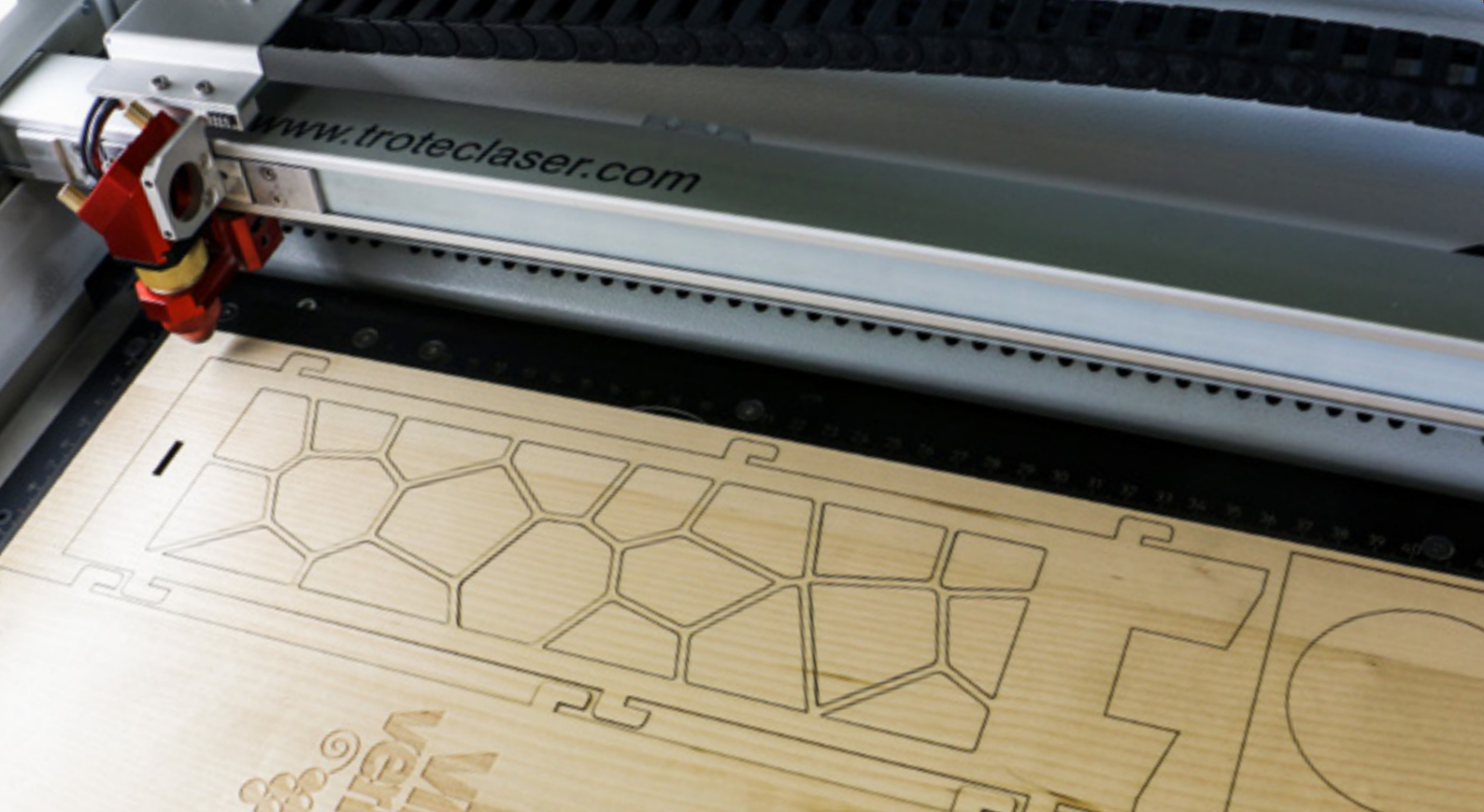




**trotec**

*laser. marking cutting engraving*

***Ideas to Reality:  
Lasers for Education***



**Trotec is a world leader in laser technology with a consistent commitment to customer support. Headquartered in Tyne and Wear, we have 6 showrooms throughout the UK and Ireland alongside a network of highly skilled technical service engineers, applications specialists and customer service advisors to ensure that your school is supported throughout your buying journey and beyond.**

