

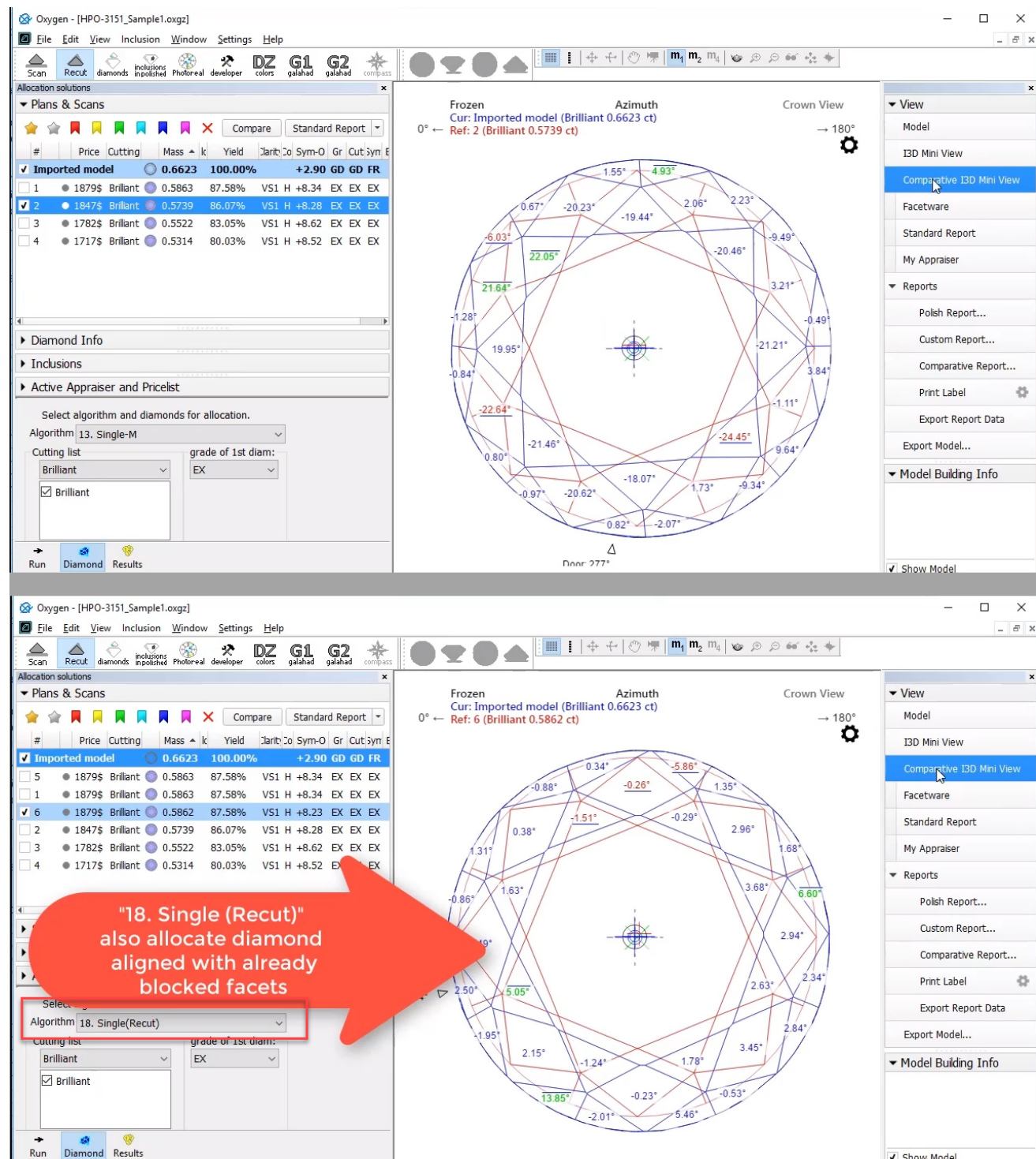
2018-10-30 - HPOxygen Server 4.7.27

Here you can find information about what is new in HPOxygen Server version 4.7.27.

In this article:
<div><div></div><div><div><div>1</div><div>Algorithm "18. Single (Recut)" for Aligning with Blocked Facets</div></div><div><div>2</div><div>Galahad Mode - Manual Selection of Initial Facet</div></div><div><div>3</div><div>G1 Galahad - Reference Line and Safe Line</div></div><div><div>4</div><div>Rough Export</div></div><div><div>5</div><div>Recut - Deleting Inclusions</div></div><div><div>6</div><div>Appraiser List Favorites</div></div><div><div>7</div><div>Custom Coloring Improvement</div></div><div><div>8</div><div>G1 Panel Improvements</div></div><div><div>9</div><div>Support of Scanning without Synchronization Cable</div></div><div><div>10</div><div>Galahad Compass - Big Step, Using Same Direction</div></div><div><div>11</div><div>New Report Parameters for Cuttings: Emerald, Princess, Heart, Oval, Pear</div></div><div><div>12</div><div>"MyRound GIA Facetware + MyRound" Appraiser - Dual Grade Display</div></div><div><div>13</div><div>Calculation of Girdle Thickness, Crown Height and Pavilion Depth - Reverse to Considering Extra Facets only for Girdle Thickness</div></div></div></div>

Algorithm "18. Single (Recut)" for Aligning with Blocked Facets

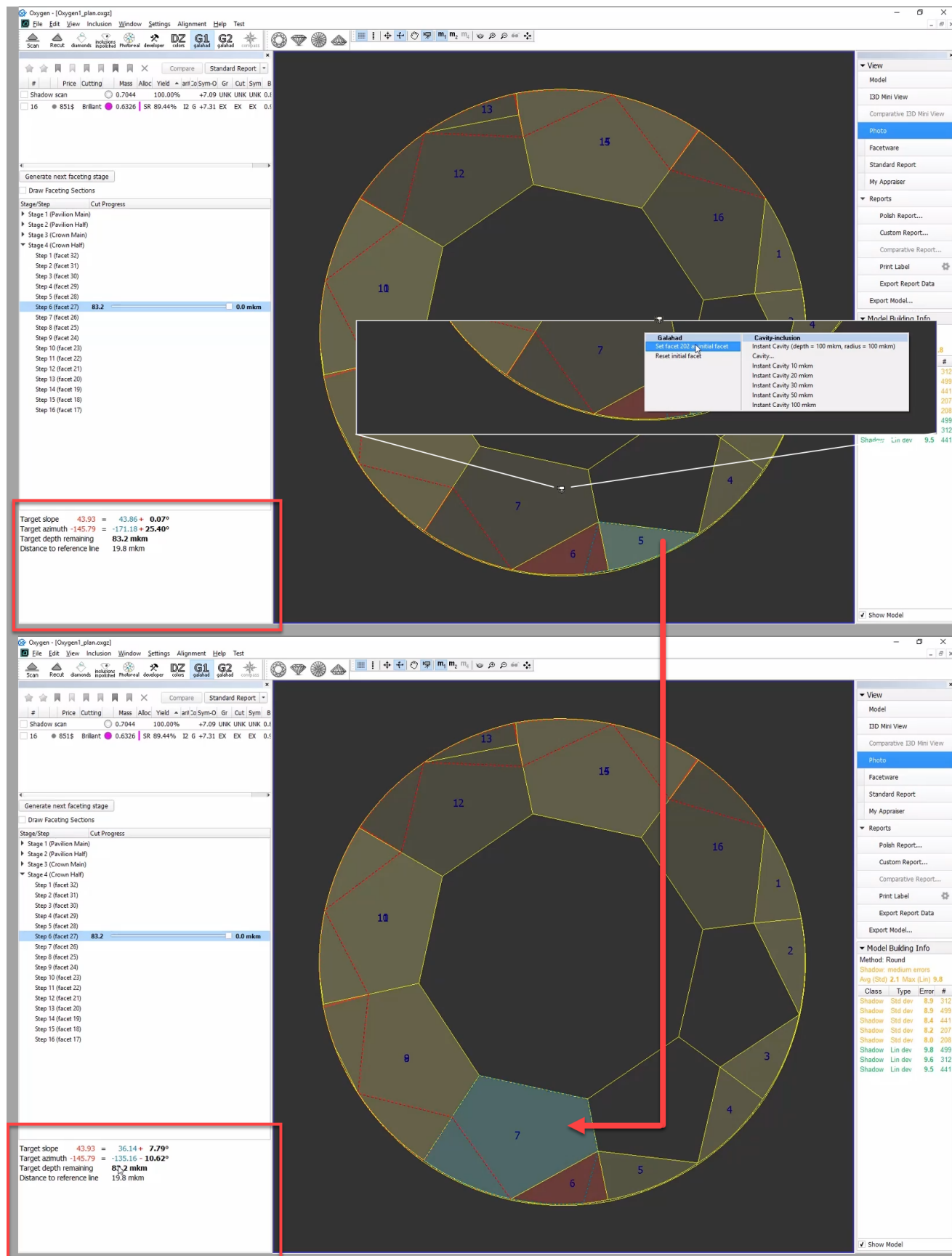
After scanning a blocked diamond, an operator may run the allocation algorithms to check the available polishing options. As in some cases we try to optimize solutions by running the asymmetric Smart Recut allocation, it is better to have a solution which is better aligned with the previously blocked facets. When we run the Smart Recut on such a solution, we may obtain the final solution with a larger mass. The new "18. Single (Recut)" algorithm allows building solutions aligned to the already blocked facets. At least one of the solutions produced by the algorithm is normally aligned to the already blocked facets of a scanned semipolished stone.



