

## **HIGH PRODUCTIVITY DIAMOND LASER MARKER**

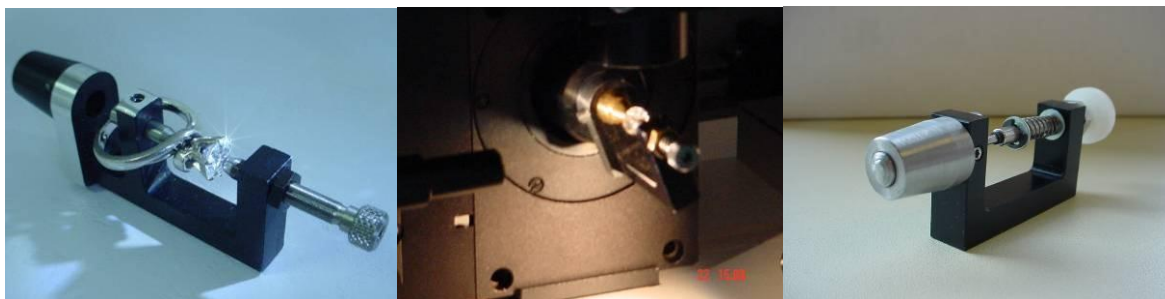


## ***GEMSCRIPTOR DT-150-R***

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**Versatile: Inscription of Logos, drawings and True Type Font text**



**Quick release spring holders for Diamonds and special cuts,**

**Holders for mounted stones on rings and earrings**



# ***GEMSCRIPTOR DT-150-R***

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# **GEMSCRIPTOR DT-150-R**

## **Desk Top *GEMSCRIPTOR-DT-150-R* Indelible Diamond LASER MARKER**



### **GEMSTAR SYSTEM DESCRIPTION**

- Gemscriptor Extended Software, all characters supported
- Keyboard operation control, fast and easy
- Windows® XP environment
- Control window on programming screen, see what you get
- Portable computer USB link, extended software
- Dimensions: W 580mm, H 330mm, D 440 mm, small footprint

### **Features**

- See what you mark, live
- Wave length 1064 nm Laser, finer marking, safer wave length
- Extra fast **marking, high volume marking**
- **No maintenance, low cost system**
- Text size selectable from 30µ to 21mm
- **Mark any size; any shape of stone** on any area or facet, no limitations
- **Mark** on mounted stones, such as **rings and ear rings, extended possibilities**
- Mark at an **angle**, no limits on the girdle
- Direct import of **logos** and drawings, **Picture marking**
- **All language Fonts** are supported, direct writing in any letter type
- Dot distance adjustable, **select the marking intensity and line width**
- **Direct view** of the marking field, **Never miss an marking**
- See what you get, never miss the **correct position** of your marking on the girdle
- No waiting time, fast working, **higher output** per day
- The DT150 needs a protective coating before marking

# **GEMSCRIPTOR DT-150-R**

## **A SYSTEM DESCRIPTION**

### **Easy installation.**

The system is mounted on castors. It runs on 240 volts 50 – 60 Hz.  
The electrical consumption of the machine is less than 1200 Watt. (5 VA)

- Gem **authentication** and **identification**
- **Long life** Fibre laser unit
- Mark: **Rounds, of any sizes, ideal for bruted girdles**
- **IR laser technology**, needs a **coating** before marking
- Easy access to the working area, easy mount of the stones on a **quick release magnetic holder**
- Easy to operate even by unskilled workers
- **Direct control** of the inscription on the vision system in order to control while programming and inscribing the gem.
- High productivity, mark **250 stones** and more in a day
- **No patent infringement**
- Desk help and **fast service** when needed
- Fine marking with **line width of 7 to 10 microns**
- Choose any **letter and or logo height** (<50 microns to > 2 mm)
- **Import** of any characters (All **True type fonts**) **logos** and **DXF** format **drawings**
- **Focus** adjust is **easy** and visible on the screen,
- Three point focussing with automatic profile follow up
- **Maintenance is restricted to a minimum**
- **Straight or slanted marking**

# GEMSCRIPTOR DT-150-R

## A1 LASER UNIT

- High performance compact Fibre Laser Unit
- Extra long life, over 100.000 h
- Economical, maintenance free
- High productivity, mark up to 250 jobs/stones and more in one day
- Marking time: 23 sec for one job marking a Logo and 12 characters
- Power control, for deeper or shallow marking jobs
- Dot distance control for higher marking density
- Power control for line width selection

