



# MORGANA

The **accurate solution** for  
a perfect cut



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### Introduction

Nothing is more important than accurate alignment of polishing equipment to achieve the so sought-after Triple Excellent diamond cut qualification. Perfect proportions, symmetry and polish are non-negotiable when selling a diamond at the best price. But to achieve this level of perfection, the diamond polisher needs to rely on his equipment. An accurate setting of the polishing tang and bench is crucial to obtain the highest level of accuracy.

Up until now, diamond polishers commonly use levels to align tang plates and tangs. A perfect alignment of the polishers' equipment takes hours and tons of experience.

Today, HRD Antwerp offers a new solution: **Morgana**. Morgana is a complete set of tools that helps the diamond polisher to align his polishing equipment.

#### How?

Morgana helps the polisher to:

- align the tang plate(s) on the mill according to the scaife
- align facets to the scaife
- align the grain axis perpendicular to the scaife
- tilt the facet very accurately in a predetermined angle
- check the setting of the stone in the tang
- check the angular scale of the tang



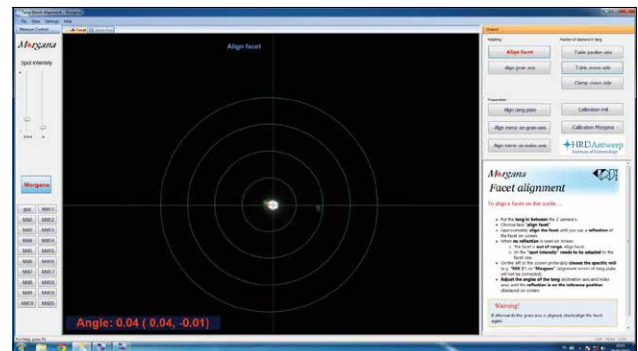
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## Principle

The innovative Morgana technology is based on the reflection of a light beam on a surface. Its high-tech system uses a set of cameras, light beams and calibration parts. The camera generates a light beam, which is reflected by a flat surface (this can be a facet, a mirror, a piece of polished metal or a piece of glass,

etc.). This reflection is shown as a point on the screen and its relative position represents very accurately the relative angle of the reflective surface (0,01 °). On top of the tang a mirror is mounted, as reflective surface, to replace the level. This tang mirror will be aligned perpendicularly to the grain axis of the tang.



## Different sets and applications

### Basic unit

Morgana's basic unit is a set for tang-calibration, consisting of:

- A table-unit with camera for facet adjustment
- A unit with camera for grain-axis-adjustment
- Tang mirrors
- A tool for calibration
- An angle setting control instrument
- A control unit and screen

### What can it do?

- (Re)take a facet flat-on and align it on the scaife fast and accurate
- Tilt a facet (within 0,01°) in a predetermined angle fast and accurate
- Align grain axis so that no false facet is polished by changing the polishing direction ('in and out of the tang') and to obtain correct angles.
- Calibrate the angular scale of the tang



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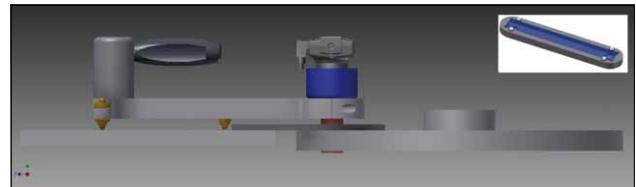
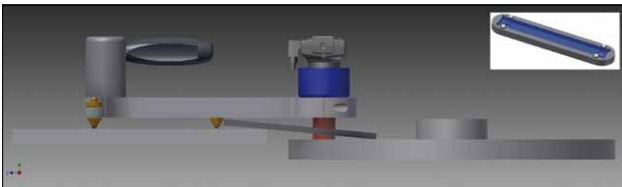
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### Tangplate alignment set

The tang plate alignment set is a set of tools that will help the polisher to bring the tang plate on the same water-level and in the same plane as the polishing wheel (the scaife). It is additional to the basic unit, which requires perfect alignment of the tang plate.