<b><i>Introduction to Lasers in Education.....</i></b>	<b><i>2-4</i></b>
<b><i>A Laser Buyers' Guide for Education.....</i></b>	<b><i>5-6</i></b>
<b><i>What Our Customers Say.....</i></b>	<b><i>7-8</i></b>
<b><i>Speedy Processing with Trotec Laser Systems.....</i></b>	<b><i>9-10</i></b>
<b><i>Intuitive &amp; Time-Saving Laser Software .....</i></b>	<b><i>11</i></b>
<b><i>Lifetime Support for your Laser .....</i></b>	<b><i>12</i></b>
<b><i>Laser Materials and Supplies.....</i></b>	<b><i>13</i></b>
<b><i>The Trotec Offer for Education.....</i></b>	<b><i>15</i></b>

# ***Introduction to Lasers in Education***

In recent years, laser cutters have become commonplace within the Education sector. Originally introduced to meet the demands of CAD/CAM requirements for the curriculum, lasers are now used across a wide range of subject areas including Resistant Materials, Graphics, Electronics, Textiles, Art and many more.

Supporting the requirement for students studying Design and Technology to follow an iterative design process, working to varied contextual challenges and producing real-life product prototypes, a laser cutter is under constant demands in the classroom.

A Trotec laser is developed to meet the challenges of modern-day teaching, working at high-speed and accuracy to ensure a high volume of projects can be handled within the allotted teaching time. A Trotec laser cutting and engraving machine helps to optimise class-time and ensures that students stay engaged and receive the best possible learning experience.



**Contact us  
for a free  
online laser  
demonstration**

## ***Inspire Young Minds***

A laser cutter and engraver is a versatile tool which is useful within a multitude of disciplines, with businesses the world over choosing Trotec to achieve their manufacturing, processing and creative requirements.

Trotec is a one-stop-shop for all things laser, including a wealth of project resources and inspiration which are updated regularly on the Trotec website. The website is home to a multitude of projects, ideas and laser inspiration as well as design files which you can use as teaching resources to show how to prepare laser graphics.

## ***Design for the Real World***

Trotec is the laser system of choice for schools of Architecture, Art & Design, Fashion, Engineering and Sciences within many universities as well as schools, colleges, fab labs, makerspaces and a plethora of other industries and organisations across the UK and Ireland.

Learning with equipment that is recognised within business and industry provides students with knowledge and experience that puts them in good stead as they move through the education system and eventually into the workplace.

The ability to solve real-world problems and contextual challenges through an iterative design process is possible owing to the high-speed processing of Trotec laser systems. It is fast and easy to create product prototypes and design stages which would not be possible on a slower or less accurate machine due to throughput limitations. A Trotec laser system enables maximum productivity within the classroom without compromising a high-quality output.

# Versatility for Multiple Subjects

Since a Trotec laser cutter is so versatile and able to easily process many types of materials, it lends itself well to incorporating different subjects from the national curriculum.

For example, moving mechanical parts are easy to design and cut out thanks to the accuracy of the laser, perfect for creating toys, moving models and small-scale machine prototypes.

The production of PCBs is also possible with Trotec's dual-source Flexx upgrade option which incorporates a fibre laser source alongside the Speedy series' standard CO2 source. The addition of a fibre laser source means that blank metals can be directly marked and engraved so that electronic circuits can be incorporated into laser cut enclosures for lighting designs, motorised models and other electrical items.



# Endless Applications

Trotec laser systems are high powered tools that make processing a wide range of materials a quick and effortless process.

Material	Cutting	Engraving	Marking
Plastic	t	t	t
Acrylic (Cast and extruded)	t	t	t
Wood	t	t	
Metal (Coated and Uncoated)		t*	t*
Paper and cardboard	t	t	t
Textiles	t	t	
Rubber	t	t	

\*Please note that marking blank metal with a CO2 laser requires an additional marking solution.

Trotec lasers for education feature a CO2 laser source as standard. This can be upgraded to a Flexx model which incorporates a fiber source in addition to the CO2 source. This dual laser source enables direct engraving and marking on uncoated metals.



## Shared Benefits

Along with the obvious teaching benefits that a laser cutter brings to the school environment, it holds the key to endless other opportunities that can help the school budget go further. Trotec lasers are perfect for easily producing classroom signage, name plaques, student awards and items such as keyrings and personalised gifts for special fundraising events.



