

# 2025-12-11 - HP Carbon 3.0.3

Here you can find information about what is new in HP Carbon version 3.0.3.

 This version is available for [download](#) from the Octonus official web site.

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Allocation - global algorithms

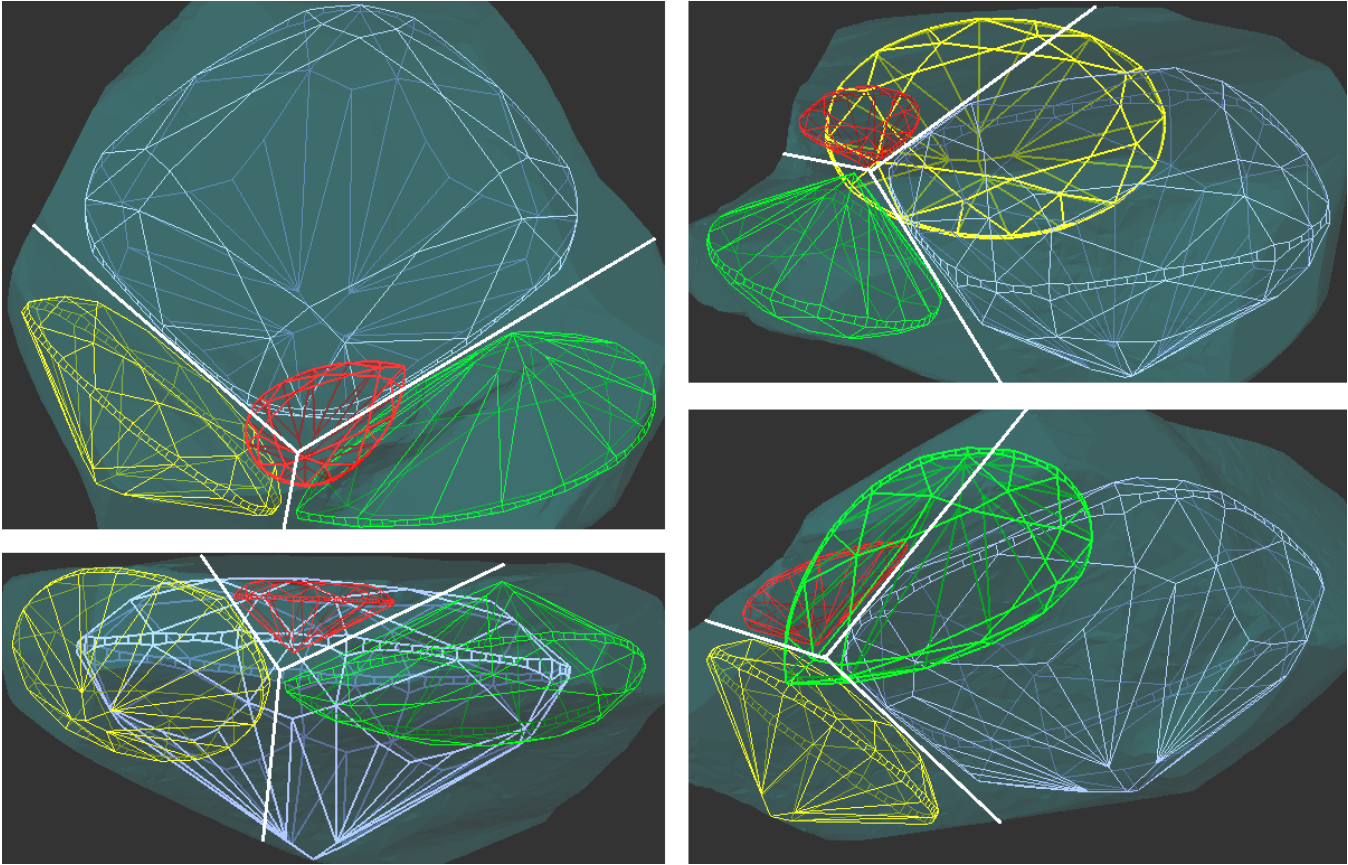
24. MultiDiamond and 24. MultiNext algorithms

| Video   Algorithms "24. MultiDiamond" and "24. MultiNext"                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                          |                                                                                               |                  |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------|-------|
| Published:                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2024, December 13                                                        | Last Updated:                                                                                 | 2025, January 10 | v.2.3 |
| Your browser does not support the HTML5 video element                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |                                                                                               |                  |       |
| <div>Video summary:</div> <ul style="list-style-type: none"><li>Introducing the new allocation algorithms: "24. MultiDiamond" and "24. MultiNext"</li><li>Solutions from the "24. MultiDiamond" algorithm can always be sawn, and we provide a sequence of sawing layers and pies to guide this process.</li><li>Specified number of diamonds in solutions</li><li>Solutions can always be sawn</li><li>Variation modes: FixedForm and FlexibleForm</li></ul> |                                                                          |                                                                                               |                  |       |
| Video keywords: Parameters, girdle shape, comparison with ideal shape, quality control, reports                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                                                                               |                  |       |
| Data                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <a href="#">CantSawing.ox2z</a><br><a href="#">CVD_MultiDiamond.ox2z</a> |                                                                                               |                  |       |
| Published in:                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Release Notes                                                            | <a href="#">2025-12-11 - HP Carbon 3.0.3</a>                                                  |                  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Documentation                                                            | NA                                                                                            |                  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Playlists                                                                | NA                                                                                            |                  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Also                                                                     | <a href="#">As Separate Page</a>   <a href="#">On YouTube</a>   <a href="#">Specification</a> |                  |       |

24. MultiDiamond

Allocation of 3 (three) or more diamonds has become the standard for all sizes and types of rough stones. On average, a solution contains 5 (five) diamonds. An important question when allocating multiple diamonds is "How to perform Sawing?" Not all solutions with 4 (four) or more diamonds can be sawn using modern sawing technologies.

The picture shows an example that cannot be sawn:



Introducing the new algorithm 24. MultiDiamond

Solutions generated by the 24. MultiDiamond algorithm can always be sawn, and we provide a sequence of sawing layers and pies to guide this process.

Users can specify the desired number of diamonds in a solution, and the algorithm will allocate that exact quantity of diamonds in the scan model. When searching for the 3 (three) largest diamonds, the algorithm prioritizes maximizing price. From 4 (four) diamonds onwards, the algorithm also considers the need for existing sawing.

Carbon - [CVD\_MultiDiamond.ox2z]

File Edit View Inclusion Window Settings Help

Scan Inclusions Recut Sawings Clarity Photoreal Colors Galahad G1 G2 Compass Fancy {DEV} Opening

Allocation solutions

Plans & Scans

Compare Standard Report

Price Mass BBB Yield Diam 1 Mass Clarity Gr Profile

1 28231\$ 3.4912 BBCEMEE 1 46.68% Brilliant 2.2061 VS2 D EX Commercial

Plan 1

Diamond statistics Show remaining layer part (dotted)

| Diam # | Cut                                        | Price       | scou          | PPC |
|--------|--------------------------------------------|-------------|---------------|-----|
| Diam 1 | Brilliant                                  | 25740\$ +0% | 11700.00\$/ct | 2.2 |
| Diam 2 | Brilliant                                  | 1983\$ +0%  | 3965.00\$/ct  | 0.5 |
| Diam 3 | CushionRectangular_PM4_PG8_PH24_PBrill_C32 | 231\$ +0%   | 923.00\$/ct   | 0.2 |
| Diam 4 | Emerald_3x4_GRID                           | 89\$ +0%    | 494.00\$/ct   | 0.1 |
| Diam 5 | Marquise_WBT_P24C32_GWGoldStar             | 98\$ +0%    | 651.80\$/ct   | 0.1 |
| Diam 6 | Emerald_3x4_GRID                           | 46\$ +0%    | 508.33\$/ct   | 0.0 |
| Diam 7 | Emerald_3x4_GRID                           | 46\$ +0%    | 508.33\$/ct   | 0.0 |

| Layer   | Diam 1 | Diam 2 | Mass     | Thickness |
|---------|--------|--------|----------|-----------|
| Pie 1   | Diam 3 | ----   | 0.2478ct | 0.15mm    |
| Pie 2   | Diam 4 | ----   | 0.2600ct | 0.15mm    |
| Pie 3   | Diam 5 | ----   | 0.1643ct | 0.15mm    |
| Pie 4   | Diam 6 | ----   | 0.3330ct | 0.15mm    |
| Layer 1 | Diam 2 | ----   | 0.1690ct | 0.15mm    |
| Layer 2 | Diam 7 | ----   | 0.0895ct | 0.15mm    |

