



Shadow Scan

 To use this feature, you must have the appropriate hardware: **Helium Shadow** scanner.

Shadow Scan is a technology that uses shadow imaging to use contours of shadow images for building the 3D model of the stone.

 See also [Reflect Scan](#) to learn about the next-generation technology that uses reflection imaging to achieve greater precision.

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
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Scanning


To scan a stone:

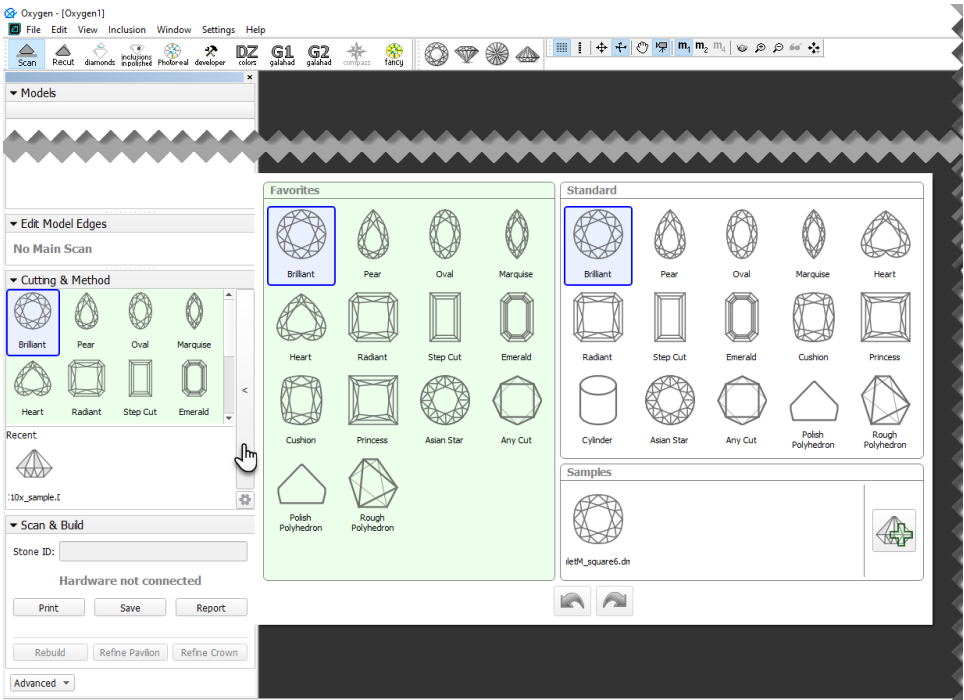
1. Mount the stone in the scanner.

2. Start **HP Carbon**.

3. Use the  mode. The left panel goes to the **Scan & Build** mode.

4. On the left panel, under **Cutting & Method**, do one of the following:

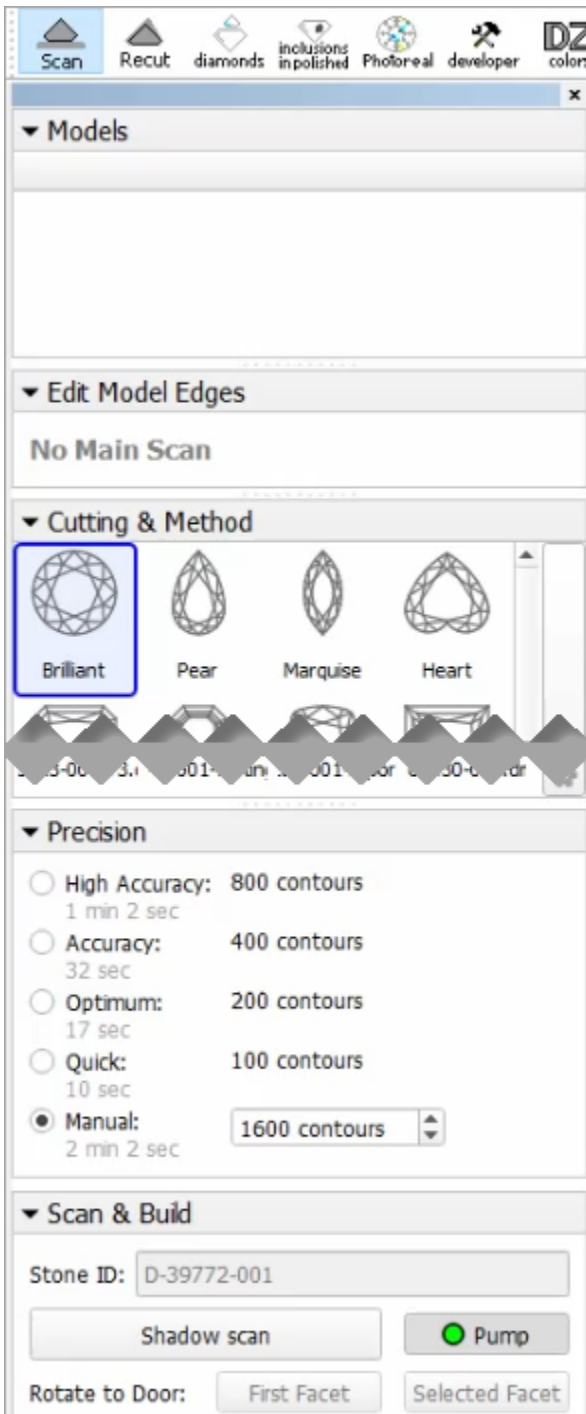
- a. select the appropriate cutting type from the predefined list
- b. select one of the previously loaded samples or load a new sample by clicking 