GEMSCRIPTOR Laser	BLS DT-150
Wavelength	1062 nm
Pulse energy	200µJ
Energy density mm <sup>2</sup>	0,66 mJ
Max. Rep. Rate	100 - 2000 Hz
Power selection	10% to 100%
Pulse length	20 ns
Stability	<2%
Peak power	10 kW
Beam size	3,3 mm
Divergence	0,5 x 1 mRad full angle
Type of laser	Fibre

## A2 POSITIONING SYSTEM, GEMSCRIPTOR DT-150

The OWIS optical grade co-ordinate tables are high precision tables

### X-Y-Z Tables

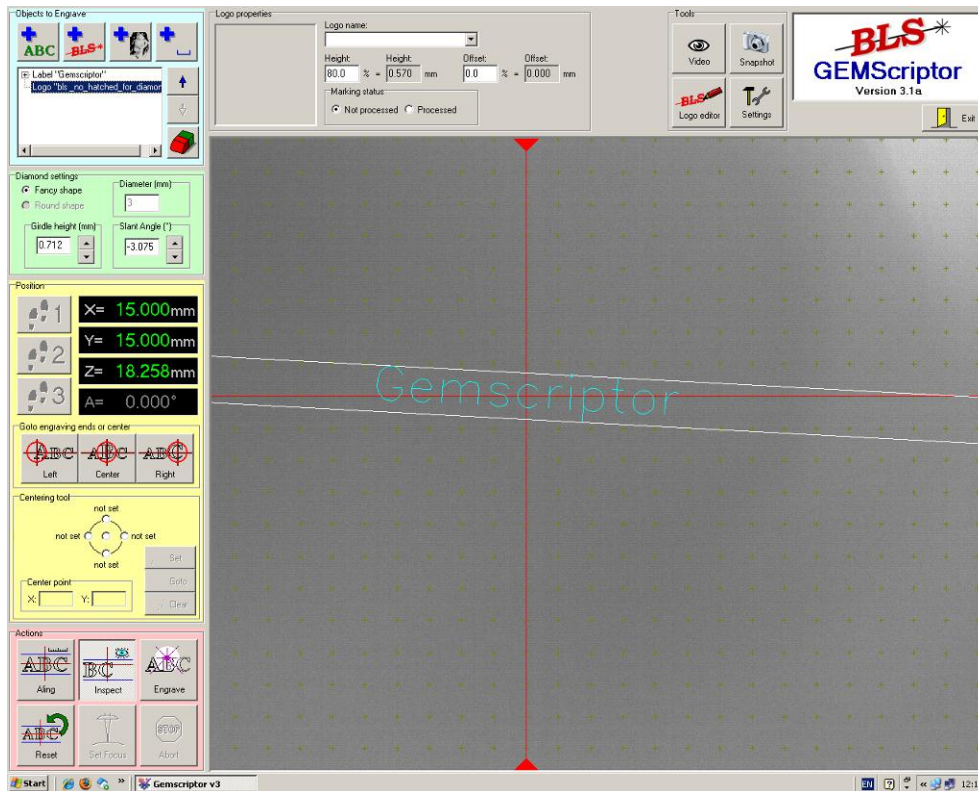
- |                             |  |
|-----------------------------|--|
| • X – Y - Z axis            | 25 mm, travel. High precision                      |
| • End contacts              | Inductive PNP contacts on each end                 |
| • Max. Working speed        | 2 mm/sec   |
| • Backlash free screw       | pitch: 1 mm  |
| • Guidance linearity        | 10µ for Z axis, 2µm/100 mm for X – Y axes          |
| • Repeatability             | Z axis 10µm (vertical) X – Y axis 2µm (horizontal) |
| • Optical encoder           | 500 lines  |
| • Smallest step, resolution | 0.2µm  |

# GEMSCRIPTOR DT-150-R

## A3 User-friendly operation

The high definition vision system makes it easy to position each stone into focus.  
 All axes are controlled by means of on the screen buttons or with the mouse.  
 The image of the stone is directly seen in the programming window of the computer screen.  
 See while you work no risk of missing  
 This unique feature allows the operator to align the stone directly in its working position.  
 Mark any where on the stone, at any angle, mark on two lines in one job

## A4 SOFTWARE



(The marked area has been moved for a better vision of the marking demo)

The program is easy to use and the job is visible on the screen. The working window has the image of the stone as background. The dimensions of the marking job on the viewing screen are in accordance with the marking on the stone.