Inclusions (325) QC Filter

Appraiser Manual appraiser selection

Diamond Allocation

Algorithm: 24. MultiDiamond + Smart Recut

Cutbook: Favorites 10/10

Brilliant Princess 4S Radiant Cushion Sq PM4 PG8 PH74 PRill CushionRectangl PM4 PG8 PH74 PRill

Emerald 3x4 GRID Marquise WBT P24C32 GWGoldStar Oval PM4 PH16 C32 GWGoldStar Oval W8I C32 G64 F24 2023 MAY 18 Pear PM8 PH26 C32 GWGoldStar

Diamond grade: EX

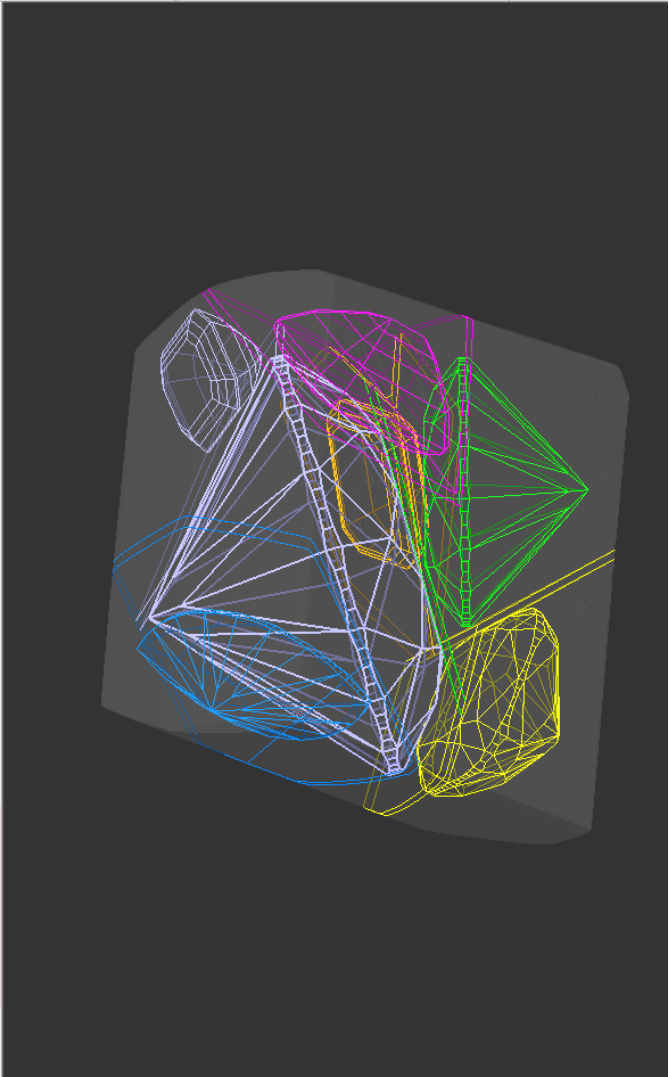
Diamond quantity: 3 5 7 9

Variation: FixedForm

Sawing Layer: 0.09 mm, (fixed)

Sawing Parameters

Start Allocation

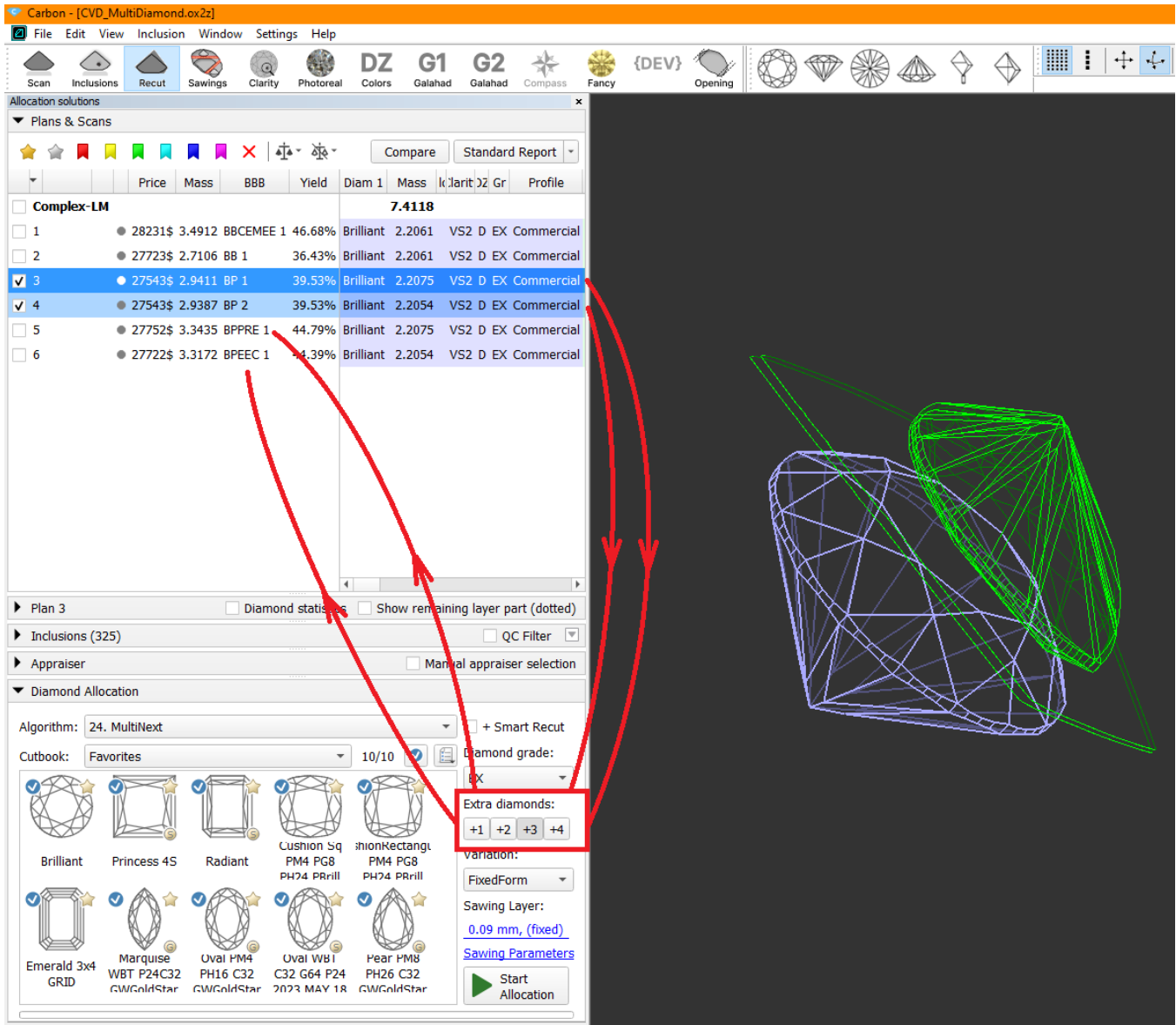


Furthermore, users can adjust the thickness of sawing planes used in the optimization process, and choose the **Variation** mode. Currently, two options are available:

- **FixedForm** to produce solutions exactly of the same form as the allocation forms registered within the cut. Only scale or position may be changed;
- **FlexibleForm** to produce solutions in the limits specified by the appraiser.

24. MultiNext

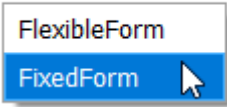
The algorithm **24. MultiNext** has also been added. It operates on one or multiple selected solutions. The user chooses how many extra diamonds need to be added to the selected solutions. In the case of multiple selected solutions, the algorithm will work independently and in parallel on each of them. **24. MultiNext** algorithm use s an allocation method identical to **24. MultiDiamond**" starting from third solutions. The result of **24. MultiNext** can always be sawn with pie sawing.



The **24. MultiNext** algorithm (similar to described above 24. MultiDiamond algorithm) provides two options in the **Variation** dropdown menu:

- **FixedForm** to produce solutions exactly of the same form as the allocation forms registered within the cut. Only scale or position may be changed;
- **FlexibleForm** to produce solutions in the limits specified by the appraiser.

Variation:



Compared to the previously released **24. MultiNext (FixedForm, BasicSawing)** algorithm in HPCarbon version 2.0.9, the new **24. MultiNext** algorithm with chosen **FixedForm** option:

- Is faster;
- In most cases provides higher solution price;
- Creates solutions that frequently cannot be sawn without using Pie Sawing.

## 25. Semicut (final) algorithm

| Video   Algorithm 25. Semicut (final) |                 |               |                 |       |
|---------------------------------------|-----------------|---------------|-----------------|-------|
| Published:                            | 2025, August 28 | Last Updated: | 2025, August 28 | v.1.0 |

Your browser does not support the HTML5 video element

Video summary:

Introducing the updated algorithm: "25. Semicut (final)".