See what a laser can do at one of our 6 UK showrooms or arrange an online demo  
Call +44 (0) 191 580 1182

# A Laser Buyers' Guide for Education

When looking for a laser system for use in education, there are many options available to you. It can be a confusing task to ensure that you make the right investment but below are some key considerations that can help lead you to your decision.

## 1. Speed and Reliability

---

### How many students' workpieces would you be able to process per one hour class time?

If the laser cutter can not keep the pace, students will become disengaged, lesson time is not optimised and some projects may not be possible to create.

In addition, a machine that constantly breaks down or requires replacement consumable parts means additional cost to the establishment as well as machine downtime meaning students are unable to use the laser to complete project work. Check that the laser supplier has a robust technical support and repairs service, and check online reviews or reference customers for an idea of machine reliability.

### Why choose Trotec?

A Trotec laser provides engraving speeds up to 4.3 m/s and 5G acceleration, with the ability to process work over 10 times faster than other lasers. You can see just how fast a Trotec laser is at one of our six showrooms across the UK and Ireland.

Austrian made and built to last, Trotec Speedy lasers feature a Ceramicore® laser source which provides a long life span, maximum stability and the best cutting capability for years of trouble-free operation. We are happy to provide reference customers for you to consult with during your decision-making process.

## 2. Ease-of-Use and Maintenance

---

As with all electro-mechanical machinery, a laser cutter requires care and maintenance. It's important to consider how much cleaning the laser will require and how long this is likely to take. If moving mechanical parts are not protected these can become clogged with material residue and may be difficult to keep clean, this can be a particular problem when processing materials such as MDF and acrylic which produce a lot of residues.

In the unfortunate event that the laser cutter does break down, what level of support and service is provided by the supplier? Is the support directly from the manufacturer and do they have a trained team of engineers that can be deployed at short notice to get the laser back up and running?

### Why choose Trotec?

A Trotec laser is designed to reduce the time required for regular maintenance with fully enclosed mechanisms thanks to the patented InPack Technology™ which fully protects moving mechanical components from dirt and debris, making it easy to maintain and reducing the risk of a mechanical breakdown.

Trotec believes in providing support for the lifetime of the laser system. Our team of UK-based service technicians have been trained to the highest standards to assure machine knowledge and technical expertise. With extended warranty and care packages available as well as free email and telephone support, we pride ourselves on offering excellent customer service and technical support from day one.

## 3. Laser Operator Safety

---

All laser cutters are not created equal. Consider where the laser is manufactured and what safety features are present. In industry, lasers typically fall into three distinct safety classes: Class 2, Class 3 and Class 4. The higher the number, the more safety protocols are required, and the more specialised the machine becomes in terms of applications.

### Why choose Trotec?

Trotec's series of Speedy laser machines are laser safety Class 2, meaning that no additional safety measures are required. The interlocked safety system means that when the laser lid is opened, the machine ceases to operate, preventing students and staff from coming into contact with the laser beam or moving components. All laser light and radiation is absorbed by the acrylic laser lid, ensuring safe operation 24/7.

## 4. After-Sales Customer Support

---

Making the decision to incorporate laser cutting into your curriculum means making a significant investment for your school. Manufacturer support is a key consideration for schools due to the heavy usage of the machine. Many entry-level laser suppliers operate only as distributors for the manufacturer who has no physical presence in the UK or Ireland. This often means that little support is offered beyond online resources.

### **Why choose Trotec?**

As the UK subsidiary, Trotec guarantees manufacturer's support including software updates, spare parts and consumables as well as annual services carried out directly by our highly-trained service team. With over 50 UK-based staff plus six showrooms across the UK and Ireland, Trotec offers enhanced training and support to ensure that you are able to make the most of your new investment.

## 5. Additional Equipment Requirements

---

Most laser systems require peripherals such as a PC and extraction and many will also need additional items such as a water chiller. When you are quoted on a new laser, make sure that you consider these costs inclusively as well as any expected annual costs for related consumables and running costs. This way you can understand the true investment in the equipment solution you choose.

### **Why choose Trotec?**

Trotec's Speedy laser cutters are ordered to suit your requirements. The laser is supplied with all essential components, including power supply, lenses and cutting table, while extraction will be discussed with Trotec's area manager during your initial demonstration so that your school receives the most efficient system for your requirements. Speedy lasers can be operated using any PC or laptop which has a graphics program installed. Unlike comparable laser systems, the Speedy range does not feature a glass tube laser source and as such a water chiller is not required.

