

# The Laser Marking System Scarab

technological equipment



## Stand-alone desk-top system for laser marking

The laser technological instrument **Scarab** is intended for laser marking by means of a mask projection method. It allows engraving micro-images, such as hall-marks, brand names, company logos, portraits, and other information on surfaces of jewelry artworks, electronic component cases, and other metal, glass, or stone ware. It also

allows to produce heads for mechanical markers and to create profile apertures of sub-millimeter sizes in foil materials.



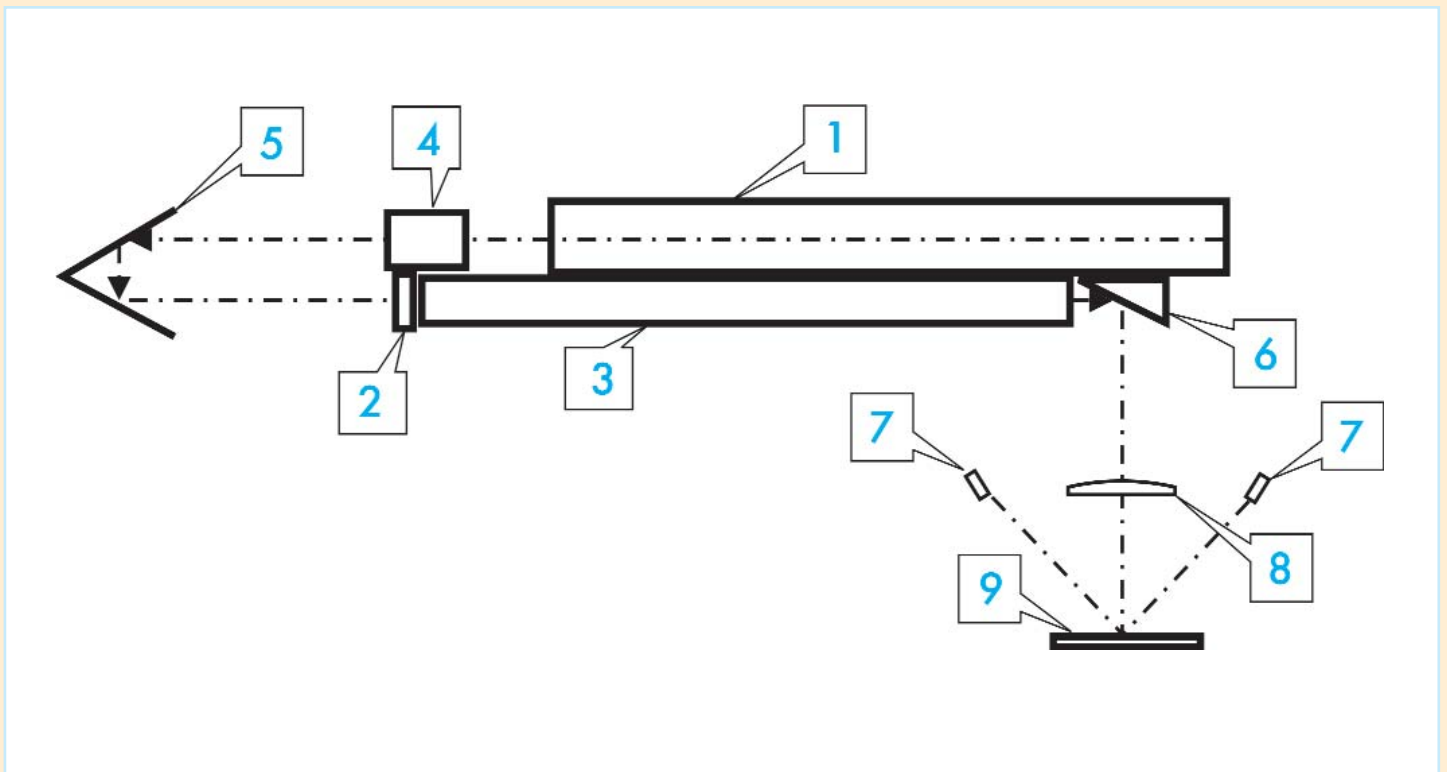
## Basic User Specifications

Dimensions of the marked area	up to 3.5 mm x 3.5 mm
Marking time	0.7 sec / mm <sup>2</sup>
Maximal mask size	22 mm x 22 mm
Metal mask lifetime	> 100,000 markings
Optical demagnification	1/6
Marking depth (per one cycle)	15 μm
Resolution	10 μm
Depth of image sharpness	1.5 mm
Time of continuous operation	8 hours
Maximal power consumption	220 V, 50 Hz, 700 W
Dimensions	700 x 500 x 440 mm
Weight	25 kg

## Laser Features

Wavelength	1.06 μm
Operating mode	Q-switch, pulse operation
Pulse energy	up to 200 mJ
Pulse duration	8 - 30 ns
Frequency of pulses	up to 40 Hz
Laser pumping	Xenon flash lamp
Lamp lifetime	> 100,000 markings
Cooling system	single-circuit
Coolant	distilled water, 2 liters

## Optical Arrangement



The pulse radiation of Nd-solid state laser 1 illuminates the mask segment 2. The segment mask image is projected on the object surface 9 through the scanning arrangements 4, 5, optical system 3, mirror 6, and objective 8. Two red laser pointers 7 are used for visual tuning.

ELVATECH Ltd.  
20 Polyarnaya str.,  
Kiev, 04209, Ukraine  
tel.: (+38 044) 495 11 43  
tel./fax: (+38 044) 412 06 81  
office@elvatech.com

Your Local Representative