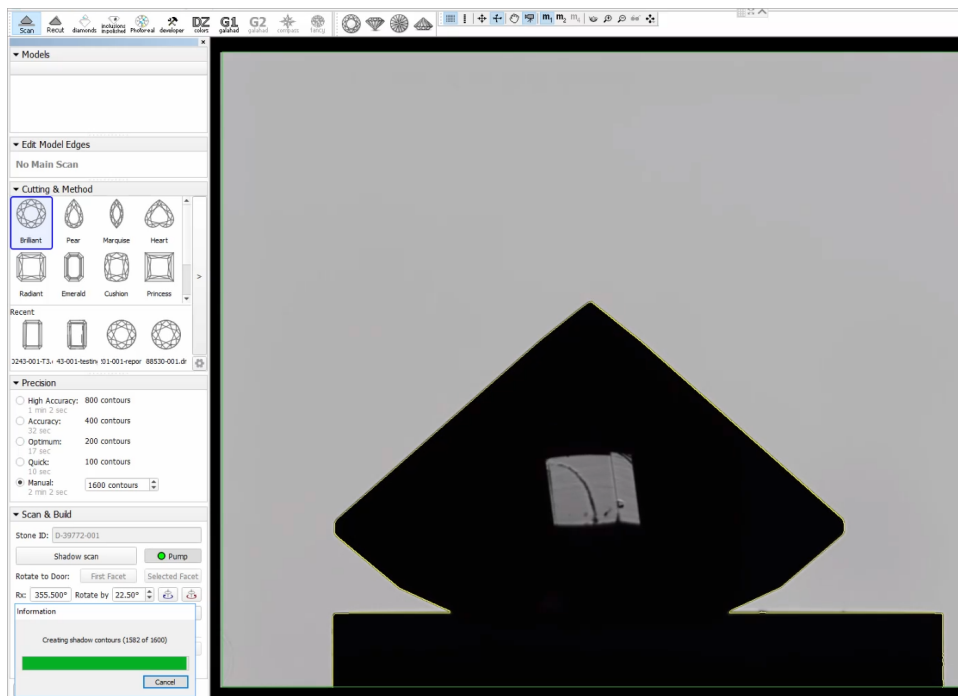
 A sample can be loaded from a file (*.dmc, *.mme, or *.gem). Once loaded, it remains in your list of models (see [Models management](#)) under the **Samples** section.

5. Under **Precision**, select the desired precision.

HP Carbon stores the most recent precision setting for each particular cutting type separately. The stored precision setting is applied automatically whenever the cutting type selection is changed. In a typical workflow, it is recommended to scan round brilliants with 400 contours and Princess cuts with 800 contours, since the latter cutting contains more facets with a nearly similar orientation which requires higher precision to resolve.



6. Click **Shadow scan** to start scanning. You may or may not be prompted to enter the Stone ID and Measured weight, depending on the settings (see [Entering Stone ID and Measured Weight](#) for more details). The following operations will proceed automatically:
- As the shadow scan progresses, the shadow photos of the model in different orientations are taken and displayed on the screen, together with overlaid contours and a progress bar.