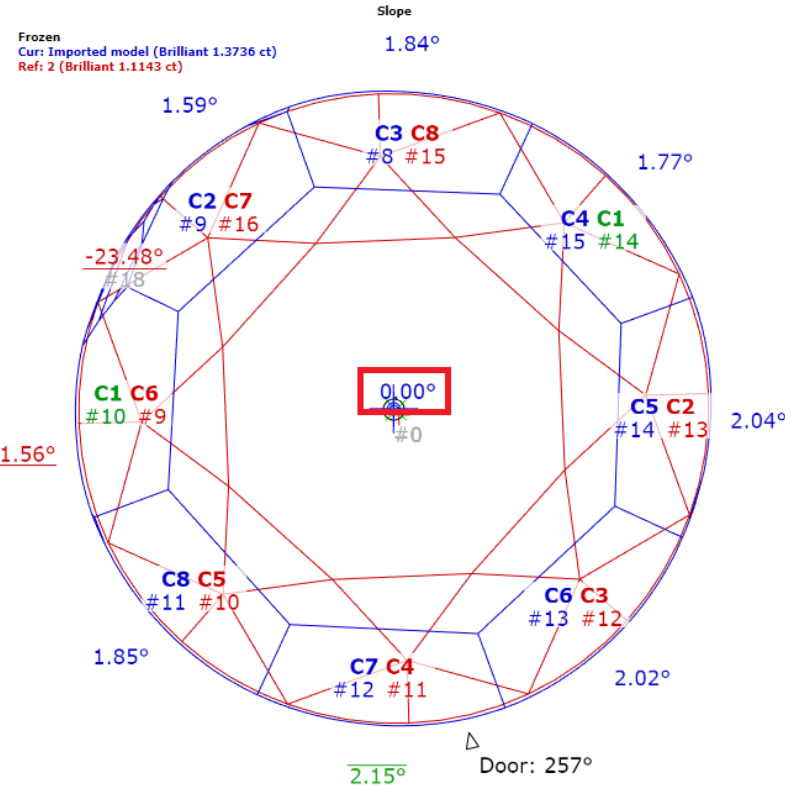
This method is used for semipolished stones to ensure that the solution maintains the Table normal of the scanned model. This allows for the cutting of other facets without altering the Table facet angle.

Video keywords: allocation, table match, Semicut (final), planning, preforms

|               |                                   |                                               |
|---------------|-----------------------------------|-----------------------------------------------|
| Data          | Sample_diamond_Semicut_final.ox2z |                                               |
| Published in: | Release Notes                     | 2025-12-11 - HP Carbon 3.0.3                  |
|               | Documentation                     | NA                                            |
|               | Playlists                         | NA                                            |
|               | Also                              | As Separate Page   On YouTube   Specification |

Introducing the updated algorithm **25. Semicut (final)**.

This method is used for semipolished stones to ensure that the solution maintains the Table normal of the scanned model. This allows for the cutting of other facets without altering the Table facet angle.



Key advantages over the **06. Semicut (final)** algorithm:

- 1. It uses preforms to increase the solution's weight.
- 2. It features improved adjustment of the solution's rotation around the Table normal to find the optimal weight.
- 3. It is built on the 23. Single algorithm and incorporates all its modern features.

On semipolished stones with a defined Table facet and girdle, 25. Semicut (final) with the Brilliant cut shows an average improvement of 0.5% in mass and 1% in price compared to 06. Semicut (final). The average processing time with one cut is approximately 3 seconds.

25. Chess algorithm

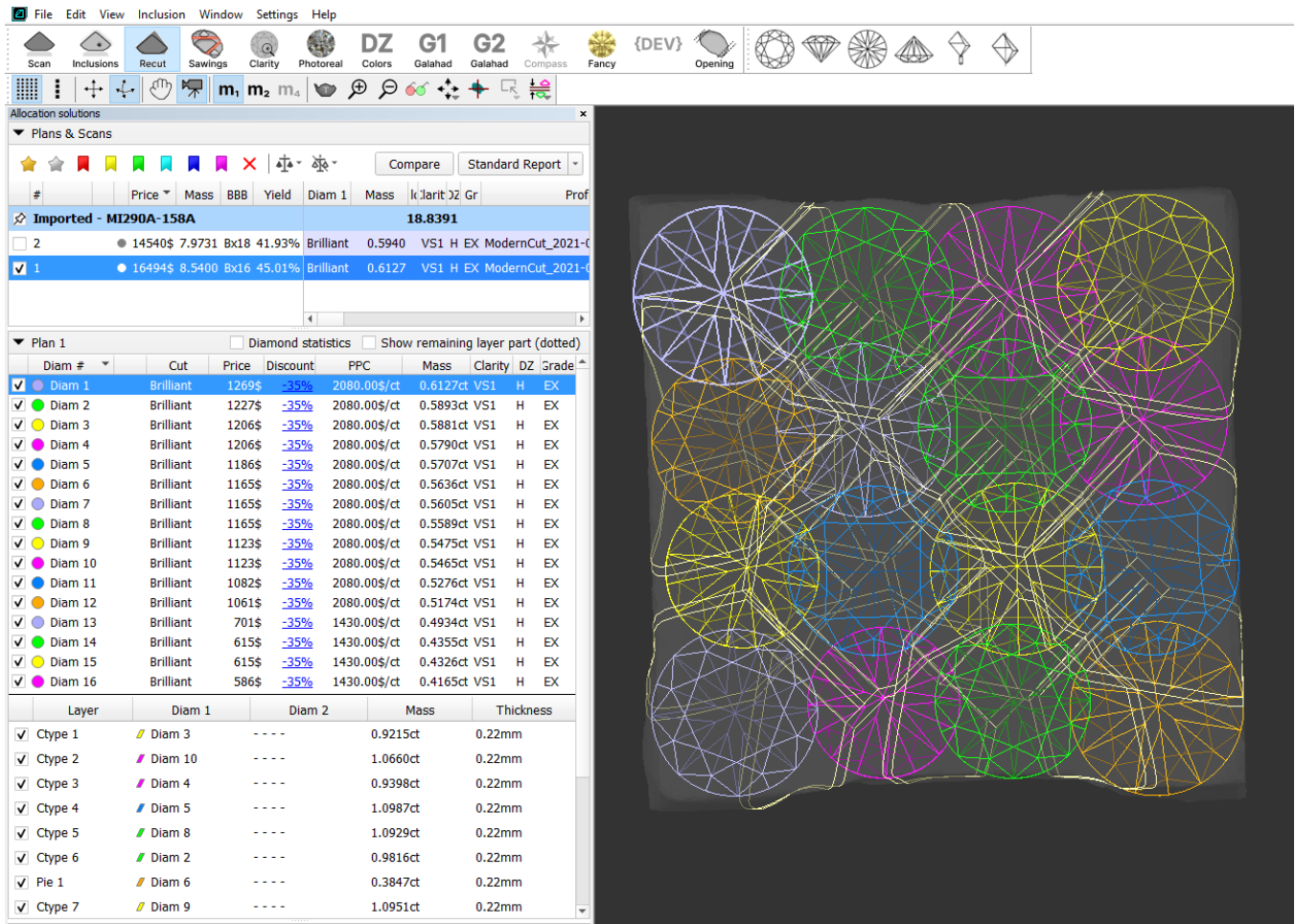
Multi-diamond optimization algorithms primarily operate on a greedy principle. Each subsequent diamond tries to maximize its own volume, paying little attention to the space it leaves for the others. This greed can lead to inefficient use of the original rough's space. While various balancing techniques exist—where earlier diamonds yield some of their space to later ones to increase the total value—the problem becomes intractable within a reasonable time as the number of diamonds increases and the rough becomes more complex due to cavities and inclusions. This forces a reliance on the initial luck of the greedy approach.

With CVD diamonds, however, it is possible to grow diamonds of a standardized shape — wide plates with a relatively low height. Furthermore, the number of inclusions decreases every year, and they are mostly located near the edges, which simply reduces the usable plate size without affecting this shape uniformity.

This standardization of the input data allowed us to create a new algorithm based on principles from the theory of packing space with identical objects.

Introducing the **25. Chess algorithm**.

It works by first constructing an optimal cutting lattice for the entire volume and then searching for the best diamonds within it, taking into account the specifics of the input model and inclusions.



There is the project for above illustration - [Chess\\_Demo.ox2z](#)

This algorithm is more efficient than greedy methods. And as CVD diamonds become purer over the years, the results of the **25. Chess** algorithm will become increasingly flawless. It also allows for finding multiple diamonds of similar mass from the same rough, which carries additional value.

