

# EOS

## The perfect girdle

New technologies and automation are transforming the diamond industry. In recent years, demand for cut quality has increased and a perfect girdle is regarded as the indispensable basis for a well-cut stone.

EOS confines the deviation on the roundness well within 0.01 mm. Bearding is history, there is no change on breakage and gletses will decrease instead of increase.



**EOS is an automatic machine for bruting and girdling diamonds. It is suitable for stones with a minimum weight of 0.2 carats and a maximal diameter of 40 mm diameter.**

The stone has to be centred for maximal diameter to be obtained, Centring can be controlled by observing the image on the computer, A set of adjustable lines can be used to assist with the bruting process.

### **Pots and pins**

The culet of the diamond is positioned in the pot. The pin works in two ways; it exerts pressure on the table, keeping the stone still during the process, and it aligns the stone's table so that the girdle is perfectly perpendicular.

Pots and pins are available in different sizes, depending on the size of the stone. Both holders turn at a synchronized low speed.

### **Diamond scaife**

To brute the stone, a diamond scaife is used instead of a boart. The scaife moves in cooling-liquid to bring down the temperature of the bruted stone. The liquid also contains a special conditioner that helps with bruting the stone.

### **Fixed plunger**

The hammer traditionally used to centre the stone has been replaced by a plunger. Its fixed position ensures that the stone can only be moved in one direction, parallel to the viewing plane of the camera.

### **Manual and auto-feed operation**

The machine can be operated manually but is also equipped with an auto-feed function. The user sets the desired diameter and the feed rate. The process is constantly monitored and is interrupted when the wheel load is too high. Once the desired diameter is reached, the machine stops automatically and waits for further action of the operator.

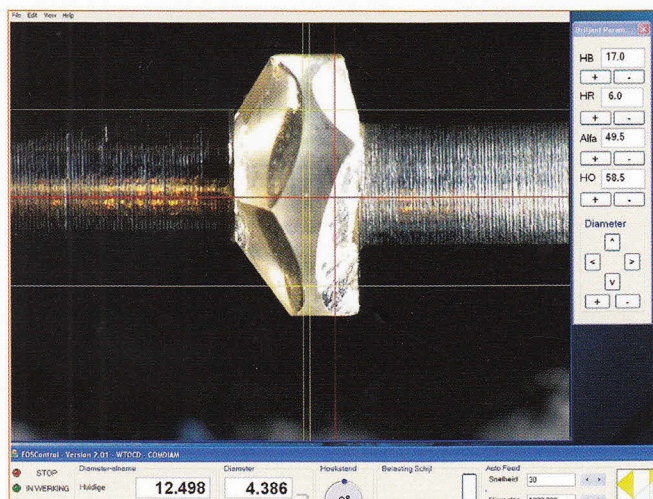
The whole process is controlled through the EOS control program on the PC.

### **Productivity, functionality and ergonomics**

The diameter is measured by a special probe that is pushed against the stone by means of compressed air. The diameter indicates the actual diameter of the girdle.

The construction of the machine guarantees a vibration-free cutting process, benefiting the final product.

Productivity, functionality and ergonomics were a few of the most important considerations in designing the EOS.



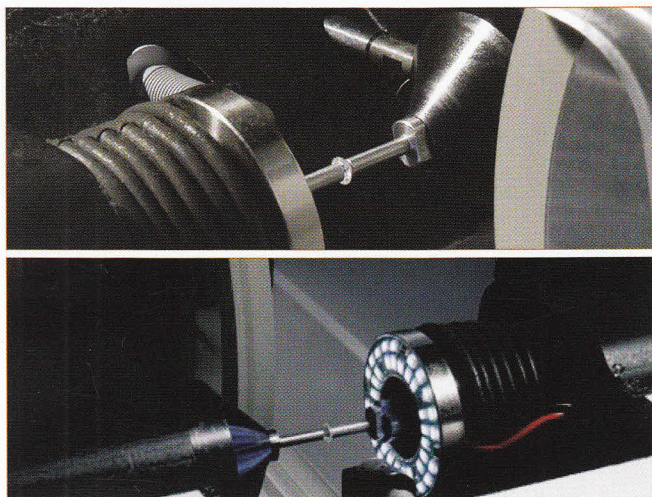
## Visual representation

EOS is connected to a computer that displays a visual representation of the stone. On the screen the user can see a simulated wire-frame within which the model can be adjusted to the desired shape (EOSView).

### The wire-frame gives information on:

- » The centring of the stone
- » The correct position of the girdle, based on the overall proportions of the stone
- » The roundness
- » The position of the naturals

A separate cable sends data to the computer for a visual representation of the status of the bruting process. This also makes it possible to display the actual diameter of the stone on the screen (EOSControl). Using three grips on the side of the camera, the image of the diamond can be focused and zoomed.

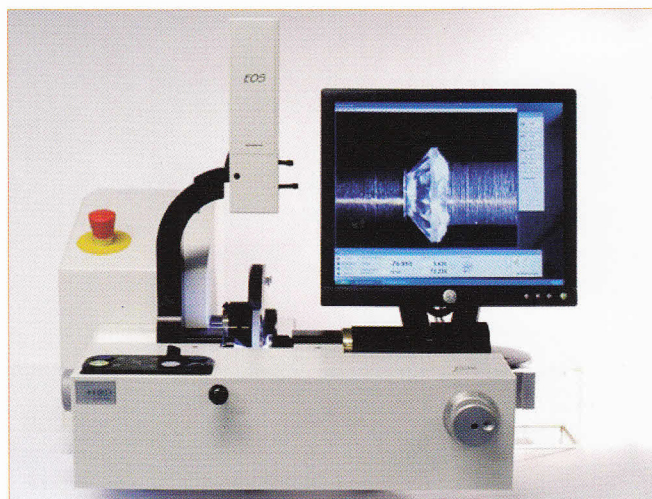


## Advantages

- » Perfectly round girdle
- » Straight girdle
- » The final diameter of the stone can be optimised
- » No risk on beard
- » No breaking of facets due to re-cutting
- » Equilibrating stones
- » Eliminating cleavages and holes, without any breakage
- » Cutting risk stones
- » A minimum of corrections during polishing

### The automatic steering, the use of high technology and the ergonomic control allows you to:

- » Achieve very high productivity, one person can operate more machines
- » Minimise the training period
- » Avoid damage of the stone while processing



## Technical Specifications

### Machine:

- » Dimensions: Length 605 mm x Height 640 mm x Depth 640 mm
- » Weight: 70 kg
- » Temperature: 5° - max. 30°
- » Speed of scaife: 0-3000 rpm
- » Speed of stone: 180 rpm

### Feeding:

- » Dimensions: Length 300 mm x Height 400 mm x Depth 190 mm
- » Weight: 15 kg
- » Current: 230 V; 50/60 Hz