Trotec lasers are compatible with all common design programmes including 2D Design, CorelDraw and Inkscape, as well as many others.

## 6. Versatility and Options

---

Laser cutters are diverse tools capable of processing an abundance of applications. Thanks to the contactless nature of the processing, tight geometries and complex shapes can be cut in seconds while detailed graphics can be easily reproduced. Some lasers are less accurate than others owing to the mechanics and motors driving the laser head. Try to get samples from different laser suppliers, using the same artwork on a range of materials so that you can see the difference in speed quality and accuracy between each solution.

Other factors such as bed size, a moving Z-axis, power options and lenses can either limit or open processing capabilities and therefore the creativity of students when using the laser for coursework and projects.

### **Why choose Trotec?**

Trotec lasers are available with a wide range of features which can further help to enhance the laser processing experience for students. From rotary engraving attachments for processing glasses and other conical objects to Trotec's JobControl® Vision camera software for accurately cutting printed material, a Trotec laser machine is available with many options to showcase a multitude of laser techniques.

For maximum material versatility, all Speedy laser systems have the option to be upgraded to dual-source models featuring both a fiber and CO2 laser source, allowing for near unlimited material processing possibilities. In addition, all Speedy lasers are available with different laser power levels which can be increased at any time to improve processing capabilities.

# What Our Customers Say

Trotec is the laser supplier of choice around the world for organisations in business, industry and the education sector alike. From independent start-ups to global manufacturing companies, Trotec laser systems have become an industry-standard noted for their reliability and productivity.

## Secondary Schools

### Sale Grammar School

*"In our opinion, the Trotec laser is a superior machine to all others we researched. It is used in industry and the quality of the engraving is far more enhanced than other systems. The Trotec area manager sorted us out with a top specification machine and extraction system which we are confident will enrich our student's experiences."* - **Pippa Conley, Faculty Leader of Design and Technology**

### St. John Fisher's Catholic High School

"The speed of the Trotec in comparison to our old laser is incredible, we've been able to increase throughput considerably and can complete many more pieces of project work within a lesson. It definitely helps to keep the students engaged."

- **David Greenwood, Head of D&T with Engineering**

### George Abbot School

"We use our Trotec for a range of activities aside from classroom projects and the machine continues to be a workhorse for the school."

- **James Monem, Design and Technology teacher**

## Universities

### University of Sheffield - School of Architecture

"The Speedy 400 laser cutter has been a huge benefit to the students. Cutting speeds are now twice as fast, allowing students to get more work done within their allotted time and as the laser software contains all of the material settings, set up times are reduced and the students can work more independently. The quality of laser processing is also superior, making producing models cheaper and quicker for our students, a huge advantage over our previous machines."

- **Laura Mason, Workshop Manager**

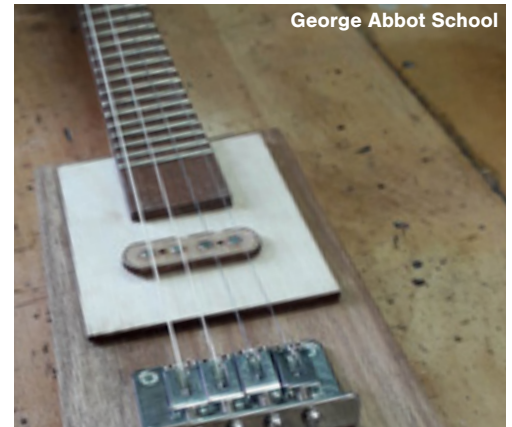
### University College Dublin - School of Architecture

"At our busy periods the machine is in constant use morning to evening. The speed of processing has meant we can get a lot more jobs through in that time and the ease of use along with accuracy enables faster operation and less wastage, especially important for us given the number of machine users and different projects going on at any one time." - **John O'Shea, Technical Officer**

### University of Manchester - Laser Processing and Research Centre

"The service we received from Trotec has been excellent. From installation to aftersales we can rely on Trotec as our supplier of choice. We have used a number of different Trotec materials, however we mainly use the range of metals to create signage and other applications. These materials are ideal for our specialised applications and the variety offered is also a benefit, allowing us to source all materials from a single supplier."