The algorithm is currently under active development and can be considered a demo version. It fully supports only the Brilliant cut. You can select a different cut, and the algorithm will search for it during the selection phase, but the optimal cutting lattice will still be built for the Brilliant cut. In future updates, we will add full support for other cuts, starting with rectangular StepCuts.

▼ Appraiser

Cut: Brilliant

Appraiser: GIA Facetware + MyRound

Profile: MyRound\_ModernCut\_2021-04-29\_SweetLine

Hide Editor

☐ Manual appraiser selection

▼ Diamond Allocation

Algorithm: 25. Chess

☐ + Smart Recut

Cutbook: Favorites

1/14

Brilliant

Princess 4S

Radiant

Cushion Sq PM4

ionRectan PM4 PG8

Em1

Em2

Emerald 3x4 GRID

EmeraldForCl

Marquise WBT

Oval PM4 PH16 C32

Oval WBT C32 G64

Pear PM8 PH26 C32

Pear PM8 PH26 C32

Variation: FlexibleForm

Sawing Layer: 0.22 mm, (auto)  
[Sawing Parameters](#)

Start Allocation

The following settings, which affect all stages of the algorithm, are currently available:

- Cut appraiser and profile
- Sawing thickness
- Variation: FlexibleForm / FixedForm

Batch allocation

| Video   Batch allocation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                                              |               |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------|---------------|-------|
| Published:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2025, June 16 | Last Updated:                                | 2025, June 16 | v.2.1 |
| Your browser does not support the HTML5 video element                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                                              |               |       |
| <div>Video summary:</div> <p>Batch allocation is a proven method in diamond planning for handling large volumes efficiently. Its effectiveness depends on the power of the underlying algorithms.</p> <p>Carbon now supports batch allocation, offering key advantages:</p> <ul style="list-style-type: none"><li>• Uses advanced Carbon cuts with auto-linked appraiser</li><li>• Supports SmartRecut and other powerful features</li></ul> <p>We plan to enhance this tool further — including clarity variation, algorithm selection per project, and more smart automation.</p> <p>Video keywords: batch allocation, algorithms, planning, smart recut</p> |               |                                              |               |       |
| Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A           |                                              |               |       |
| Published in:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Release Notes | <a href="#">2025-12-11 - HP Carbon 3.0.3</a> |               |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Documentation | NA                                           |               |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Playlists     | NA                                           |               |       |

There is a plan to improve the batch allocation in the next release version and add more flexibility.

### Green inclusions behavior update

#### Why the change?

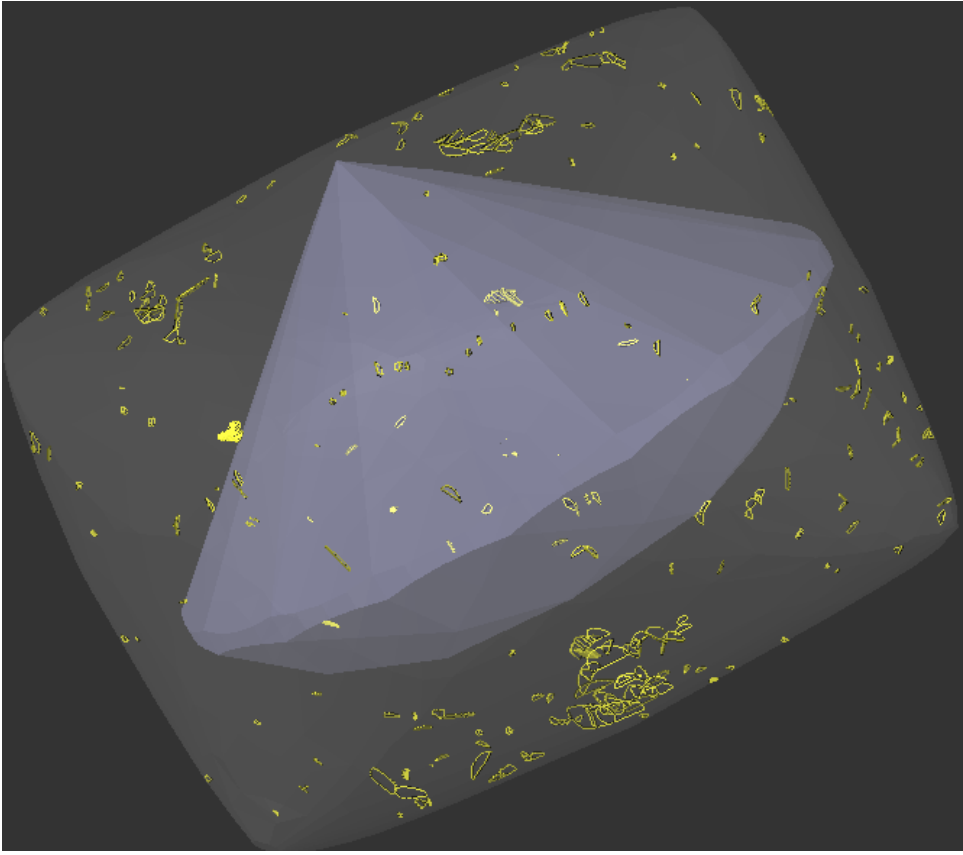
Some customers evaluate results using external price lists that our algorithms cannot access. They need a simpler, faster way to manually guide the allocation algorithms. Specifically, they want direct control over which inclusions are prohibited in solutions and which ones factor into the final price. In earlier versions, users marking inclusions as green expected a maximum-volume solution, ignoring the "permitted green" inclusions. However, the algorithm instead reduced volume to create a cleaner, more expensive result per its built-in pricing.

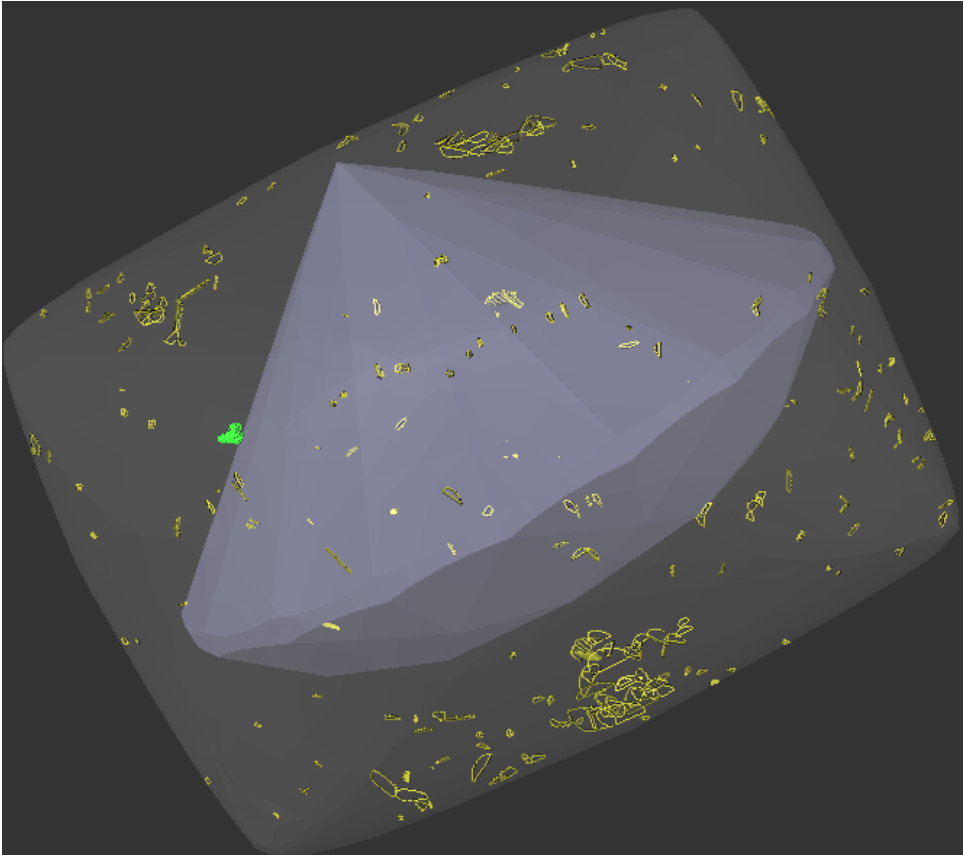
There is example where the change in behavior of green inclusions is shown obviously:

[Carbon3.0.3\\_GreenInclusions\\_Demo.ox2z](#)