This allows an eventual second marking at exactly the same position as the one made before. Before starting the programmed marking there is a possibility to check the focusing of each letter or marking in order to teach-in or correct the exact focusing position of each. For strong curved or slanted surfaces, fast three point focussing (A B C)

WYSIWYG system. **(What you see is what you get)**

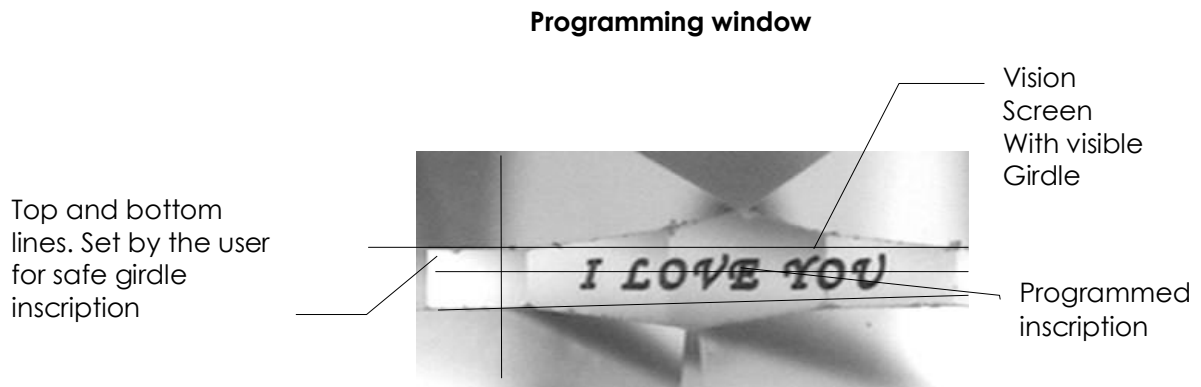
The user selects the dimension of the marking in function of girdle height.

A cross hair with two parallel lines representing the limits of the girdle. It helps to adjust and position the marking in the centre of the girdle.

## GEMSCRIPTOR DT-150-R

Several settings are possible: select the height in function of the girdle height and the spacing between each letter or marking in %.

**Mark up to 20 characters and two logos in one working session.**



Other significant parameters that can be adjusted:

- Speed of the X-Y Z tables
- Laser Power and line width
- Pulse rate: the dot distance is selectable, from 0,1 micron and up for lighter or deeper marking.

*Advantages of the BLS GEMSCRIPTOR DT150-IR*

**Computer and program are included. Logo import, all true type fonts available.**

**All letter types or alphabets are supported**

**USB camera with image enhancer and pixel position correction.**

**Three point focussing** for curved and slanted surface marking

The installation is done in a minimum of time. The **apprentice is done in half a day.**

The machine is delivered with several **holders for loose stones and set stones.**

The laser works at **250 Hz**, marking time is < 0.5 sec per character.

High speed **mark up 250 stones in one working day**

**Mark on one or more lines** in one session

**Three programmable start positions** for fast work when having different stone sizes





# **GEMSCRIPTOR DT-150-R**

## **A5 CONSTRUCTION**

Industrial Aluminium profiles with adjustable feet.  
 Laser unit with halogen filters, vacuum pump and gas canister inside the construction.  
 Computer, flat screen and cooling fans integrated in the cabinet  
 Safety enclosure with security locks.

**Security Laser class 1**

## **Dimensions BLS DT150-IR GEMSCRIPTOR**

Table top model

Length of construction .....800 mm  
 Width .....600 mm  
 Height.....600 mm  
 Weight.....±45 kg

## **Services**

220 – 240 Volt, 50 – 60 Hz, single phase, 5 Vamp  
 110 Volts on demand  
 Air inlet and exhaust in the working room

## **Security**

The construction is made following the DIN security standard.  
 Laser Safety class I: closed safety-working area with sliding door.