- **Dr. David Whitehead, Senior Experimental Officer**



George Abbot School



University of Sheffield  
School of Architecture



George Abbot School



Sale Grammar School





## Makerspaces

### **South London Makerspace**

"We can confidently say that SLMS has the best laser cutter of any non-profit makerspace in the country. The Speedy 300 cuts faster, lasts longer and stands up better to constant use by a large group of people of varying skill levels."

- **Dermot Jones, Director**

### **AALFY - Learn Create Sell**

"We were most impressed by Trotec's JobControl application with its simple and easy interface. A tool which is easy to understand, with a vast array of unique settings and a pre-set database list of materials settings. This enables us as training facilitators to teach elements of laser cutting to complete novices in a very short space of time." - **Zak Ahmed, Learn Create Sell**

## Business & Industry

### **Raspberry Pi Foundation**

"We purchased our Trotec laser because of the strong reputation that they have as being the most reliable and best laser systems on the market. The laser does not disappoint, with the robust build and processing capabilities meaning that the laser continues to produce excellent quality results even after heavy use."

- **Mark Calleja, Youth Partnership Manager**

### **Laser Cut London**

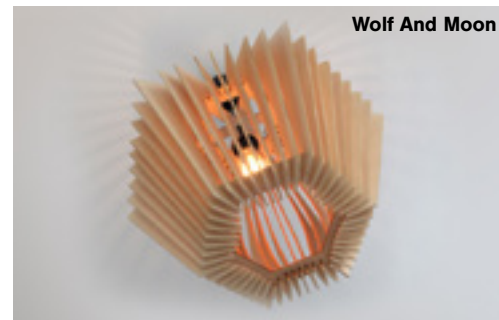
"Since being installed, my Speedy 400 has seen over 600 hours of processing time over a range of applications. The Speedy laser is 2.5 times faster than my previous laser, and as such has further helped me to develop my initial vision for the company, processing more projects than previously possible"

- **Chris McGee, Managing Director/Founder**

### **Betsy Benn**

"The ability to go into Trotec's laser showroom to test the machines and find out what was possible on our own products, coupled with Trotec's experts being on hand to advise us, made us feel confident in our purchase. More so, Trotec's after-sales support is excellent. Whether a technical support issue or simply needing some advice, Trotec are always happy to help me."

- **Betsy Benn, Company Director**



See more Trotec customer case studies at:  
[www.troteclaser.co.uk](http://www.troteclaser.co.uk)

# Speedy Processing with Trotec Laser Systems

The Speedy series of laser cutters and engravers from Trotec provides the fastest, most precise processing results available in their class with up to 4.3m/s speed and 3G or 5G acceleration. A patented low-maintenance, high-efficiency design will empower students and staff alike and stand up to rigorous challenges within the classroom while offering an enriching experience and interactive design process.

## Features to Make Your Teaching Life Easier:

### **InPack Technology™**

Patented InPack Technology™ is standard on the Speedy series, providing the utmost protection for moving mechanical components from dust and debris generated during processing. This feature is particularly useful when processing woods and rubber which produce a lot of residue. This combined with Trotec's patented Ceramicore® laser source technology, ensures a long and trouble-free life span for your equipment with minimal maintenance required.

### **Ceramicore® Technology**

One of the most important aspects when choosing your laser system is the laser source itself. Laser power is measured in Watts but not all sources are equal. Most Trotec Speedy systems are equipped with Ceramicore® laser sources, offering the longest life span, most stability and best cutting capability per Watt, as well as years of trouble-free operation.

### **Air Assist**

Air Assist is a built-in feature which supplies compressed air to the Speedy laser head during processing. This significantly improves the quality of processing results and protects the lens from dust and debris, greatly reducing the risk of damage to the machine.

### **Multifunctional Table Concept**

All Speedy laser systems feature a multifunctional table concept, allowing the working table to be easily exchanged depending on what material is being processed, so that the optimum results can be achieved.

### **Class 2 Laser Safety**

Trotec laser systems are built to the highest standards and are certified Class 2 laser safe. The fully enclosed system ensures that all staff and students are protected from the laser source and moving components.

### **Extraction**

Trotec's range of Atmos extraction units ensure 100% clean working environments, efficiently filtering out dust, gases and odours. This ensures a clean learning environment and also extends the service life of the laser machine.