Some details and examples you can find in the video:

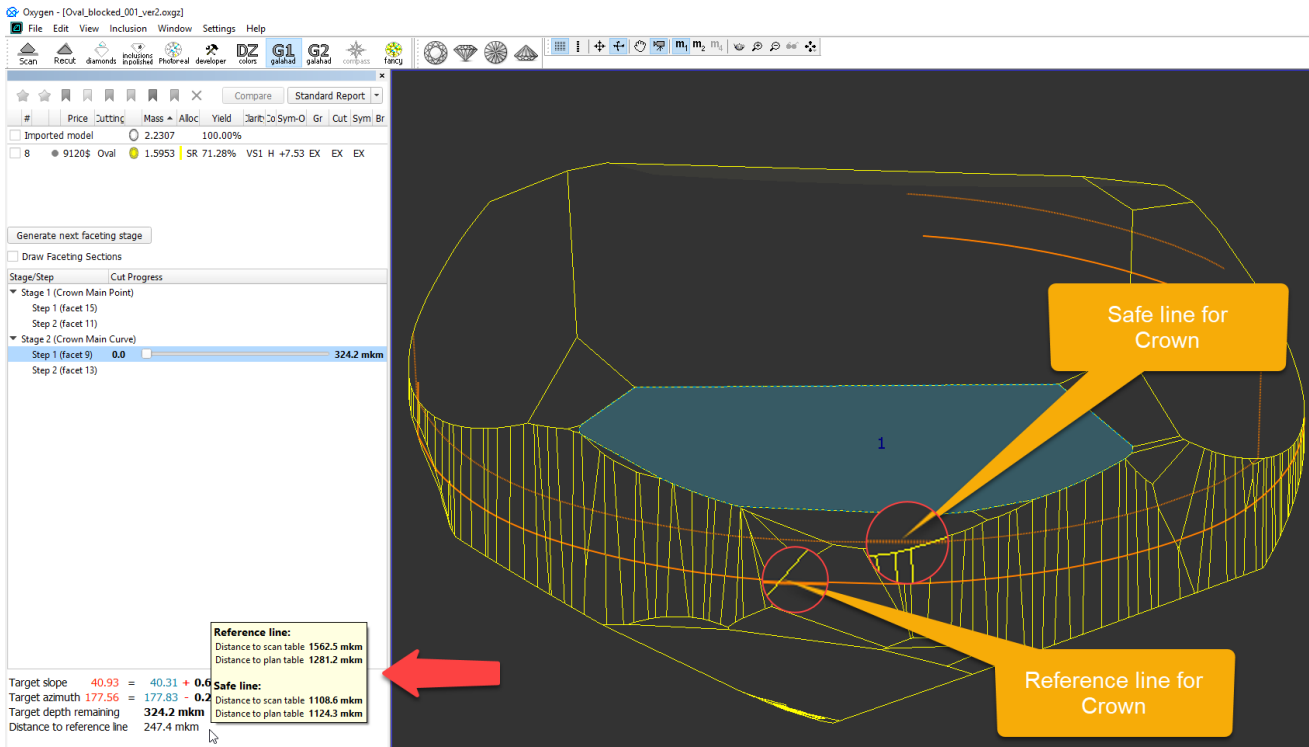
Galahad Mode - Manual Selection of Initial Facet

In Galahad Mode, for the selected step it is now possible to manually select the initial facet different from the one automatically calculated by the system. Once manually set, the initial facet can then at any moment be reset to the default one.

