

Laser Marking System

Fixed/Mobile Laser Units

May 2014 Laser Marking System

Glass Machinery and Equipment

System Description

Our innovative range of three laser units, one mobile and two fixed, has been developed to provide the glass industry with a quick and simple method of marking glass to meet the various standards to which companies must comply.

The patented laser is 10 times smaller and lighter than other systems. The extraordinary beam parameter and short pulse rising times, make the technology absolutely unique - worldwide.

All types of glass can be marked using our system. Even solar glass which contains elements of metal does not pose a problem; the mark can have the characters reversed to produce a mirror image and be applied to the uncoated side, where it will be readable through the solar coating. We are not aware of any other method of marking solar glass "on its surface".

The system is also well suited to marking many different substrates, in addition to glass.

All three units are compact as well as fully functional with an easy to view and use touch screen embedded PC unit running Windows XP pro. An external mouse or keyboard can be included to assist customers should they wish to design their own marks.

Wi-Fi networking is included as standard with the mobile unit and the two fixed units are supplied with standard wired 10/100 Ethernet cabling.



System Options Currently Available

FU020

Mains powered floor mounted laser control cabinet, hand held laser system with 4 metre umbilical cord. The user is able to mark any size of glass in any position. Adaptors are also available allowing the customer to mark along the edge of glass with thicknesses ranging from 3mm to 30mm in any denominations and can be quickly changed for marking the face of glass.

Note: Although the laser head weighs only 3.5kgs, continuous use throughout the day can cause operator stress. This means the unit is most suitable for lower volume glass processors or where it is possible to use more than one operator.

MU020

Dual powered mobile laser control cabinet on wheels, operated either from the mains supply or from integral 12V batteries. The laser head is hand held and is supplied as Standard with 3 metres of umbilical cord. This is similar to the FU020 system with the advantage that the unit is primarily battery powered and can therefore be wheeled to anywhere within a processing plant. The unit can be used whilst on charge but for obvious reasons must remain static; it carries an on-board charging unit so simply plugs into a 230v AC wall socket. On a fully charged battery pack the unit will operate for between 14-16 hours. It also has a very sophisticated monitor that continually monitors the battery, enabling it to be put on charge before it runs flat. The estimated life of each battery is estimated to be around 2 years.

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System Advantages

- Class 1 laser system which conforms to health and safety requirements for laser based equipment as specified in BSEN / IEC 60825-1: 1994
- Conforms to BGV B2 Protective housing with 2 channel interlock circuits
- Laser template files can be designed on a dedicated CAD machine, imported and preloaded for the quick and easy selection of the required mark
- Customer logo, BSEN data, CE certification logo, serial number, tempering oven ID, date (in any format), time (to the second HH:MM:SS) and user ID can easily be incorporated via the user friendly CAD based software interface, providing the customer with lifetime traceability for all their glass products.
- The size and depth of etch can be varied to meet specific requirements
- Produces a clear mark 100% of the time
- Capable of marking glass at any stage of production - i.e. before or after toughening, or at the despatch stage.
- Very little maintenance is required - a simple cleaning routine being all that is necessary.
- Air cooled thus no requirement for water or chillers.



FU020R

As above, with the laser head mounted on a self-guided rail system, built to a customer's height and width specifications, normally to suit the dimensions and position of a tempering oven. The rail can be configured entirely to a customer's needs. The main advantage is that there is no requirement to lift/carry the laser head, therefore making it suitable for high volume processors. The laser head can be effortlessly slid in both X&Y axis, X – determinable by the length of the rail and Y – by +/- 150mm. This provides accurate placement of the mark without the need to move the glass. Both X&Y axis are also lockable.

If required, a remote firing/trigger box can be supplied so that the operator does not need to be near the glass when the marking takes place. This method is ideal for marking large pieces of glass where the mark needs to be applied further in from the edge when it would obstruct the standard rail mounted fire/trigger buttons. It is also particularly useful for production runs of the same size pieces of glass when the laser head can be locked in place on the rail and fired in the same spot without the need for adjustments.

This unit is not suitable for marking the edge of glass.

System Technical Data

Max. size of mark for flat surfaces	40mm x 40mm
Edge marking of glass	3mm - 30mm
Tolerance	+/- 0.5mm
Ave. time to complete single etch	0.5 of a second

If a customer's requirements are not met by one of the three current options, we will be happy to discuss the designing of a bespoke unit. The price of the unit includes a one year warranty. For pricing and further information please contact:

Fraser Global Trading Pty Ltd

Website: www.fgtrading.co.za

Information: info@fgtrading.co.za

Orders: sales@fgtrading.co.za

JHB Tel: 011 450 0263

Fax: 011 450 0306

DBN Tel: 031 564 8692

Fax: 031 564 8691