

Creating movies

One of the most important features of Vibox 2.0 is the ability to film objects with 360-degree rotation under standardised lighting. Additionally, the films can be shot in a mode with extended depth of field, allowing for sharp focus on large stones and revealing multiple internal reflections within the diamond. A key aspect of this technology is that the extended depth of field is achieved without any loss of optical resolution.

A typical cycle for creating a film in Vibox 2.0 consists of the following steps:

- Placing the stone on the holder
- Setting the optimal region of interest (ROI) for filming the stone and selecting a position that is symmetrical relative to the rotation axis
- Setting the initial rotation position of the stone for scanning
- Selecting a standardised preset for filming
- Choosing the extended depth of field (EDOF) mode
- Scanning
- Entering the stone's metadata
- Uploading the film to Cutwise

Placing the stone on the holder

To place the stone, you need to open the lighting cover and set the stone on the holder connected to the vacuum pump (in the case of a B2B setup). Depending on the hardware version, the stone should be placed either under service lighting or backlight (shadow lighting). This lighting will either turn on automatically when the cover is lifted, or you will need to do it manually by changing the preset in the software, for example, to "Shadow". The setup takes place in the [Camera live view](#) interface mode.

Setting the optimal region of interest (ROI) for filming

When filming, it is important to adjust the camera's field of view to match the size of the stone. It is crucial that the selected region of interest does not cut off any part of the stone during rotation and that the stone is well-centred relative to the axis of rotation.

Let's consider the case of setting the region of interest for a B2B setup. The cropping area is displayed as a rectangle over the video stream, along with the axis of rotation. The lower intersection of the rotation axis and the rectangle is fixed at the level of the holder; this point is intended to be an anchor and, in most cases, should not move. By moving the left (or right) edge of the rectangle, the right (or left) edge moves symmetrically relative to the axis of rotation, allowing you to roughly set the cropping of the field of view horizontally. Moving the top side of the rectangle allows you to crop the stone vertically.

After this, you need to ensure that the stone is symmetrically positioned relative to the axis of rotation in the initial scanning position, as well as in all positions during the 360-degree rotation of the stone. For this, the 90, 180, and 360-degree rotation buttons are useful. If you notice the stone shifting relative to the axis of rotation in any view, you will need to adjust its position on the holder. If the stone is tilted relative to the rectangle, this should be corrected.

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You can evaluate the result using the Crop View mode, as this is essentially how the frame will be cropped during scanning.

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Setting the initial rotation position of the stone for scanning

Next, you need to set the initial rotational position of the stone. The first frame of the film will be captured in this position. You can adjust this position with an accuracy of up to one degree using the rotation button controls.

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Selecting a standardised preset for filming

Before starting the filming, you need to select a preset that will be used for the scanning. The preset primarily determines the lighting and film processing parameters. Choose the appropriate option from the dropdown list.

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Choosing the extended depth of field (EDOF) mode

The Vibox 2.0 software offers several filming options with different depths of field:

- 1x - No extended depth of field, suitable for small objects that fit within the optical depth of field.
- Short depth - Extended depth of field, ideal for filming rough stones and diamonds with cuts that have a short light path.
- Long depth - Extended depth of field, suitable for diamonds with cuts that have a long light path.

Select one of the appropriate options in the Focus range settings.

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Scanning

Click the Scan button. The software will switch to [Scanning view](#) mode. In this mode, you'll see information on the scanning progress as a percentage, the estimated scanning time, and the estimated remaining time, elapsed scanning time.

Additionally, separate windows will display selected thumbnail images from the final film. By hovering your mouse over these images, you can view a portion of the image under the cursor on the right-hand side at its original resolution. This allows you to check, for example, whether all details of the object are in focus.

Clicking the Cancel button will stop the scanning process and return you to [Camera Live View](#).

During scanning, you can also enter the stone's metadata for Cutwise.

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Entering the stone's metadata

To upload the film obtained from scanning to Cutwise, you need to provide the following basic information about the stone:

- SKU
- Whether the stone is natural or synthetic
- Whether it is rough or a diamond

If a page for this stone has already been created under the given Cutwise account, simply enter the SKU (or scan it into the SKU field using a bar scanner), and the rest of the information will automatically load from Cutwise.

This information can be entered during the scanning process. Once scanning is successfully completed and the necessary stone information is entered, the Upload to Cutwise button will become active.

Uploading the film to Cutwise

After completing the scan and entering the stone's information, you can initiate the upload of the film to Cutwise by clicking the Upload to Cutwise button. The film will be prepared for upload and sent to Cutwise via the Cutwise Agent. As soon as the upload begins, the software will switch to [Camera live view](#), allowing you to start filming a new stone.

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Once the stone has been uploaded and processed on Cutwise, an indication will appear in the bottom left corner. Clicking on the link provided will take you to the Cutwise page for that film.

Currently, the main way to view upload history and obtain a link to the Cutwise page with the film is through the Cutwise Agent interface.

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