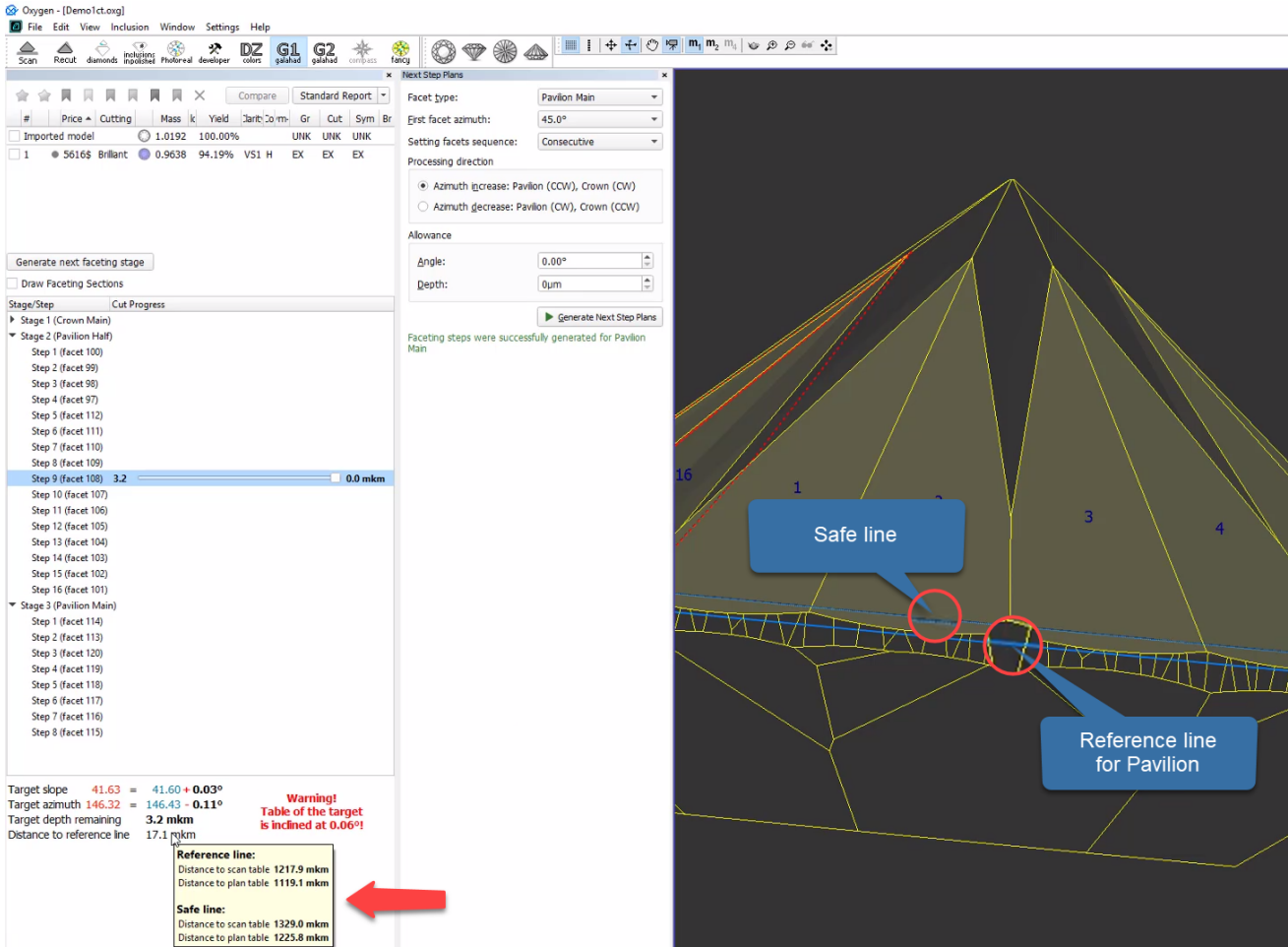


G1 Galahad - Reference Line and Safe Line

In **G1 Galahad** mode, the reference line is now calculated only once for the entire polishing process (previously it was calculated for each stage separately). Also, the *safe line* is calculated which is the limit of safe polishing, i.e. each big facet, with the correct facet angles, can be safely polished down to the safe line without risk of damaging the future brilliant. For the crown, the reference line is displayed by a bold orange line, safe line - by a thin dotted orange line. On the left panel, on mouse over the **Distance to reference line** parameter, the tooltip is displayed with the information about reference and safe lines.



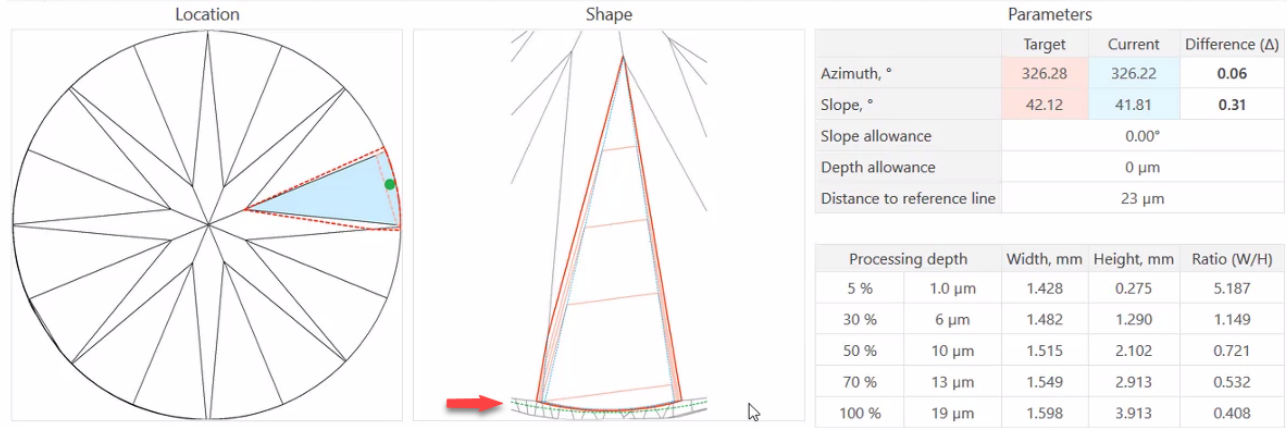
For the pavilion, the reference line is displayed by a bold blue line, safe line - by a thin dotted blue line. The tooltip with the detailed information is also available.



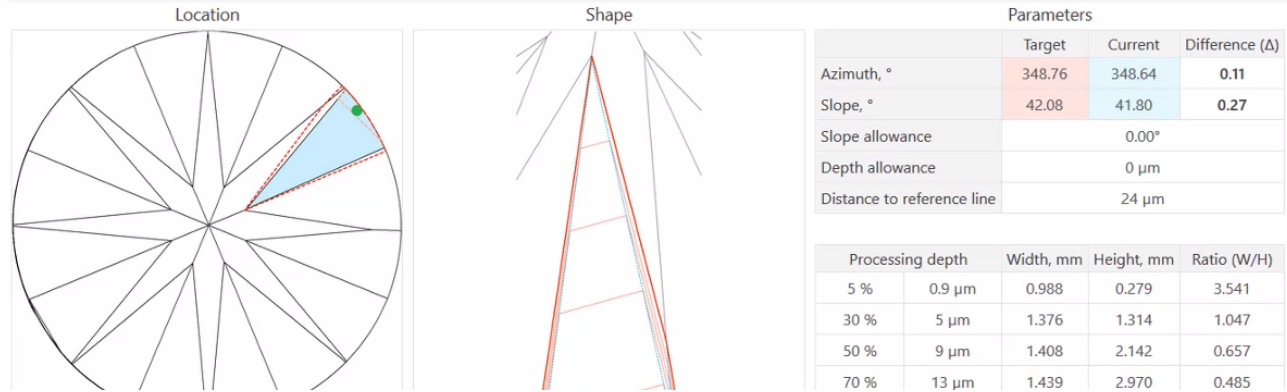
Information about reference and safe lines is also presented in the Faceting Report.

Reference line: 1.218 mm from semicut table (1.119 mm from plan table), Safe line: 1.329 mm

Step 1 of 16



Step 2 of 16

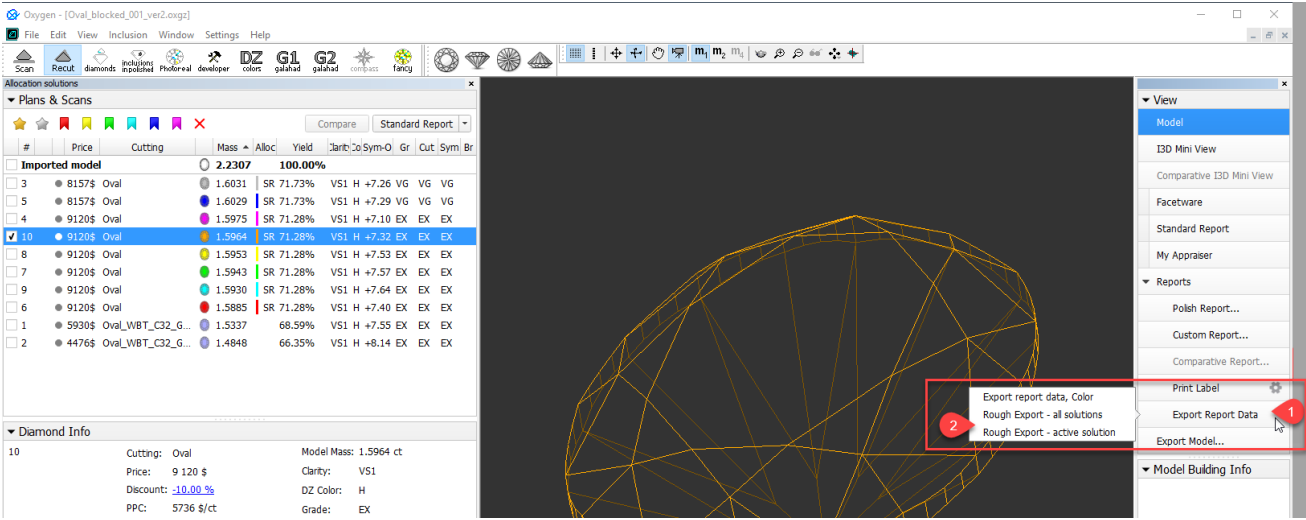


⚠ Note that if the "Girdle" or "Table" stages are included in the process, the distance to the reference line is **recalculated** for all other stages.