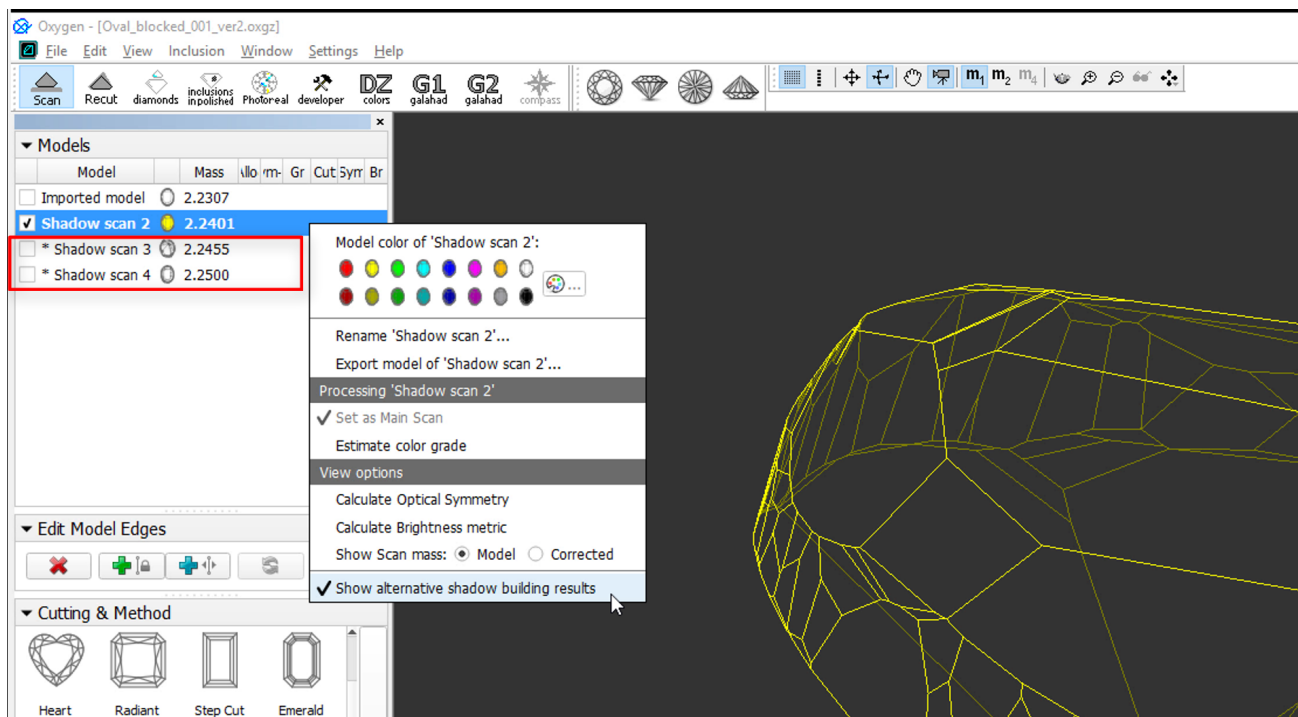


b. After the shadow scan is completed, the model is built based on the scanned contours.

After Scanning

Alternative Building Results

For some cuttings, there are several applicable methods. If so, they all are applied and the system then automatically selects the primary one and shows its built model. The alternative models are hidden by default. Now you can view the alternative models. To do that, in the context menu of the shadow scan model, select **Show alternative shadow building results**. For the displayed secondary models you can set the main one. To do so, for the displayed secondary shadow scan model, from the context menu, select **Set model as best shadow result**.



Post Scan Operations

Some post-scan operations may be initiated via the **Scan & Build** section. Switch between **Basic** and **Advanced** set of operations using the button at the bottom of the section.

▼ Scan & Build

Stone ID:

Shadow scan

Pump

Rotate to Door:

First Facet

Selected Facet

Rx: Rotate by

Print

Save

Report

Rebuild

Refine Pavilion

Refine Crown

Check Holder Offset

Advanced ▼

Button	Usage
Rotate to Door: Firs t Facet	Orients the stone in the scanner so as to face the operator with the first facet, i.e. the one which is set to zero azimuth in the Polish report, thus facilitating further operations (marking the facet, etc). The button is initially inactive and becomes enabled after scanning. The same action can be set up to be performed automatically after scanning (see Automatic Actions).
Rotate to Door: Sel ected Facet	Orients the stone in the scanner so as to face the operator with the facet currently selected in the Scene.
Rx	Current stone rotation against the scanner camera. It can be changed using Rotate by controls.
Rotate by ... <div><div><div></div></div><div><div></div></div></div>	Rotates the holder with the stone to the specified number of degrees, clockwise and counterclockwise. Changes the stone Rx .
Print	"Quick buttons" for reporting purposes. You can assign one or several actions performed on a button click in Settings > General Settings > Reports > Report Buttons .
Save	

Settings

Page Filter

Reports

General

Report Buttons

Cutting: Brilliant

Print button

☒

Polish report

Illustrated report for brilliant (RTF)

Color

☐

Polish report

Illustrated report for brilliant (RTF)

Color

☐

Label report

Label Report for brilliant

Save button

☒

Export report

Export report data, Color (INI)

☐

Export report

Export report data, Color (INI)

☐

Export report

Export report data, Color (INI)

Report button

☒

Polish report

Open

Illustrated report for brilliant (RTF)

Color

☒

Export reportSaveExport report data, Color (INI)

☐

Label reportPrintLabel Report for brilliant

OK

Cancel

Apply

Report	Notes <ul style="list-style-type: none"> • The configuration is made separately for different cuttings. First select Cutting from the list, then configure buttons for it. • The Print button immediately sends output to your default printer.
Rebuild	Adds new Shadow model to the list basing on the Shadow contours stored in the project.
Refine Pavilion	<p>Uses the currently selected model and the Pavilion Reflect contours* stored in the project to build the new model and add it to the list.</p> <p>* If the current project does not contain the Pavilion Reflect contours, the button will be inactive.</p>
Refine Crown	<p>Uses the currently selected model and the Crown Reflect contours* stored in the project to build the new model and add it to the list.</p> <p>* If the current project does not contain the Crown Reflect contours, the button will be inactive.</p>
Check Holder Offset	Normally an offset check is done automatically, so this button is not needed. Use it if you want to run an extra check.