#### What can it do?

- Control the flatness of the scaife
- Level tang plate and scaife
- Adjust scaife height
- Check overall alignment of tang plate and scaife Calibrate all polishing benches



### Online check of grain-axis alignment (while polishing)

For this application, the camera is set in a holder on the bench above the polisher's tang, which needs to be equipped with a tang mirror. Every time the tang mirror is passing under the camera, the polisher can check the inclination of the grain-axis and adjust if necessary. When the inclination is 'nil', this means the desired facet angle is achieved.

#### Additional accessories are available to:

- check the correct mounting of a stone in its holder (in press pots for bottoms as well as for tops)
- check the perpendicularity of the table to the index axis when initiating crown polishing (claw system)



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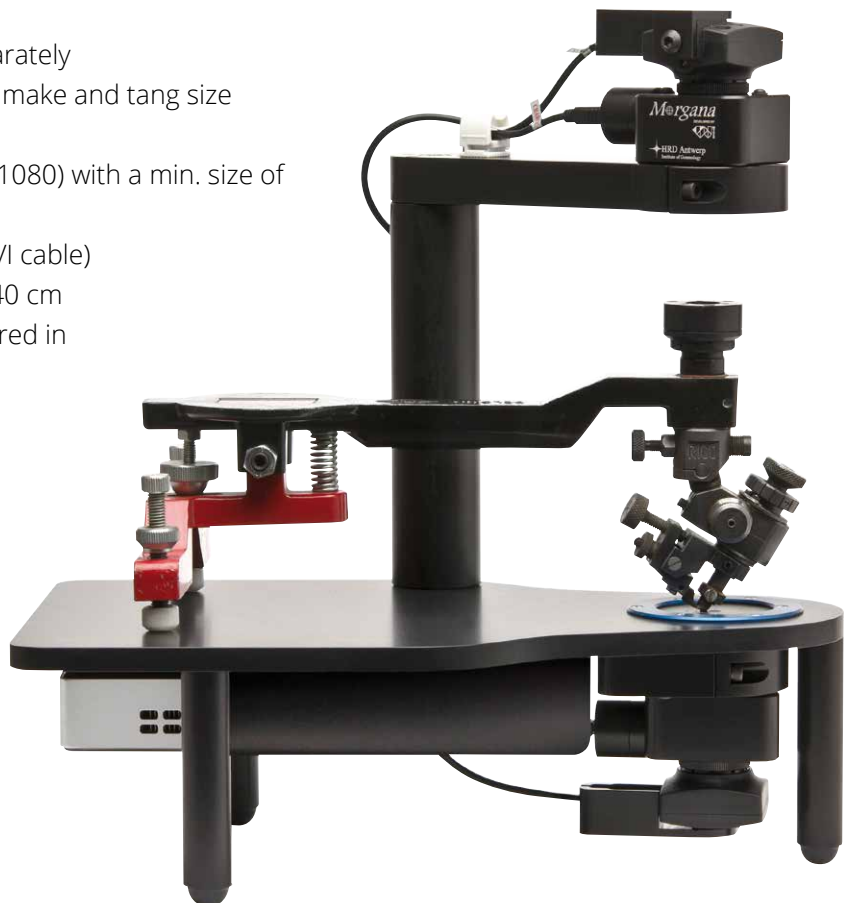
### What you need to know about your Morgana

#### The benefits of Morgana

- Easy to use
- No size limits
- Quick procedures
- Prepare benches and tangs in no time
- Storage of the alignment-data (max. 20 benches)
- Easy and quick alignment of scaife and tang plate
- Time and carat saving when re-polishing a facet
- Very accurate angle setting e.g. table tilting
- Accurate alignment of the polishers' equipment
- On screen user's manual

#### Features of Morgana

- Basic set always required
- Additional sets can be ordered separately
- Tang mirrors are available for every make and tang size
- No extra pc required
- Flat screen required: full HD (1920x1080) with a min. size of 20" with DVI or HDMI interface (DVI requires male HDMI to male DVI cable)
- Space required for basic unit: 30 x 40 cm
- Basic unit and accessory sets delivered in easy storage boxes.



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**HRD ANTWERP IS BASED IN ANTWERP,  
DIAMOND CAPITAL OF THE WORLD.**

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