Rough Export

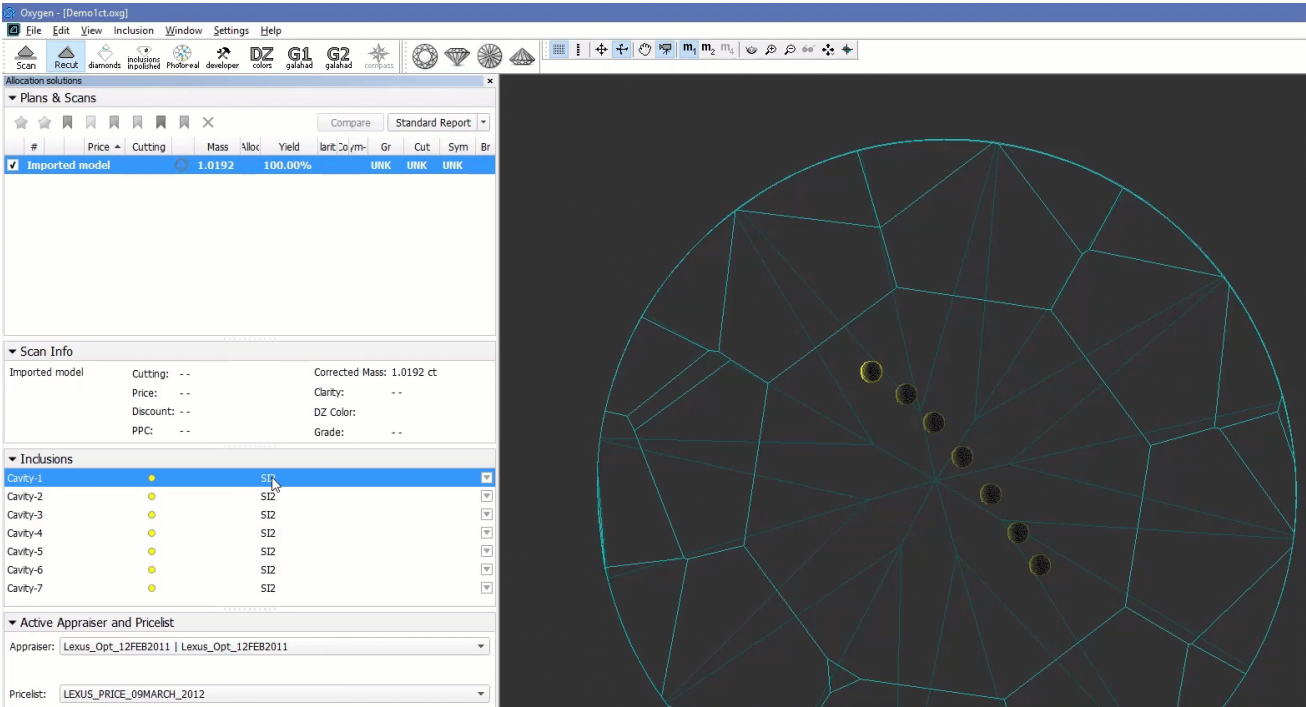
The new "Rough Export" feature is added. This allows exporting a rough model (in most cases this will be semipolished stones) along with the set of solutions created for it. You can select one of two options:

- **Rough Export - all solutions** - the main scan and all the solutions will be exported
- **Rough Export - active solution** - the main scan and the selected solution will be exported



Recut - Deleting Inclusions

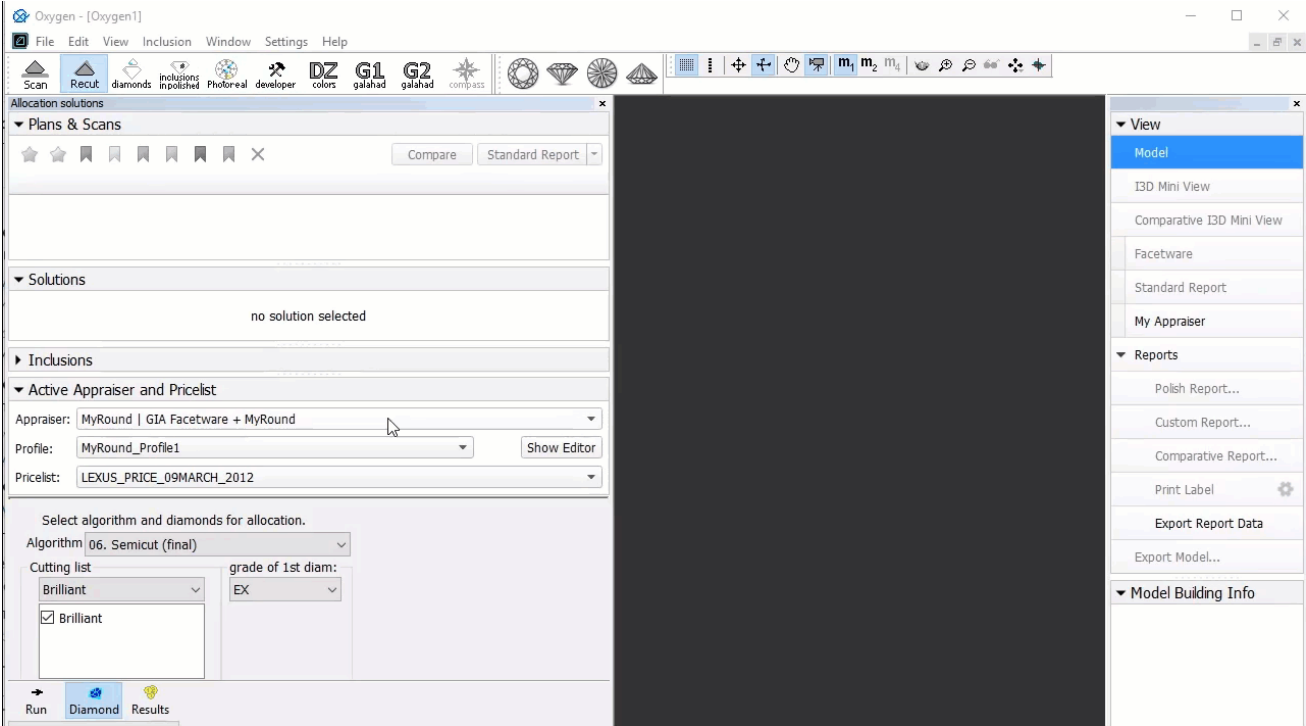
Now you can delete existing inclusions. To delete the inclusion, on the left panel, in the **Plans & Scans** mode, in the **Inclusions** section, right-click the inclusion you want to delete, from the context menu, select **Delete Inclusion**.



You can delete several inclusions at once. To do so, select inclusions clicking their names holding the CTRL or SHIFT keys, then use the context or pop-up menu.

Appraiser List Favorites

In the list of appraisers, now you can mark some appraisers as favorites: these marked appraisers will be shown as a "short list" displayed by default. The full list is available on clicking **show all**. To mark the appraiser as a favorite, click the star mark - it becomes highlighted. To remove the appraiser from favorites, click the start again to deselect .



