

Laser systems for

# → Architectural Model Making



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

**setting  
new  
standards**



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

## The advantages of

# → Laser technology

→ **The use of laser technology in the construction of architectural models offers significant 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

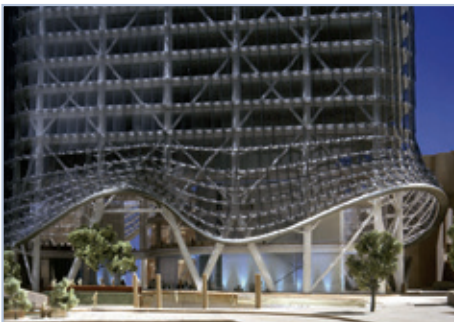
Milling various materials, geometric shapes and thicknesses of material requires different tool heads. The laser beam is the universal "tool" for all geometric shapes and materials. Not only that, the beam is always "laser sharp". You therefore no longer have to think about the cost of tools or sharpening.

### No post-processing of material required

PMMA is often used in architectural model making. Manually polishing the milled edges of the acrylic parts is costly and time-intensive, with the additional risk of damage to the work piece if mishandled. Laser cutting produces crystal-clear edges and inner contours without the need for further processing.

### Non-contact material processing

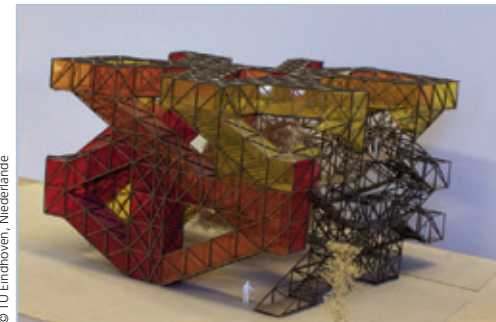
During milling, the sheet material has to be clamped tightly and often fixed in place with a vacuum. During laser processing, no pressure is exerted on the material (no clamping or other form of fixing). Simply insert and laser. This saves time and money when preparing the material.



© KPF  
High precision competition model



© Diplomarbeit an der TU Graz  
Design model



© TU Eindhoven, Niederlande  
Processing of a wide range of materials, like acrylics or wood

## Laser technology in architectural model making - Saves time and money!

Our customers confirm the considerably shorter production times achieved when cutting individual components using Trotec laser systems - saving 80% compared with 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 wide range of matched accessories for its machines. Vacuum tables, passthrough options, lenses, gas kits and others all help ensure you get the best possible results.

## 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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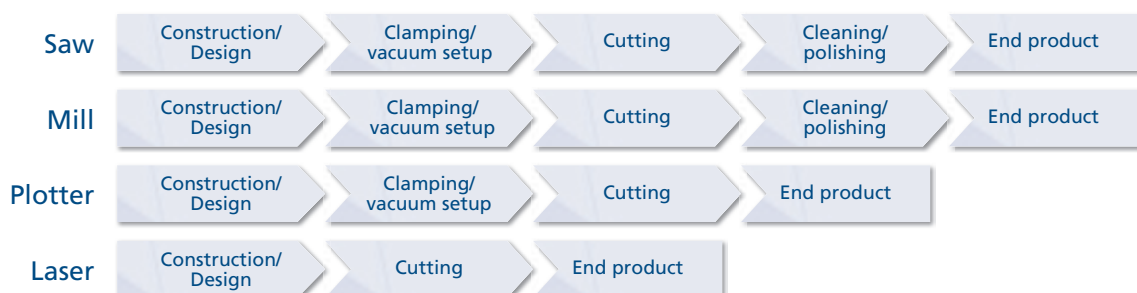


Filigree architectural models



Engraving precise surfaces & textures

## Laser technology in architectural model making – material preparation by comparison



# → Facts and figures:

<b>Typical Trotec systems:</b>	Rayjet, Speedy 100, Speedy 300, SP500, SP1500
<b>Working area:</b>	Up to 1500 x 1250 mm
<b>Laser power:</b>	Up to 400 watts
<b>Laser class:</b>	Laser safety class 2 (with pass-through class 4)
<b>File formats:</b>	All popular file formats like .DXF, .DWG, .AI, .EPS, .CDR



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

## Selected testimonials:

### Educational institutions

- Bauhaus University Weimar - Faculty for architecture (Germany)
- TU Vienna - faculty for architecture and urbanism (Austria)
- TU Dresden - Faculty for architecture (Germany)
- ÉPFL – Faculté Environnement Naturel, Architectural et Construit (Switzerland)
- Fachhochschule Münster – Department design (Germany)
- University Innsbruck (Austria)
- Fachhochschule Salzburg (Austria)
- HTL Hallein (Austria)
- TU Eindhoven (The Netherlands)
- University Tasmania (Australia)
- TU Munich (Germany)

### Architectural model makers and architects

- Peter McCann (Canada)
- Kohn Pedersen Fox (Canada)
- Coop Himmelb(l)au (Austria)
- Duggal Visual Solutions, Inc. (USA)
- Projektdesign Holzhammer (Austria)
- Newtowne (France)
- Design Seoul Model (Korea)

### Railway model makers

- Huppertz Modellbau & Engineering (Germany)
- Mini Europe (Belgium)
- Regner Eisenbahnmodelle (Germany)
- Noch GmbH & Co. KG (Germany)
- Gebr. Faller GmbH (Germany)



Send us your materials and we would be more than happy to produce some samples to help you in your decision making process.

### Showrooms and Training & Development Facilities

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