### **Intuitive Laser Software**

JobControl® laser software offers intuitive workflows for staff and students alike. JobControl® works just like a printer driver and is compatible with many common design programs such as 2D Design. All laser settings are easily stored within the software to allow easy set up for repeat lessons.





## ***Laser Options to Meet Your Needs***

**Each Speedy laser system can be enhanced to include a wide range of optional features to enable additional processing capabilities and improved efficiency.**

**Choose from the following and many more:**

### **Laser power upgrade**

More power makes processing thicker materials easy and fast

### **Flexx upgrade**

Incorporates both a CO2 and fiber laser source for processing a wider range of materials

### **JobControl® Vision software**

Accurately and automatically aligns the cutting path on pre-printed materials

### **JobControl® Cut software**

Optimises laser cutting time

### **Spare and additional lenses**

Choose the best lens for optimal results on different materials

### **Interchangeable tables**

Different work tables ensure the best results for different applications.

### **Rotary attachment**

Enables engraving on cylindrical or conical objects



**Book an online demo or arrange to visit a showroom.**

**Call +44 (0) 191 580 1182  
or email [sales@troteclaser.co.uk](mailto:sales@troteclaser.co.uk)**



## ***Laser Warranty & Extended Care Packages***

All new Trotec laser systems come with a two year warranty\*. For maximum peace of mind, Trotec offers the TroCare extended warranty package, providing laser machine cover and peace of mind for up to 10 years.

\*Terms and conditions apply

# Intuitive & Time-Saving Laser Software

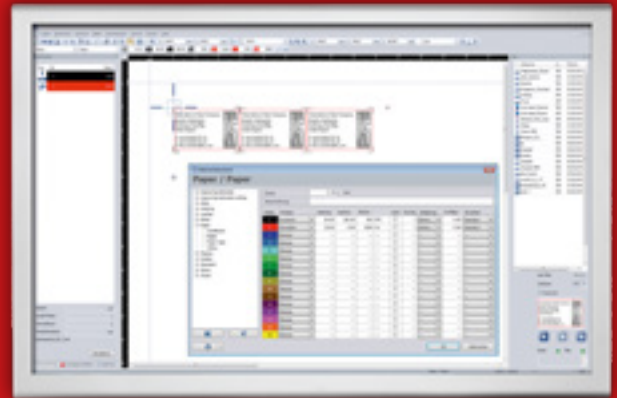


JobControl® is Trotec's proprietary software, designed to keep laser processing a fast and efficient option for workshops and the teaching environment. From an intuitive interface which is compatible with a vast range of popular graphics programmes to pre-set laser settings for a whole catalogue of common materials, JobControl® provides a seamless solution to turning artworks into a laser-finished product in as little time as possible.

## Work directly from your chosen graphics package just like a printer

Trotec's JobControl® laser software acts just like a printer driver, allowing students to work directly from the school's preferred graphics program, meaning no additional learning curve or cost is incurred.

Among the compatible software packages are 2D Design, Adobe Illustrator and Corel Draw. This makes turning ideas into reality as simple as creating the graphic and clicking print!



## Other great software features include:

**Materials Database:** A built-in materials database means no guesswork for settings. Students can simply select the material from JobControl's database of pre-loaded laser parameters to quickly ensure the correct laser settings are used. Staff can add additional parameters for non-Trotec materials to the database, making the workflow intuitive and easy so students spend as much time laser processing and less (or no) time tweaking settings.

**Laser head positioning feedback:** Trotec's laser head positioning feedback allows laser job positioning on an area of the material that has not been processed yet to make sure it will fit within the space, this maximises the use of each sheet of material and avoids miscuts.

**Direct Image Engraving:** JobControl® software is compatible with colour images, so graphics from drawing packages and scanned or imported hand-drawn images can be transferred to an array of media.

**3D Relief Mode:** Create 3D contoured results on wood and acrylic using JobControl®'s relief mode feature. Whether students are detailing on a resistant materials project or creating a standalone art project, this brings new possibilities to the classroom.

**Photo Engraving:** JobControl's® built-in photo mode is perfect for graphics classes. Photos and detailed images are sent to the laser in an optimised manner, allowing an image to be effortlessly recreated with no previous photo processing experience.