Before

Green and Yellow inclusions produces same result





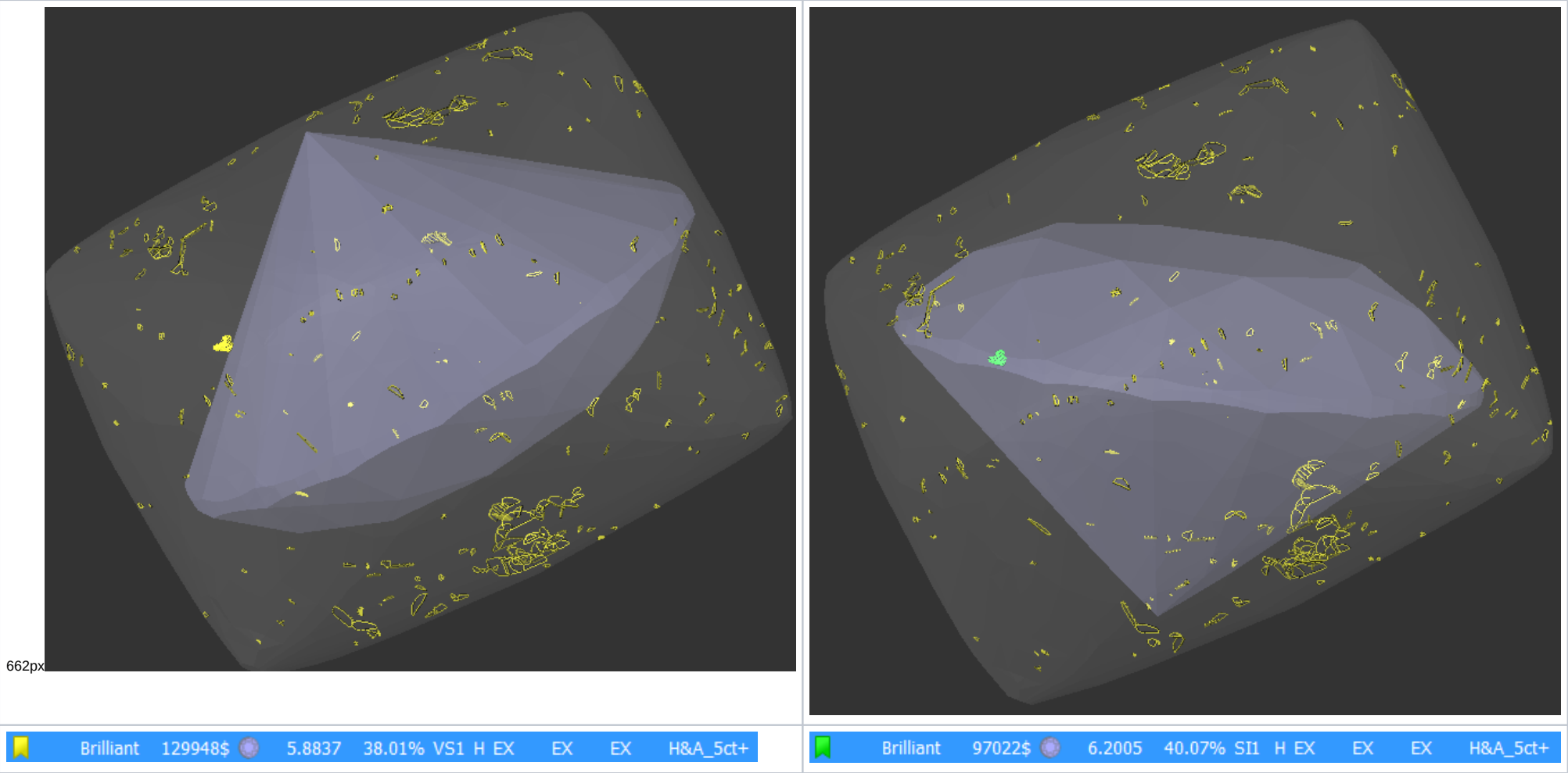
 Brilliant 129948\$  5.8837 38.01% VS1 H EX EX EX H&A\_5ct+

 Brilliant 129948\$  5.8837 38.01% VS1 H EX EX EX H&A\_5ct+

Now

Yellow

Green. According to user goal



What's new?

To resolve this and support different users workflows, **we have changed the behavior of green inclusions in the allocation algorithms**. Each Inclusion Color Status now has a unique role and you can choose which inclusion color statuses are convenient for you to use.

Inclusions participate in two important stages:

- 1. Influences how allocation algorithms find solutions.
- 2. Determines the final clarity and price of a solution.

Within the allocation algorithms, there are three options for an inclusion:

- **Forbid**: The solution must not contain this inclusion.
- **Ignore**: The solution may contain the inclusion without affecting the forecasted price and the search for the optimal solution. It's treated as non-existent during allocation.
- **Algorithmic choice**: The solution may either contain the inclusion or not. The forecasted clarity and price of a solution candidate change based on the inclusions it contains. The algorithm evaluates and selects solutions using this inclusion-dependent forecasted price.

In the final solution assessment, inclusions can influence in two ways:

- **Ignore**: Does not affect the solution's final clarity or price.
- **Consideration**: If contained, the solution's clarity is downgraded to the inclusion's clarity.

A complete table of properties for each color status in Carbon 2.3.2 is provided below.

|        |                    |               |
|--------|--------------------|---------------|
| Gray   | Ignore             | Ignore        |
| Green  | <b>Ignore</b>      | Consideration |
| Yellow | Algorithmic choice | Consideration |
| Red    | Forbid             | Consideration |

In versions prior to Carbon 2.3.2, green inclusions behaved identically to yellow ones. If you were satisfied with the old behavior, your new effective color set is Gray, Yellow, and Red. Simply recolor your old green inclusions to yellow.

How it works?

When to use each color status:

**Gray**: For inclusions you consider physically absent or so insignificant they won't affect the final product price. They have no effect anywhere in the program.

**Green:** For inclusions you want to ignore during allocation but consider in the final assessment.

- *Use Case 1 (Green-Red workflow):* Speed up individual allocation runs by removing yellow inclusions. Manually select Green-Red inclusion subsets for sequential global/local allocation runs. While still seeing their impact on final clarity, otherwise, your path is "Gray-Red workflow".
- *Use Case 2 (Custom pricing):* Force the algorithm to find larger, less clean solutions optimal for your external price list, not Carbon's built-in ones.

**Yellow** (Trust the Algorithm): The default for optimization. The allocation algorithms decide to include or exclude these inclusions to maximize objective functions like price.

**Red:** Strictly forbidden from appearing in algorithm-generated solutions. However, manual manipulation may inadvertently leave them inside a solution.

The **Clarity Diversity** parameter relies on the forecasted price during allocation. Therefore, only inclusions that participate in algorithm price forecasting (**Yellow** status) affect Diversity. Gray and Green inclusions are ignored, and Red inclusions are forbidden.

For convenient personalized work with inclusion clarity and color status, we have developed a new interface, which you can read about in the chapter "[Batch Operations Panel for Inclusions](#)".

## Allocation - manual tools

### Fast Swim

Operators use manual tools during planning after getting the initial solution of global allocation. One of them is a movement of layer and recalculation of diamonds allocation. This operation is required both for natural rough diamonds and grown CVD diamonds to get symmetrical solutions, or fixed mass solutions (such as 1ct+1ct, 1ct+2ct). Current algorithms may not provide that kind of solution. However, you can achieve the desired result manually by using the movement panel for the layer and applying the Swim algorithm to each diamond individually. It takes time.