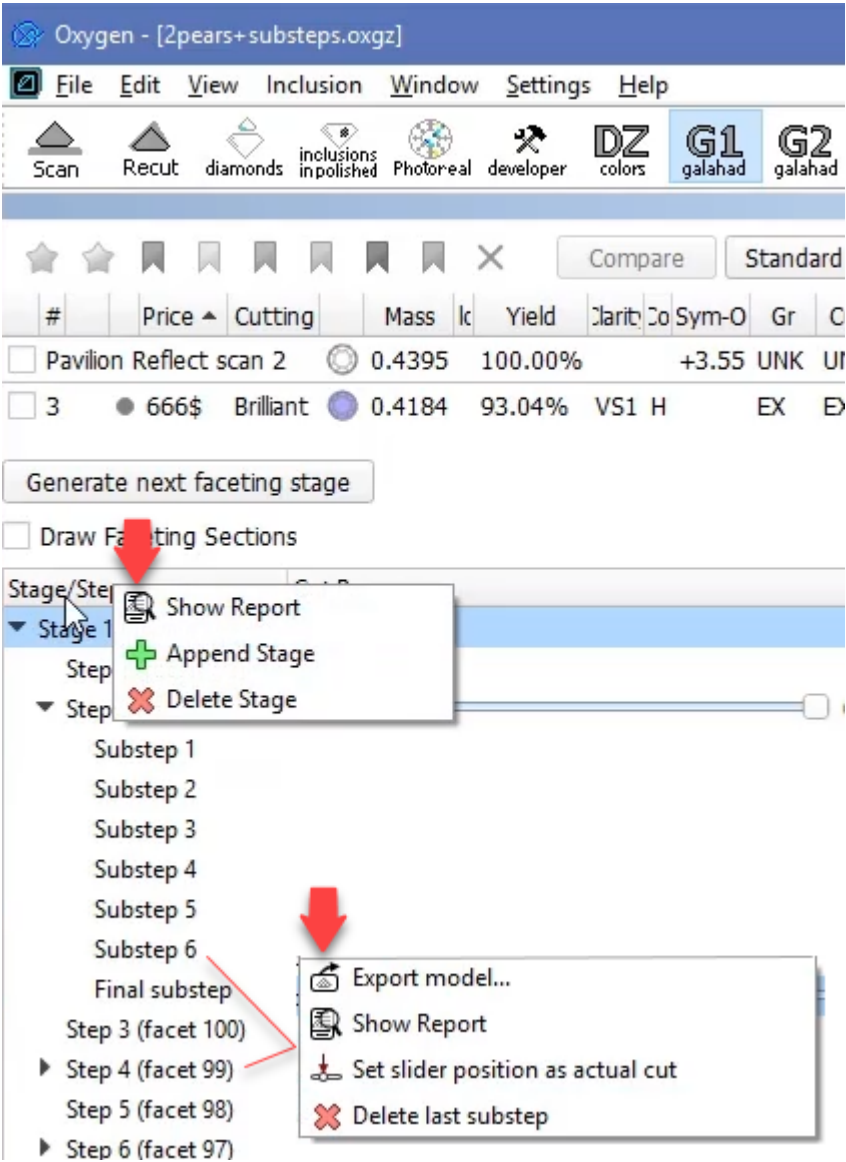
Custom Coloring Improvement

The colors for the **Facet Marking** of the Custom Report have been changed. The overview of the updated coloring is presented in the video.

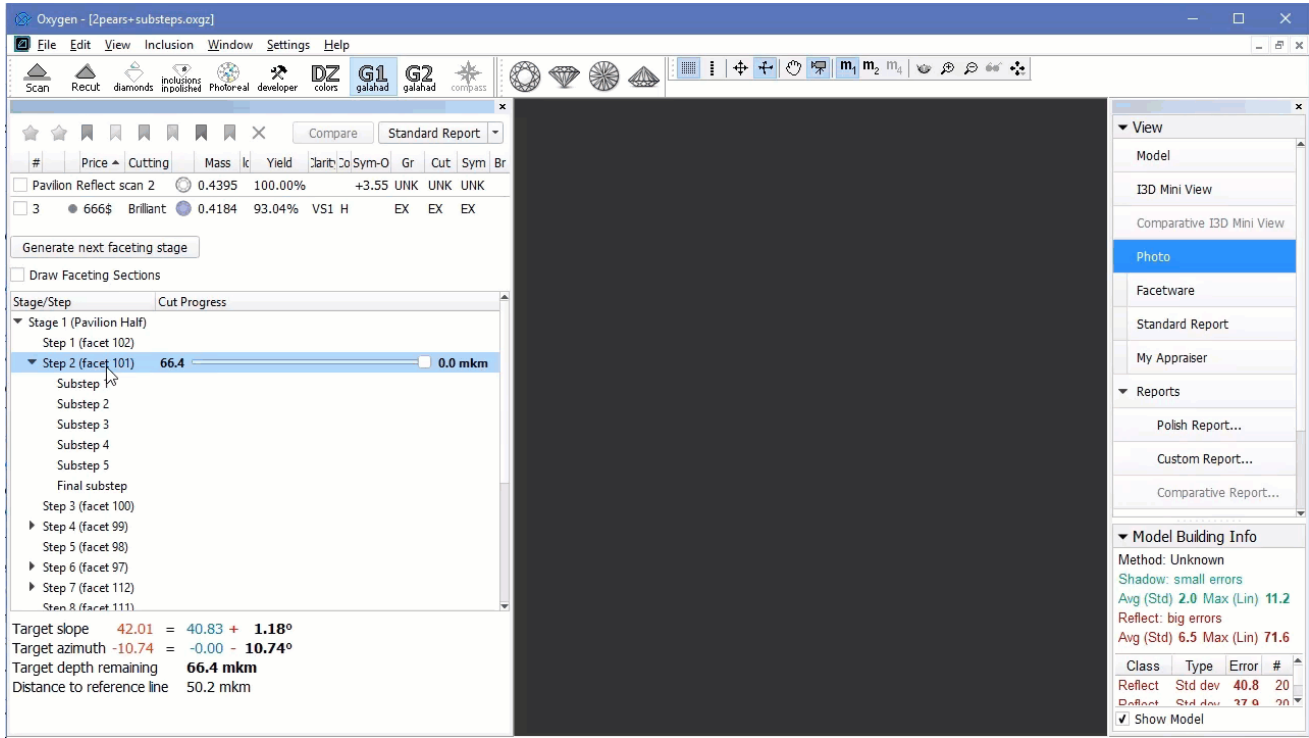
Your browser does not support the HTML5 video element

G1 Panel Improvements

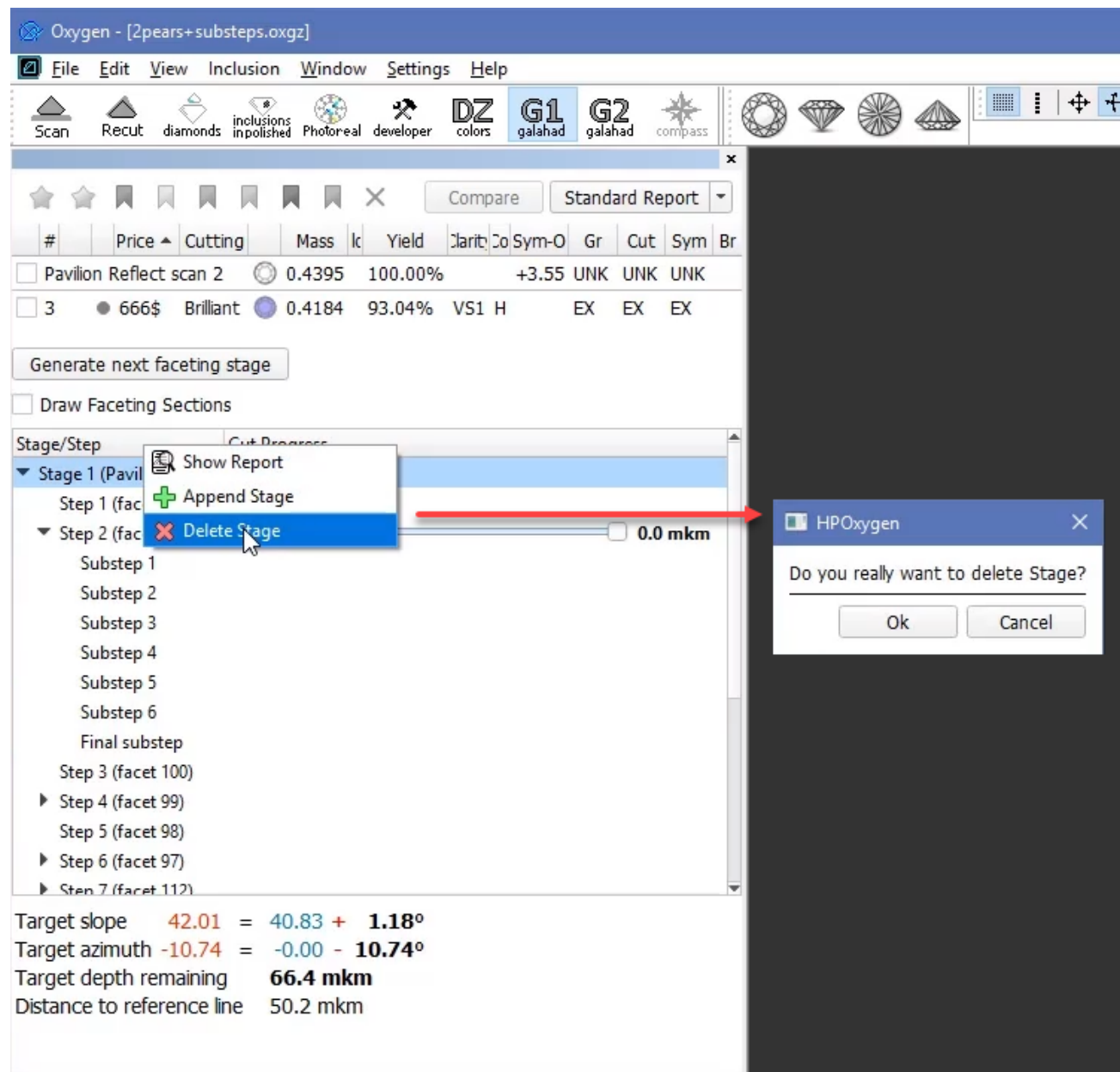
On the **Galahad 1 (G1)** panel, in all context menus now the icons are displayed which makes working with menus more convenient.