**Preset Templates:** Project templates including graphics and settings can be stored in JobControl® for quick processing of repeat work such as lesson plans for different class groups.

**Job Time Calculation:** JobControl®'s job time calculator displays how long the laser job will take to complete before the job starts, ensuring that lesson plans can be kept within the allocated teaching time.





## Lifetime Support for your Laser

### Full UK support directly from the manufacturer

We believe that the purchase of your Trotec Laser is just the start of our journey together and have built a class-leading support structure to make sure that your school can get the best from the machine. With the largest team of engineers covering all of the UK and Ireland we boast a 98% first visit close-out rate\* for technical support queries and pride ourselves on providing unrivalled service levels to our customers.

To ensure that your school is able to use the laser to its full potential, full training is provided during the installation of the laser. This enables your school to hit the ground running and integrate laser cutting into the curriculum without delay.

Trotec also offers full onsite training days as well as training appointments at six regional showrooms for laser users to refresh their knowledge and learn new skills.

In addition to onsite support, Trotec offers remote maintenance to reduce laser downtime. Trotec's technical service hotline and remote screen-sharing support mean that minor faults can be identified and fixed without the need for an engineer to visit onsite.

\*Accurate at time of going to print.

## Why choose Trotec?

- Free UK-based email and telephone support
- National coverage from Trotec's official team of qualified service technicians and fully stocked van fleet
- Remote support using TeamViewer screen-sharing software
- Response to support requests within 4 business hours
- ★★★★★ Google Reviews from our customers
- Comprehensive Trocare packages available
- Huge UK warehouse for fast turnaround on parts and consumable items

**Call us today for advice and information**  
**+44 (0) 191 580 1182**

# A One-Stop Shop for Laser Materials and Supplies



## The Ideal Material for Each Application

Trotec's extensive line of laser and engraving supplies includes many common materials used within schools including acrylics, wood sheets, metals and even laserable paper, alongside other useful supplies such as metal marking sprays and acrylic paints.

By choosing Trotec as your supplier of choice you will have a dedicated account manager with a vast knowledge of Trotec materials to help you get the best materials for your school. Other benefits of choosing Trotec include:

- Value for money on premium products
- Next day delivery
- Materials ordered to your specifications with in-house services - Cut to size, bevelled edges and more

### Register for a webshop account to receive:

- Easy online ordering 24/7
- A complete overview of your orders
- Earn reward points and receive discounts on future orders

All Trotec materials are tested by our expert staff, with laser parameters provided within the Trotec JobControl® software, meaning that students can easily get started processing new materials with a few button clicks.

Acrylic, plywood, plastic laminates, metals, paper and more at [www.engraving-supplies.co.uk](http://www.engraving-supplies.co.uk)



### Earn reward points with every order

Get yourself a little extra when ordering consumables! Every £1 spent on our webshop earns you TroPoints, which you can redeem against future orders.

[www.engraving-supplies.co.uk](http://www.engraving-supplies.co.uk)



# ***The Trotec Offer for Education***

## ***Educational Packages***

In support of making industry-specified laser technology affordable for schools, Trotec provides specialist education pricing and packages.

Request package information:

For pricing packages contact [sales@troteclaser.co.uk](mailto:sales@troteclaser.co.uk)

## ***A Visit to Our Showroom***

Seeing is believing, which is why Trotec has six showrooms across the UK and Ireland. Each showroom features a range of Trotec laser systems, including the flagship Speedy series. Contact us today to book an appointment at your local showroom and see first hand the benefits an industry-standard laser brings to the classroom.

To find your nearest showroom and book an appointment contact us on **+44 (0) 191 580 1182** or email [sales@troteclaser.co.uk](mailto:sales@troteclaser.co.uk)

## ***Online demonstrations***

Although we recommend a visit to one of our showrooms, we understand that it's not always easy to get out of the classroom and as such can offer online demonstrations of our equipment. You can talk directly with one of our representatives to be shown around the equipment and see the machine in action.

Contact **+44 (0) 191 580 1182** now to arrange your demonstration.

**[www.troteclaser.co.uk](http://www.troteclaser.co.uk)**

Tel. +44 (0) 191 580 1182

Email. [sales@troteclaser.co.uk](mailto:sales@troteclaser.co.uk)



9 Didcot Way, Boldon Colliery, NE35 9PD