# Helium Rough



The most accurate advanced rough cavity mapping and inclusion scanning value based planning.



### Introduction

- Helium Rough is the most accurate advanced rough cavity mapping and inclusion scanning value based planning equipment optimizing rough with value analysis and sawing plans.
- For the first time you have an access to a diamond planning equipment in true sense. All earlier planning equipments will appear to be only a measuring tool.
- Helium Rough is used for scanning rough and polished diamonds constructing its 3D Model.

### Salient Features

- Any inclusion including Gletz / piques / bubbles (VS to I) can be considered.
- Shortest payback time. Many times, as short as 4 to 5 days. Increases profit exponentially with a little increase in efforts.
- Automatic Sawing plan generated, to maximize your profit.
- Most advanced and accurate cavity mapping technique, thanks to its dual head scanning technology.
- The machine intelligence will help you to decide if inclusion removal or re-orientation of inclusion will maximize your profit.
- If the suggested plan includes the inclusion, the machine software will show you where that inclusion will be reflected in the polished piece. The Software will grade the finished stone based on size of inclusion left inside the polish stone, its orientation and its reflection / refraction inside the polish stone. Model building accuracy of better than 0.005 mm makes this possible.
- More than 3000 data fields are exported, including images for every scan.
- Intelligent Laser marking software leaves off the area unmarked where it matters the most.
- Very fast laser marking facility. Choose and mark all option of

marking in one key stroke.

- Warranty of 36 months/5000 hrs on laser source
- Free Oxygen Viewer will make it possible for your overseas office to participate in critical decision making. They will be able to view the provisional / final plan on the virtual stone, and give their consent before further process.
- Free Oxygen Viewer is an inevitable tool for the manufacturing department to have a look at virtual report of the plan. This will reduce a great amount of paper work, and makes your factory, a truly IT oriented organization.
- Eight options of cavity mapping: Small, Medium, Big, etc. to suite your need.
- Eight and more options of optimization program to choose from.
- LAN configurable and multi user environment software support reduces overall cost. Inclusion placement and allocation can be done in off machine mode to reduce load on the scanner and increase its utility factor (reduce overall investment).
- The software is specifically designed to accurately suggest the most profitable planning options in value recovery terms. In the process the Rapaport / user specific price structure can be used.

## Specification

Camera Model: MC023MG-SY CMOS 1/1.2" Resolution: 1936 x 1216 (ratio 1.6:1)			
2.3 Megapixels Monochrome CMOS camera with Sony IMX174			
MODELS	HR 21 (OE Mark)	HR <sup>+</sup> 22.5	HR <sup>+</sup> 45
→ Field Of View	13.4 x 21.4 mm	14.2 x 22.6 mm	28.4 x 45.2 mm
➡ Rough Size	0.25 Ct to 50 Ct	0.30 Ct to 60 Ct	2.5 Ct to 440 Ct
→ 3D-model accuracy	20 µm (Specifically built for marking)	11.7 µm	23.4 µm
→ Diamond Type	Any Cut		
→ Diamond Holding	Vacuum / Glue assisted		
→ 3D Inclusion Mapping	Very Advanced - working on images of windowed stone		
➡ Concavity Mapping	Unparalleled accuracy due to dual line sournce to cover from multiple direction		
→ Optimization	Auto/Manual Sawing, Single/Multiple		
→ Laser Marking	With advanced focusing system. Select all requirements in one go.		
Print Reports	Available (Very detailed + User definable)		
➡ Electronic Reports	Free reader software (any numbers). Important for Manufacturing support		
→ Warranty	24 Months Part warranty - 12 months free service warranty		
➡ Lens	0.5x	0.5x	0.25x
→ Camera	CMOS 1/1.2" - 1936 x 1216 pixel		
Computer Requirements	Intel Core i7 $4^{\text{th}}$ Generation 4700K or Higher, Ram 16GB and 500GB HDD SATA		
➡ Operating System	Windows 10 Professional - 64bit		
➡ Weight	30 Kgs		
→ Dimentions	92 x 23 x 23 cm		
➡ Power consumption	220V 50Hz 500W		

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