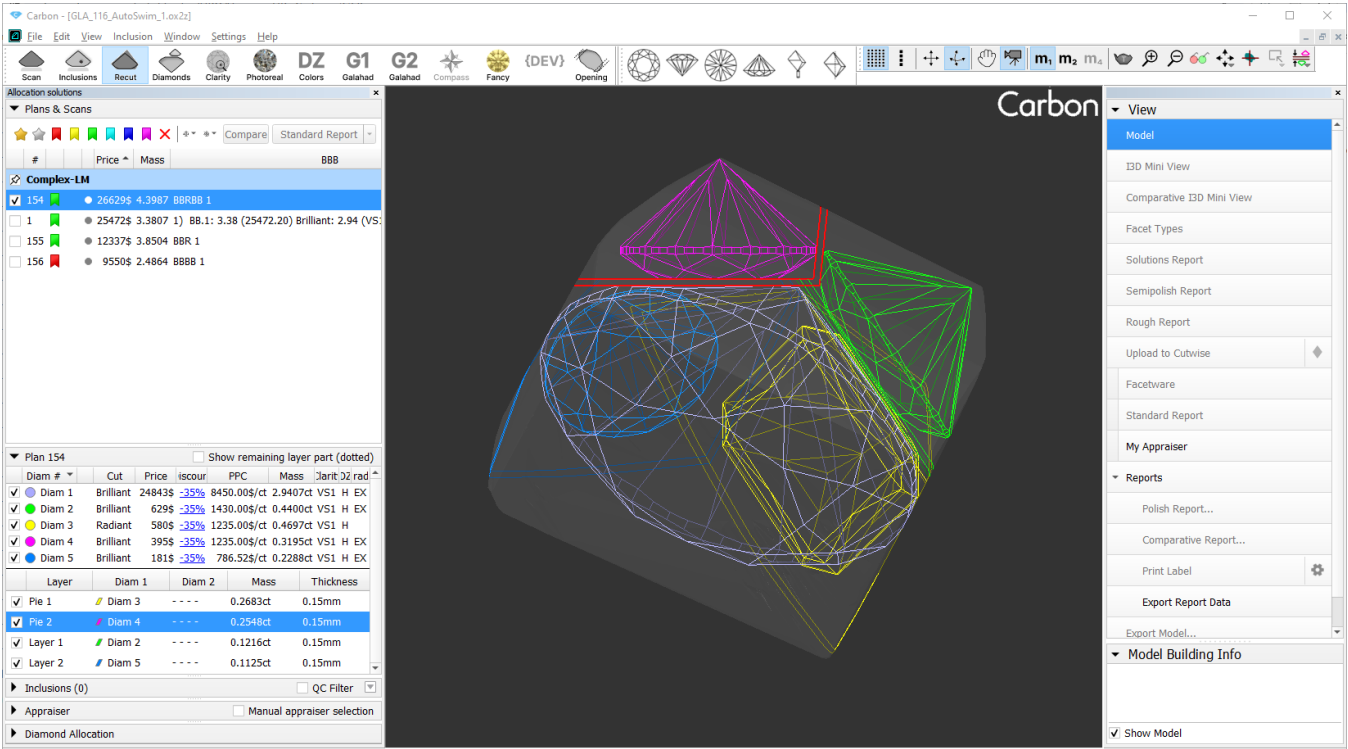
We have developed a mode that eliminates the need for manual use of the Swim algorithm, saving you valuable time.

| Video   Fast Swim - manual allocation tool by layer or pie movement                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |                                                                                               |               |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------|---------------|-------|
| Published:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2024, December 13                     | Last Updated:                                                                                 | 2025, June 17 | v.4.5 |
| Your browser does not support the HTML5 video element                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                       |                                                                                               |               |       |
| <b>Video summary:</b><br><br>Operators currently use manual tools to adjust diamond allocations for symmetry or fixed mass solutions, which existing algorithms may not provide. A new fast-swim mode has been developed to automate this process, saving time. By selecting this mode, moving a layer or pie automatically adjusts the associated diamonds, displaying brief information and price changes. This resulted in a higher-value solution with two symmetrical 0.5-carat diamonds. |                                       |                                                                                               |               |       |
| <b>Video keywords:</b> fast swim, auto-swim, auto swim, swim, layer, pie, movement, adjustment                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                                                                                               |               |       |
| Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <a href="#">Fast_swim_sample.ox2z</a> |                                                                                               |               |       |
| Published in:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Release Notes                         | <a href="#">2025-12-11 - HP Carbon 3.0.3</a>                                                  |               |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Documentation                         | NA                                                                                            |               |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Playlists                             | NA                                                                                            |               |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Also                                  | <a href="#">As Separate Page</a>   <a href="#">On YouTube</a>   <a href="#">Specification</a> |               |       |

### Support for Solutions with Arbitrary Numbers of Polished Diamonds

The Fast Swim processes solutions containing any number of **polished diamonds**. The order of layers in the solution defines the **working zone** for each polished diamond, where the **Bound Swim** algorithm is executed.

- When the **first layer** is moved, Bound Swim runs for **all polished diamonds** in the solution.
- Typically, each layer isolates one polished diamond from the remaining ones.
- For subsequent planes (second, third, etc.), the working zone remains unchanged for previously isolated polished diamonds, and the algorithm **is not triggered** for them.



### Compatibility with Different Section Types (Layer, Pie)

The algorithm now supports **all section types**, including:

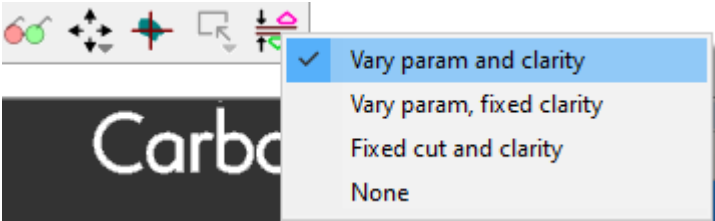
- **Layer:** Traditional planar sections.
- **Pie:** Two planes in one section (newly supported).

**Operational Notes:**

- Pie sections can only be moved or rotated **as a single unit**.
- Adjustment methods:
  - Direct manipulation in the 3D scene (mouse controls).
  - Precision editing via the **Movement** panel.
- **Restriction:** Angle adjustment between planes within a single Pie section is currently unavailable.

### Algorithm Selection Integrated into Main Toolbar

The **Fast Swim** algorithm settings (activated after plane adjustment) are accessible in the main toolbar.

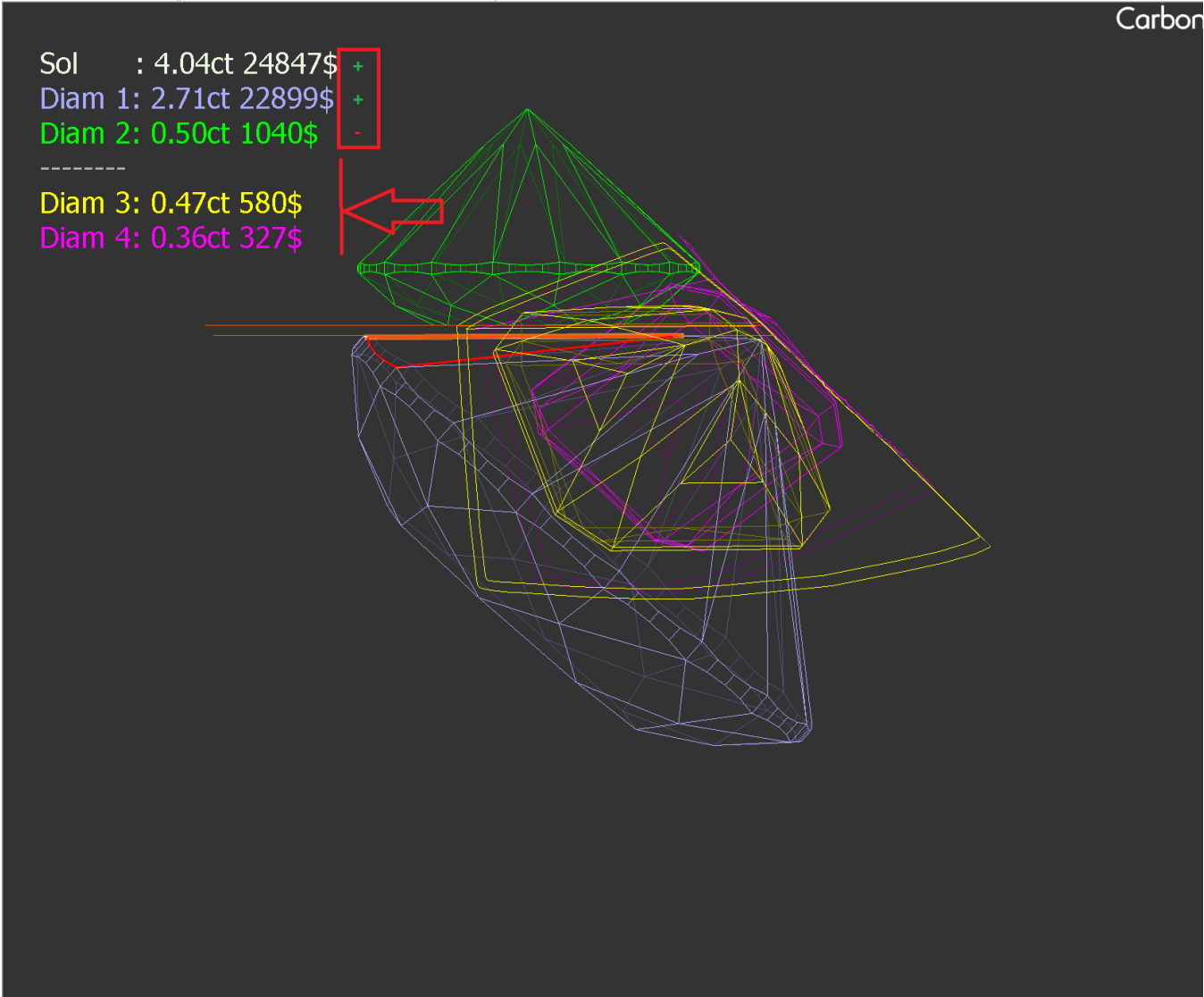


Available modes:

|                                  |                                                                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vary param and clarity</b>    | Maximizes solution value by optimizing polished diamond parameters <i>and</i> evaluating multiple clarity groups (inclusion sets). Default mode. |
| <b>Vary param, fixed clarity</b> | Optimizes solutions by adjusting polished diamond parameters <i>only</i> (current clarity group remains unchanged).                              |
| <b>Fixed cut and clarity</b>     | Uses predefined fixed polished diamond parameters and the current clarity group.                                                                 |
| <b>None</b>                      | No automatic optimization after plane movement.                                                                                                  |

### Detailed solution information in the Scene

- In **Fast Swim**, extended solution details have been moved to the **top-left corner**.
- Price changes for diamonds and the solution itself are now marked with **+/-** signs.
- Below a dotted line in the table, you'll see information about diamonds that cannot be modified when adjusting the current saw.
- This compact summary automatically disappears after 30 seconds.



