

## 3D & 2D SUB SURFACE LASER ENGRAVING INFORMATION SHEET

This information is a guide for all customers interested in using our sub surface laser engraving service.

Sub Surface engraving is a unique and fascinating way promote a business, a product or to create a very personal gift that will amaze and impress the recipient.

We now operate a 16 head sub surface laser engraving machine, that is capable of engraving photographs, text, logo's and 3 dimensional models *inside* blocks of crystal. '16 Head' means that we can engrave up to 16 pieces with the same design at the same time. The laser is computer controlled – the computer sends the design information as a series of co-ordinates set on a 'x' 'y' 'z' axis, the laser heads move according to this information, and fire a measured laser beam into the crystal. Where the beam 'stops' a tiny fissure or bubble is created, called a 'point'. The machine runs at an average speed of 45 points per second – 2700 points per minute! The Stag design shown below contains 61808 points.



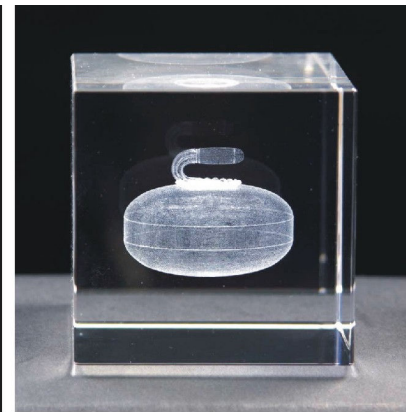
2D Photo - standard style cropping with background.



2D Photo - Images have been 'cut' from their original background.



3D Stag - 3 Dimensional 'model' of a Stag inside the block.



3D Curling stone - 3 Dimensional 'model' of a stone inside the block. Bespoke models can be made to your specification.

### 3D Engraving.

3D Engraving is the term for an engraving inside a block of crystal that represents an image/article 3 dimensionally. You will be able to view the engraving as an object from whichever angle you look at it. We have a range of standard designs available, but can also make unique, bespoke models to order. 3D engraving is ideal for corporate and personal gifts alike, and our sporting designs make supreme trophies and awards.

### 2D Engraving.

2D Engraving is used to represent 'flat' photographs and logos inside the crystal. Although the 3<sup>rd</sup> dimension (depth) is 'missing', having a photograph or corporate identity engraved inside the crystal is still a unique and fascinating concept. 'How did you get that picture inside the glass?' is the modern day ship in a bottle...



**General.**

For all 2D work, only a copy of the photograph or logo required is necessary, we will be able to create the laser file in-house. For photographic work, our standard costs are for producing an image similar to that shown in the picture above left, (dogs). The photo will be cropped and will be engraved with a soft, fading edge. The picture next to this (children) has been made from 3 separate photos that have been 'cut' from the photograph's original background. This type of image would incur a small artwork charge, which can be quoted for once we have sight of the work to be undertaken. Logos and other 2D designs will be quoted for on a job-by-job basis.

Bespoke 3D Engraving is created from a model. We would need details/pictures of the item that is to be engraved, so that our designers can create the appropriate model. We can accept commissions for just one piece, and can also produce production runs of thousands of pieces. Our laser engraving machine works from **.lss** files, which have normally been converted from **.dxf** files. As for 2D graphics, we will quote for the modelling costs from the information/requirements provided, and although our 3D model makers have years of training and experience, you will find the costs very reasonable.

All laser files that have been converted to **.lss** files can only be used at the size made. The points that make up the image are 'fixed' and cannot be increased or decreased if the engraving is made larger or smaller. If a model needs to be used at a different size, there will be a small 'regeneration' fee.

We do reserve the right to refuse any artwork that may cause offence, or that we consider to be of an unsuitable quality.

Copyright for any artwork and models generated by The Glass Scribe International Limited will remain the property of The Glass Scribe International Limited whether or not a charge is made in respect thereof, and the artwork will *not* be released for any purpose.

If you have any queries regarding 3D or 2D engraving or photographic/artwork provision & requirements, please contact our offices; we will offer the best advice that we can to help give you the best result possible.

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