For the steps with substeps, now you can delete the last substep. This can be done via the context menu of the step. For convenience, the command can also be accessed in the context menu of any substep.



When trying to delete the stage, now the confirmation dialog is displayed. There you can confirm deletion of the stage or cancel deletion if you initiated it by mistake.



Support of Scanning without Synchronization Cable

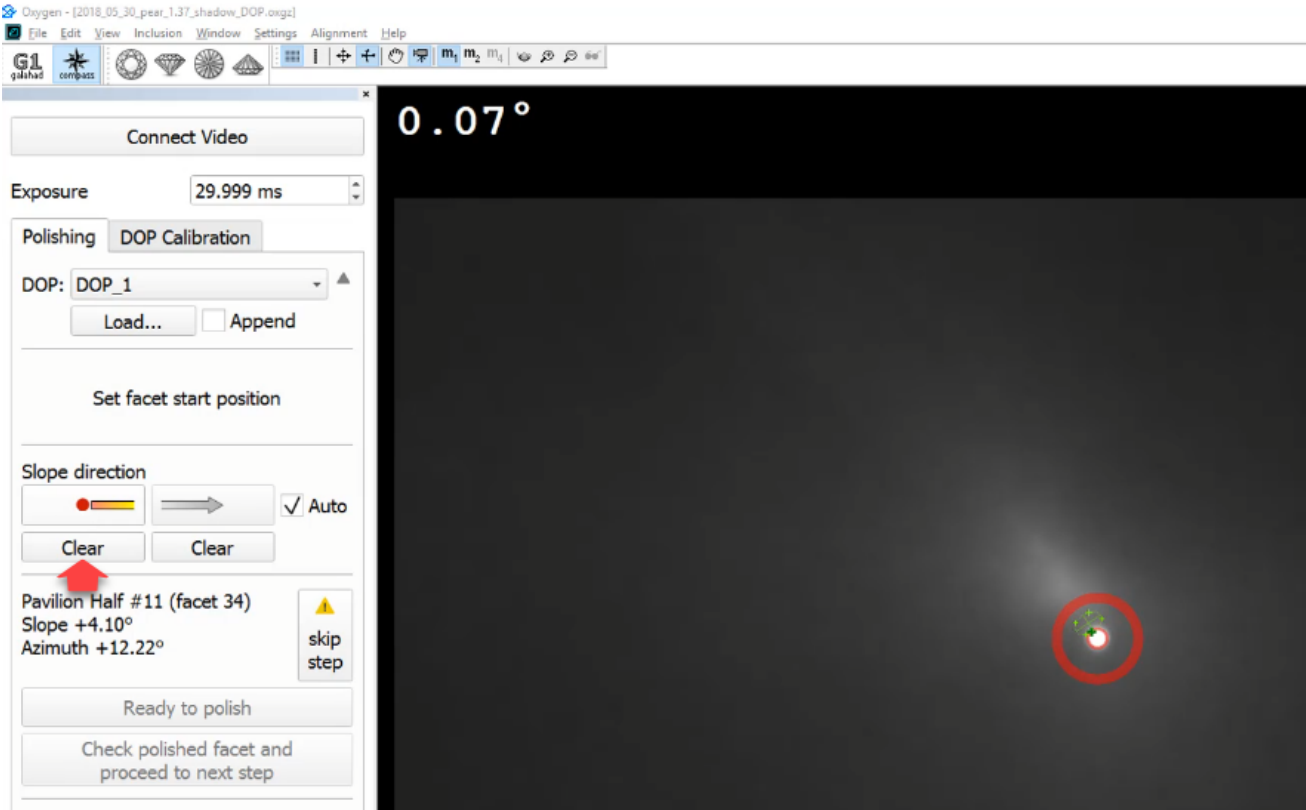
Now the scanning without synchronization cable is supported. On start, the system checks the synchronization cable availability. If a cable present, the scanning uses synchronization. If the cable is not found, scanning still continues - without synchronization.



Note that scanning without synchronization is slower. It is recommended to update the hardware to the newer version (HP_SMC board).

Galahad Compass - Big Step, Using Same Direction

In Galahad Compass - if a step is separated into sub-steps ("Bid Step" feature), after the direction and zero is set for the first sub-step, the system will automatically use the same direction for all following sub-steps. Previously, an operator should have defined the direction manually for each sub-step. Note that if you need to change the direction manually, you still have the ability to do that: use the **Clear** button and then set the new direction in a usual way.



New Report Parameters for Cuttings: Emerald, Princess, Heart, Oval, Pear

New parameters for the report were added for different cuttings.

Parameters are calculated and exported to .ini-file report, but currently, are not displayed in any printed report.

Parameter Name	Description	Bookmark	Calculation
Crown 1-2 Degree Diff (°)	Difference between Crown Main 1 angle , ° (Avg) and Crown Main 2 angle , ° (Avg) .	CRN_MAIN_1_2_ANGLE_DIFF_DEG_DEV	(CRN_MAIN_1_ANGLE_DEG_AVG) - (CRN_MAIN_2_ANGLE_DEG_AVG)
Crown 2-3 Degree Diff (°)	Difference between Crown Main 2 angle , ° (Avg) and Crown Main 3 angle , ° (Avg) .	CRN_MAIN_2_3_ANGLE_DIFF_DEG_DEV	(CRN_MAIN_2_ANGLE_DEG_AVG) - (CRN_MAIN_3_ANGLE_DEG_AVG)
Pavilion 1-2 Degree Diff (°)	Difference between Pavilion Main 1 angle , ° (Avg) and Pavillion Main 2 angle , ° (Avg) .	PAV_MAIN_1_2_ANGLE_DIFF_DEG_DEV	(PAV_MAIN_1_ANGLE_DEG_AVG) - (PAV_MAIN_2_ANGLE_DEG_AVG)
Pavilion 2-3 Degree Diff (°)	Difference between Pavilion Main 2 angle , ° (Avg) and Pavillion Main 3 angle , ° (Avg) .	PAV_MAIN_2_3_ANGLE_DIFF_DEG_DEV	(PAV_MAIN_2_ANGLE_DEG_AVG) - (PAV_MAIN_3_ANGLE_DEG_AVG)
Pavilion 3-4 Degree Diff (°)	Difference between Pavilion Main 3 angle , ° (Avg) and Pavillion Main 4 angle , ° (Avg) .	PAV_MAIN_3_4_ANGLE_DIFF_DEG_DEV	(PAV_MAIN_3_ANGLE_DEG_AVG) - (PAV_MAIN_4_ANGLE_DEG_AVG)

Parameter Name	Description	Bookmark	Calculation
Pavilion Width Trikon Angle (°)	Sum of Pavilion Main angle , ° #1 and #3.	PAV_TRIKON_WIDTH_ANGLE_DEG	(PAV_MAIN_1_ANGLE_DEG_1) + (PAV_MAIN_1_ANGLE_DEG_3)
Pavilion Width Trikon Height (%)	Sum of Pavilion Main height , % #1 and #3.	PAV_TRIKON_WIDTH_HEIGHT_PC	(PAV_MAIN_1_HEIGHT_PC_1) + (PAV_MAIN_1_HEIGHT_PC_3)
Pavilion Length Trikon Angle (°)	Sum of Pavilion Main angle , ° #2 and #4.	PAV_TRIKON_LENGTH_ANGLE_DEG	(PAV_MAIN_1_ANGLE_DEG_2) + (PAV_MAIN_1_ANGLE_DEG_4)
Pavilion Length Trikon Height (%)	Sum of Pavilion Main height , % #2 and #4.	PAV_TRIKON_LENGTH_HEIGHT_PC	(PAV_MAIN_1_HEIGHT_PC_2) + (PAV_MAIN_1_HEIGHT_PC_4)