Quick Sandwich tool

A Quick Sandwich tool has been added, which makes it possible to separate a smaller peace of inclusion. This may increase plan weight with the same clarity.

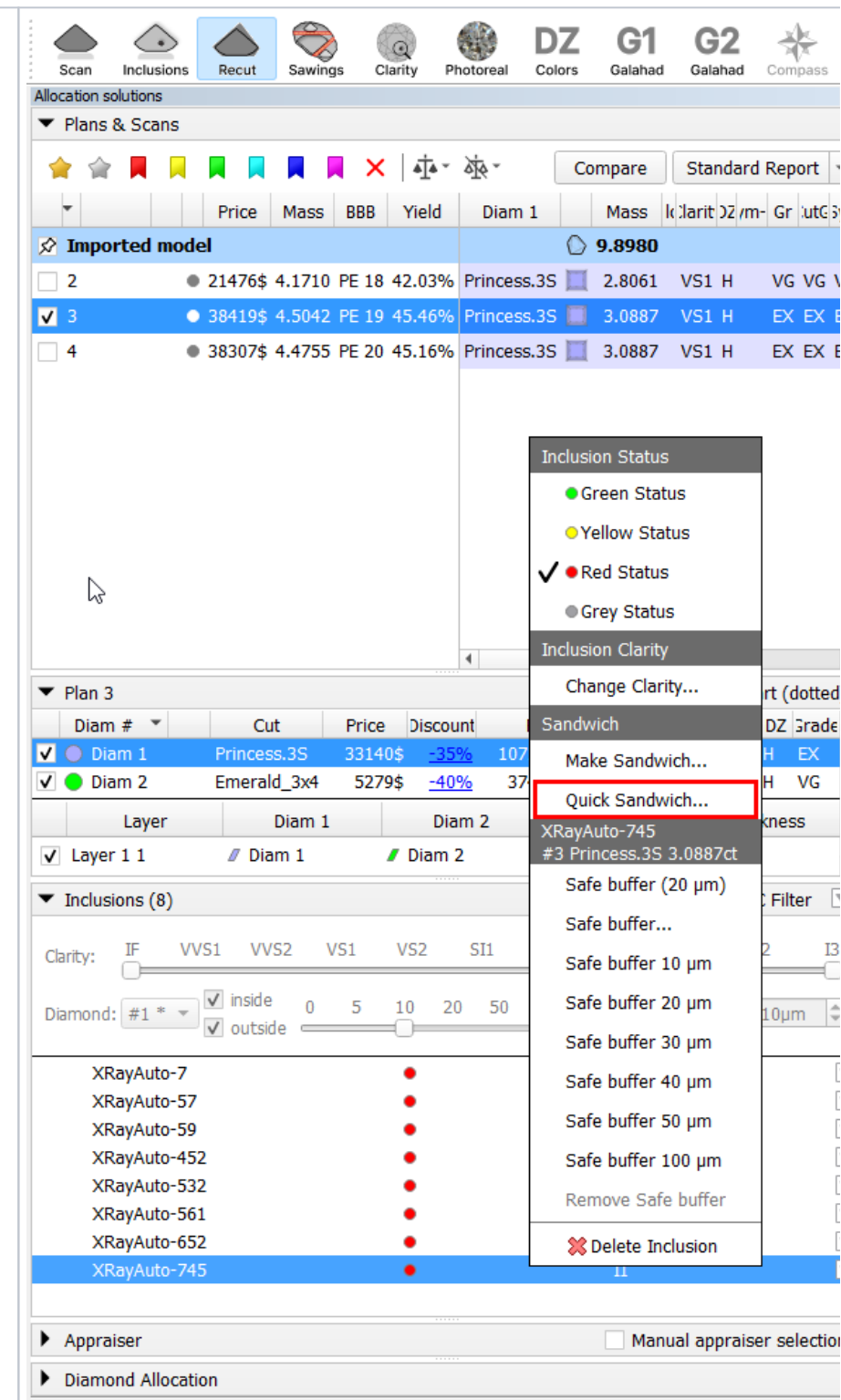
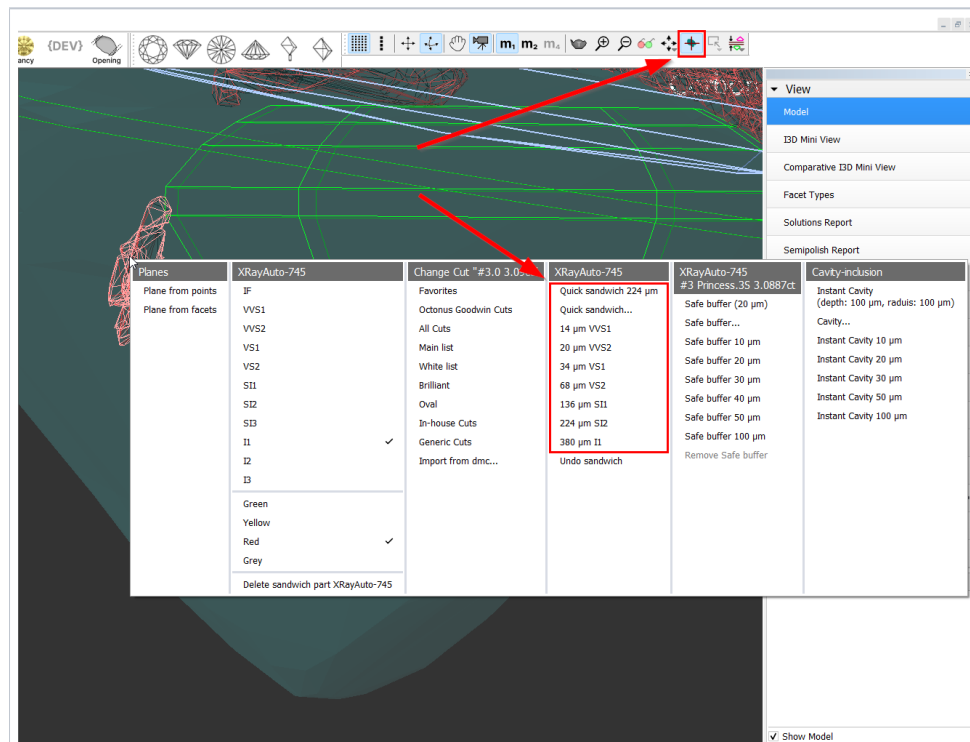
| Video   Quick sandwich - Tool to separate part of inclusion. Episode 2                                                                                          |                                            |                                                                                               |               |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------|---------------|-------|
| Published:                                                                                                                                                      | 2025, June 11                              | Last Updated:                                                                                 | 2025, June 11 | v.1.2 |
| Your browser does not support the HTML5 video element                                                                                                           |                                            |                                                                                               |               |       |
| <b>Video summary:</b><br>A Quick Sandwich tool makes it possible to separate a smaller peace of inclusion. This may increase plan weight with the same clarity. |                                            |                                                                                               |               |       |
| <b>Video keywords:</b> quick sandwich, inclusion, planning                                                                                                      |                                            |                                                                                               |               |       |
| Data                                                                                                                                                            | <a href="#">Layers-demo4.ox2z</a>          |                                                                                               |               |       |
|                                                                                                                                                                 | <a href="#">raw_diamond_sample+4b.ox2z</a> |                                                                                               |               |       |
| Published in:                                                                                                                                                   | Release Notes                              | <a href="#">2025-12-11 - HP Carbon 3.0.3</a>                                                  |               |       |
|                                                                                                                                                                 | Documentation                              | NA                                                                                            |               |       |
|                                                                                                                                                                 | Playlists                                  | NA                                                                                            |               |       |
|                                                                                                                                                                 | Also                                       | <a href="#">As Separate Page</a>   <a href="#">On YouTube</a>   <a href="#">Specification</a> |               |       |

Sequence of actions when working with Quick Sandwich.

