXF, .DWG, .AI, .EPS, .CDR



Trotec Laser – developed and built in Austria

Selected testimonials:

- Peter McCann (Canada)
- Bauhaus University Weimar – Faculty for architecture (Germany)
- TU Vienna - Faculty for architecture and urbanism (Austria)
- ÉPFL – Faculté Environnement Naturel, Architectural et Construit (Switzerland)
- Fachhochschule Münster – Department design (Germany)
- University Innsbruck (Austria)
- TU Eindhoven (The Netherlands)
- Kohn Pedersen Fox (Canada)
- Coop Himmelb(l)au (Austria)
- Mini Europe (Belgium)
- Projektdesign Holzhammer (Austria)
- Huppertz Modellbau & Engineering (Germany)
- Regner Eisenbahnmodelle (Germany)
- University Tasmania (Australia)
- ...



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

www.troteclaser.com

Trotec Produktions u. Vertriebs GmbH
Linzer Str. 156, A-4600 Wels, trotec@troteclaser.com
Tel. +43 / 72 42 / 239-7002, Fax +43 / 72 42 / 239-7380