Parameter Name	Description	Bookmark	Calculation
Crown Angle (°)	Sum of Crown curve angle , ° #1 and #2 and Crown shoulder angle , ° #1 and #2.	CROWN_HEART_ANGLE_DEG	(CROWN_FANCY_CURVE_ANGLE_DEG_1) + (CROWN_FANCY_CURVE_ANGLE_DEG_2) + (CROWN_FANCY_SHOULDER_ANGLE_DEG_1) + (CROWN_FANCY_SHOULDER_ANGLE_DEG_2)
Crown Height (%)	Sum of Crown curve height , % #1 and #2 and Crown shoulder height , % #1 and #2.	CROWN_HEART_HEIGHT_PC	(CROWN_FANCY_CURVE_HEIGHT_PC_1) + (CROWN_FANCY_CURVE_HEIGHT_PC_2) + (CROWN_FANCY_SHOULDER_HEIGHT_PC_1) + (CROWN_FANCY_SHOULDER_HEIGHT_PC_2)
Pavilion Angle (°)	Sum of Pavilion curve angle , ° #1 and #2 and Pavilion shoulder angle , ° #1 and #2.	PAVILION_HEART_ANGLE_DEG	(PAVILION_FANCY_CURVE_ANGLE_DEG_1) + (PAVILION_FANCY_CURVE_ANGLE_DEG_2) + (PAVILION_FANCY_SHOULDER_ANGLE_DEG_1) + (PAVILION_FANCY_SHOULDER_ANGLE_DEG_2)
Pavilion Height (%)	Sum of Pavilion curve height , % #1 and #2 and Pavilion shoulder height , % #1 and #2.	PAVILION_HEART_HEIGHT_PC	(PAVILION_FANCY_CURVE_HEIGHT_PC_1) + (PAVILION_FANCY_CURVE_HEIGHT_PC_2) + (PAVILION_FANCY_SHOULDER_HEIGHT_PC_1) + (PAVILION_FANCY_SHOULDER_HEIGHT_PC_2)
Cul Width Shift (%)	Diffrence between values of Width culet shift ratio , %.	CULET_SHIFT_WIDTH_WISE_PC_DEV	(CULET_SHIFT_WIDTH_WISE_PC_1) - (CULET_SHIFT_WIDTH_WISE_PC_2)
Cul Length Shift (%)	Diffrence between values of Length-wise culet shift ratio , %.	CULET_SHIFT_LENGTH_WISE_PC_DEV	(CULET_SHIFT_LENGTH_WISE_PC_1) - (CULET_SHIFT_LENGTH_WISE_PC_2)

Parameter Name	Description	Bookmark	Calculation
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Star Width Angle (°)	Sum of Star facets angle , ° #1, #4, #5, #8.	STAR_LOGIC_1_ANGLE_DEG	(STAR_ANGLE_DEG_1) + (STAR_ANGLE_DEG_4) + (STAR_ANGLE_DEG_5) + (STAR_ANGLE_DEG_8)
Star Length Angle (°)	Sum of Star facets angle , ° #2, #3, #6, #7.	STAR_LOGIC_2_ANGLE_DEG	(STAR_ANGLE_DEG_2) + (STAR_ANGLE_DEG_3) + (STAR_ANGLE_DEG_6) + (STAR_ANGLE_DEG_7)
Pavilion Halves Curve Angle (°)	Sum of Lower girdle facets angle (°) #1, #8, #9, #16.	HALVES_LOGIC_1_ANGLE_DEG	(HALVES_ANGLE_DEG_1) + (HALVES_ANGLE_DEG_8) + (HALVES_ANGLE_DEG_9) + (HALVES_ANGLE_DEG_16)
Pavilion Halves Curve Height (%)	Sum of Lower girdle facets height (%) #1, #8, #9, #16.	HALVES_LOGIC_1_HEIGHT_PC	(HALVES_DEPTH_PC_1) + (HALVES_DEPTH_PC_8) + (HALVES_DEPTH_PC_9) + (HALVES_DEPTH_PC_16)
Pavilion Curve LGF (%)	Sum of Length Girdle Facet (%) #1, #8, #9, #16.	LENGTH_LOGIC_1_GIRDLE_FACET	(LENGTH_GIRDLE_FACET_1) + (LENGTH_GIRDLE_FACET_8) + (LENGTH_GIRDLE_FACET_9) + (LENGTH_GIRDLE_FACET_16)
Pavilion Halves Wing 1 Angle (°)	Sum of Lower girdle facets angle (°) #2, #7, #10, #15.	HALVES_LOGIC_2_ANGLE_DEG	(HALVES_ANGLE_DEG_2) + (HALVES_ANGLE_DEG_7) + (HALVES_ANGLE_DEG_10) + (HALVES_ANGLE_DEG_15)
Pavilion Halves Wing 1 Height (%)	Sum of Lower girdle facets height (%) #2, #7, #10, #15.	HALVES_LOGIC_2_HEIGHT_PC	(HALVES_DEPTH_PC_2) + (HALVES_DEPTH_PC_7) + (HALVES_DEPTH_PC_10) + (HALVES_DEPTH_PC_15)
Pavilion Wing 1 LGF (%)	Sum of Length Girdle Facet (%) #2, #7, #10, #15.	LENGTH_LOGIC_2_GIRDLE_FACET	(LENGTH_GIRDLE_FACET_2) + (LENGTH_GIRDLE_FACET_7) + (LENGTH_GIRDLE_FACET_10) + (LENGTH_GIRDLE_FACET_15)
Pavilion Halves Wing 2 Angle (°)	Sum of Lower girdle facets angle (°) #3, #6, #11, #14.	HALVES_LOGIC_3_ANGLE_DEG	(HALVES_ANGLE_DEG_3) + (HALVES_ANGLE_DEG_6) + (HALVES_ANGLE_DEG_11) + (HALVES_ANGLE_DEG_14)
Pavilion Halves Wing 2 Height (%)	Sum of Lower girdle facets height (%) #3, #6, #11, #14.	HALVES_LOGIC_3_HEIGHT_PC	(HALVES_DEPTH_PC_3) + (HALVES_DEPTH_PC_6) + (HALVES_DEPTH_PC_11) + (HALVES_DEPTH_PC_14)
Pavilion Wing 2 LGF (%)	Sum of Length Girdle Facet (%) #3, #6, #11, #14.	LENGTH_LOGIC_3_GIRDLE_FACET	(LENGTH_GIRDLE_FACET_3) + (LENGTH_GIRDLE_FACET_6) + (LENGTH_GIRDLE_FACET_11) + (LENGTH_GIRDLE_FACET_14)
Pavilion Halves Point Angle (°)	Sum of Lower girdle facets angle (°) #4, #5, #12, #13.	HALVES_LOGIC_4_ANGLE_DEG	(HALVES_ANGLE_DEG_4) + (HALVES_ANGLE_DEG_5) + (HALVES_ANGLE_DEG_12) + (HALVES_ANGLE_DEG_13)
Pavilion Halves Point Height (%)	Sum of Lower girdle facets height (%) #4, #5, #12, #13.	HALVES_LOGIC_4_HEIGHT_PC	(HALVES_DEPTH_PC_4) + (HALVES_DEPTH_PC_5) + (HALVES_DEPTH_PC_12) + (HALVES_DEPTH_PC_13)
Pavilion Point LGF (%)	Sum of Length Girdle Facet (%) #4, #5, #12, #13.	LENGTH_LOGIC_4_GIRDLE_FACET	(LENGTH_GIRDLE_FACET_4) + (LENGTH_GIRDLE_FACET_5) + (LENGTH_GIRDLE_FACET_12) + (LENGTH_GIRDLE_FACET_13)
Crown Cruve-Wing Degree Diff (°)	Difference between Crown curve angle , ° (Avg) and Crown wing angle , ° (Avg).	CRN_CURVE_WING_DIFF_DEG_DEV	(CROWN_FANCY_CURVE_ANGLE_DEG) - (CROWN_FANCY_WING_ANGLE_DEG)

Parameter Name	Description	Bookmark	Calculation
Star 1 Angle (°)	Sum of Star facets angle , ° #1 and #4.	STAR_LOGIC_1_ANGLE_DEG	(STAR_ANGLE_DEG_1) + (STAR_ANGLE_DEG_4)
Star 2 Angle (°)	Sum of Star facets angle , ° #5 and #8.	STAR_LOGIC_2_ANGLE_DEG	(STAR_ANGLE_DEG_5) + (STAR_ANGLE_DEG_8)
Star 3 Angle (°)	Sum of Star facets angle , ° #6 and #7.	STAR_LOGIC_3_ANGLE_DEG	(STAR_ANGLE_DEG_6) + (STAR_ANGLE_DEG_7)
Star 4 Angle (°)	Sum of Star facets angle , ° #2 and #3.	STAR_LOGIC_4_ANGLE_DEG	(STAR_ANGLE_DEG_2) + (STAR_ANGLE_DEG_3)
Upper 1 Angle (°)	Sum of Upper girdle facets angle , ° #1 and #8.	UPPER_LOGIC_1_ANGLE_DEG	(UPPER_ANGLE_DEG_1) + (UPPER_ANGLE_DEG_8)
Upper 1 Height (%)	Sum of Upper girdle facets height , % #1 and #8.	UPPER_LOGIC_1_HEIGHT_PC	(UPPER_HEIGHT_PC_1) + (UPPER_HEIGHT_PC_8)
Pavilion Halves 1 Angle (°)	Sum of Lower girdle facets angle , ° #1 and #8.	HALVES_LOGIC_1_ANGLE_DEG	(HALVES_ANGLE_DEG_1) + (HALVES_ANGLE_DEG_8)
Pavilion Halves 1 Height (%)	Sum of Lower girdle facets height , % #1 and #8.	HALVES_LOGIC_1_HEIGHT_PC	(HALVES_DEPTH_PC_1) + (HALVES_DEPTH_PC_8)
Lengh Girdle Facet 1 (%)	Sum of Length Girdle Facet , % #1 and #8.	LENGTH_LOGIC_1_GIRDLE_FA CET	(LENGTH_GIRDLE_FACET_1) + (LENGTH_GIRDLE_FACET_8)
Upper 2 Angle (°)	Sum of Upper girdle facets angle , ° #2 and #7.	UPPER_LOGIC_2_ANGLE_DEG	(UPPER_ANGLE_DEG_2) + (UPPER_ANGLE_DEG_7)
Upper 2 Height (%)	Sum of Upper girdle facets height , % #2 and #7.	UPPER_LOGIC_2_HEIGHT_PC	(UPPER_HEIGHT_PC_2) + (UPPER_HEIGHT_PC_7)
Pavilion Halves 2 Angle(°)	Sum of Lower girdle facets angle , ° #2 and #7.	HALVES_LOGIC_2_ANGLE_DEG	(HALVES_ANGLE_DEG_2) + (HALVES_ANGLE_DEG_7)
Pavilion Halves 2 Height (%)	Sum of Lower girdle facets height , % #2 and #7.	HALVES_LOGIC_2_HEIGHT_PC	(HALVES_DEPTH_PC_2) + (HALVES_DEPTH_PC_7)
Lengh Girdle Facet 2 (%)	Sum of Length Girdle Facet , % #2 and #7.	LENGTH_LOGIC_2_GIRDLE_FA CET	(LENGTH_GIRDLE_FACET_2) + (LENGTH_GIRDLE_FACET_7)
Upper 3 Angle (°)	Sum of Upper girdle facets angle , ° #3 and #6.	UPPER_LOGIC_3_ANGLE_DEG	(UPPER_ANGLE_DEG_3) + (UPPER_ANGLE_DEG_6)
Upper 3 Height (%)	Sum of Upper girdle facets height , % #3 and #6.	UPPER_LOGIC_3_HEIGHT_PC	(UPPER_HEIGHT_PC_3) + (UPPER_HEIGHT_PC_6)
Pavilion Halves 3 Angle(°)	Sum of Lower girdle facets angle , ° #3 and #6.	HALVES_LOGIC_3_ANGLE_DEG	(HALVES_ANGLE_DEG_3) + (HALVES_ANGLE_DEG_6)
Pavilion Halves 3 Height (%)	Sum of Lower girdle facets height , % #3 and #6.	HALVES_LOGIC_3_HEIGHT_PC	(HALVES_DEPTH_PC_3) + (HALVES_DEPTH_PC_6)
Lengh Girdle Facet 3 (%)	Sum of Length Girdle Facet , % #3 and #6.	LENGTH_LOGIC_3_GIRDLE_FA CET	(LENGTH_GIRDLE_FACET_3) + (LENGTH_GIRDLE_FACET_6)
Upper 4 Angle (°)	Sum of Upper girdle facets angle , ° #4 and #5.	UPPER_LOGIC_4_ANGLE_DEG	(UPPER_ANGLE_DEG_4) + (UPPER_ANGLE_DEG_5)
Upper 4 Height (%)	Sum of Upper girdle facets height , % #4 and #5.	UPPER_LOGIC_4_HEIGHT_PC	(UPPER_HEIGHT_PC_4) + (UPPER_HEIGHT_PC_5)
Pavilion Halves 4 Angle(°)	Sum of Lower girdle facets angle , ° #4 and #5.	HALVES_LOGIC_4_ANGLE_DEG	(HALVES_ANGLE_DEG_4) + (HALVES_ANGLE_DEG_5)
Pavilion Halves 4 Height (%)	Sum of Lower girdle facets height , % #4 and #5.	HALVES_LOGIC_4_HEIGHT_PC	(HALVES_DEPTH_PC_4) + (HALVES_DEPTH_PC_5)
Lengh Girdle Facet 4 (%)	Sum of Length Girdle Facet , % #4 and #5.	LENGTH_LOGIC_4_GIRDLE_FA CET	(LENGTH_GIRDLE_FACET_4) + (LENGTH_GIRDLE_FACET_5)
Upper 5 Angle (°)	Sum of Upper girdle facets angle , ° #9, #10, #11, #12, #13, #14, #15 and #16.	UPPER_LOGIC_5_ANGLE_DEG	(UPPER_ANGLE_DEG_9) + (UPPER_ANGLE_DEG_10) + (UPPER_ANGLE_DEG_11) + (UPPER_ANGLE_DEG_12) + (UPPER_ANGLE_DEG_13) + (UPPER_ANGLE_DEG_14) + (UPPER_ANGLE_DEG_15) + (UPPER_ANGLE_DEG_16)
Upper 5 Height (%)	Sum of Upper girdle facets height , % #9, #10, #11, #12, #13, #14, #15 and #16.	UPPER_LOGIC_5_HEIGHT_PC	(UPPER_HEIGHT_PC_9) + (UPPER_HEIGHT_PC_10) + (UPPER_HEIGHT_PC_11) + (UPPER_HEIGHT_PC_12) + (UPPER_HEIGHT_PC_13) + (UPPER_HEIGHT_PC_14) + (UPPER_HEIGHT_PC_15) + (UPPER_HEIGHT_PC_16)
Pavilion Halves 5 Angle(°)	Sum of Lower girdle facets angle , ° #9, #10, #11, #12, #13, #14, #15 and #16.	HALVES_LOGIC_5_ANGLE_DEG	(HALVES_ANGLE_DEG_9) + (HALVES_ANGLE_DEG_10) + (HALVES_ANGLE_DEG_11) + (HALVES_ANGLE_DEG_12) + (HALVES_ANGLE_DEG_13) + (HALVES_ANGLE_DEG_14) + (HALVES_ANGLE_DEG_15) + (HALVES_ANGLE_DEG_16)