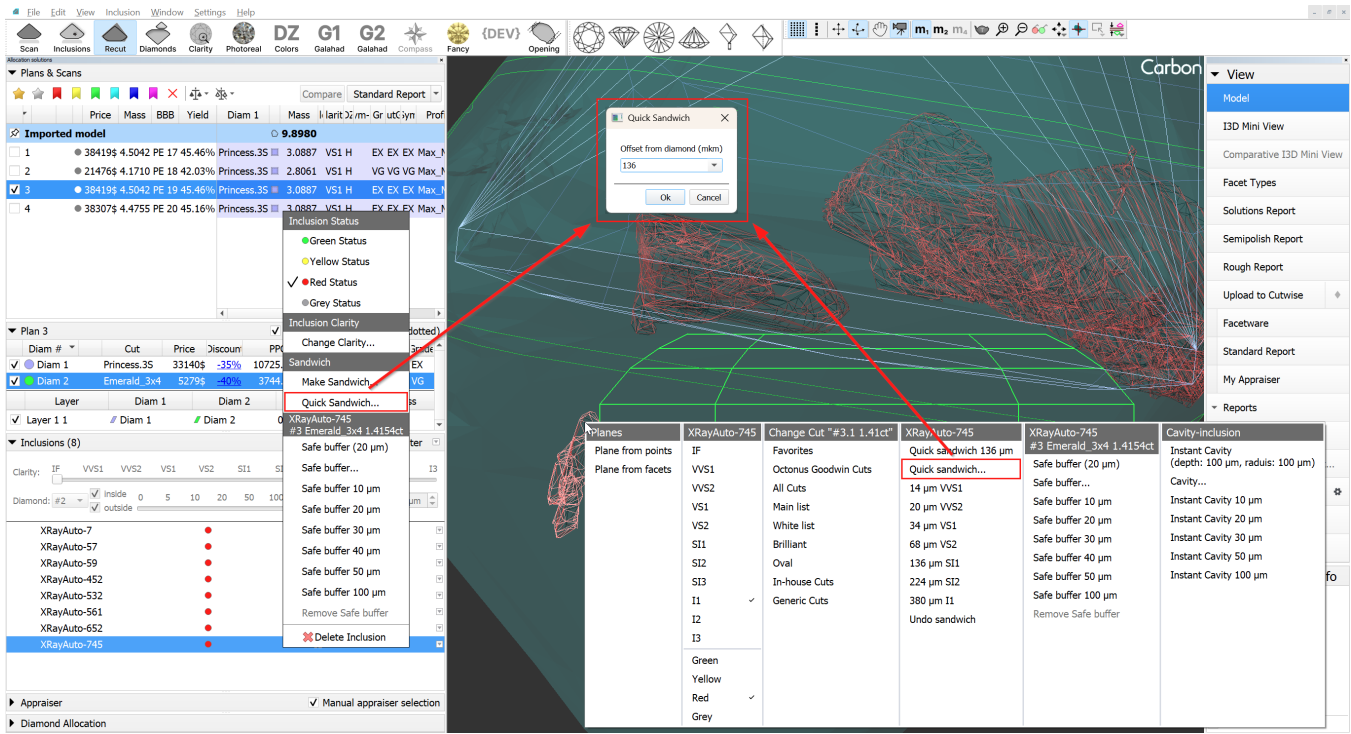
### 1. Creating a sandwich.

A sandwich can be created in two ways:

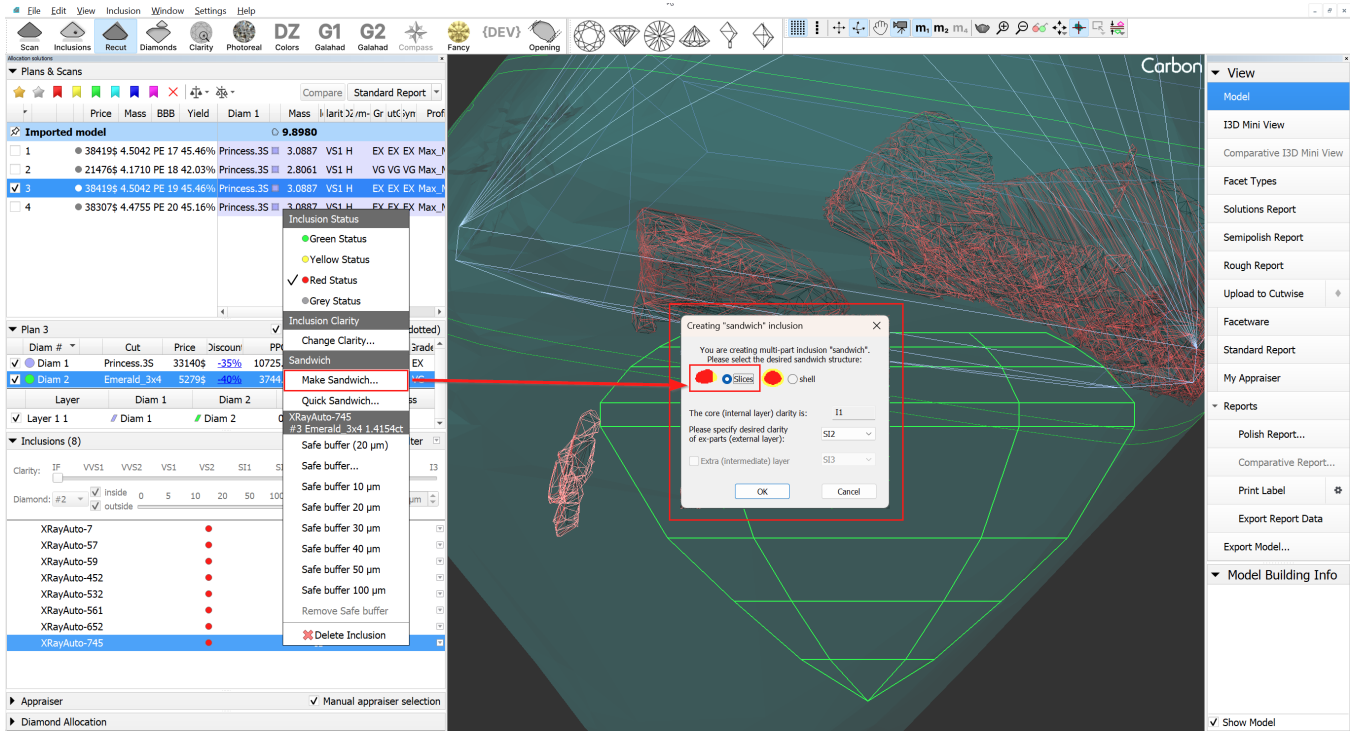
- Using the context menu in the scene (the selection mode must be activated in the scene for this).
- Using the context menu in the inclusion list.



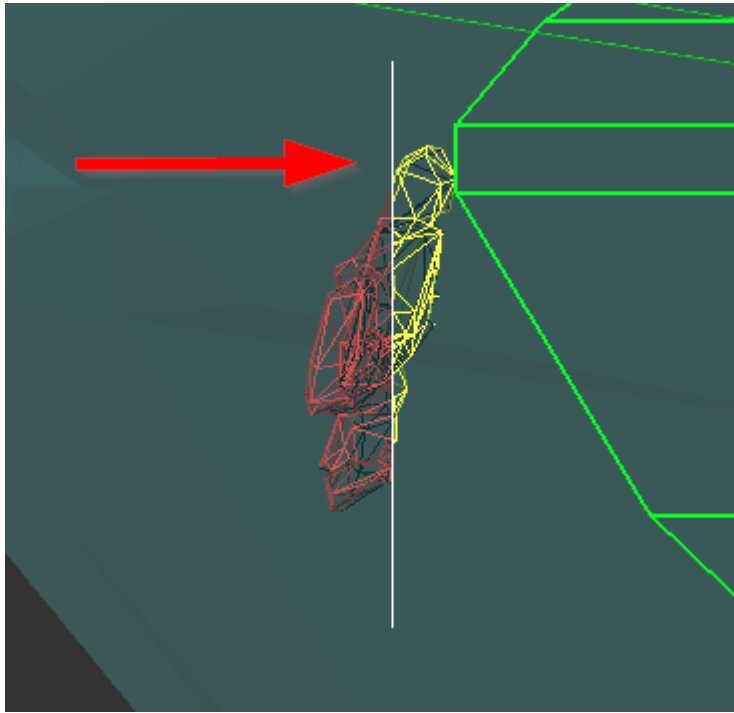
When you select the "Quick sandwich..." menu item, a dialog box will be displayed where you can manually enter the desired offset value.



Quick Sandwich is also now created in the "Creating sandwich inclusion" dialog box.

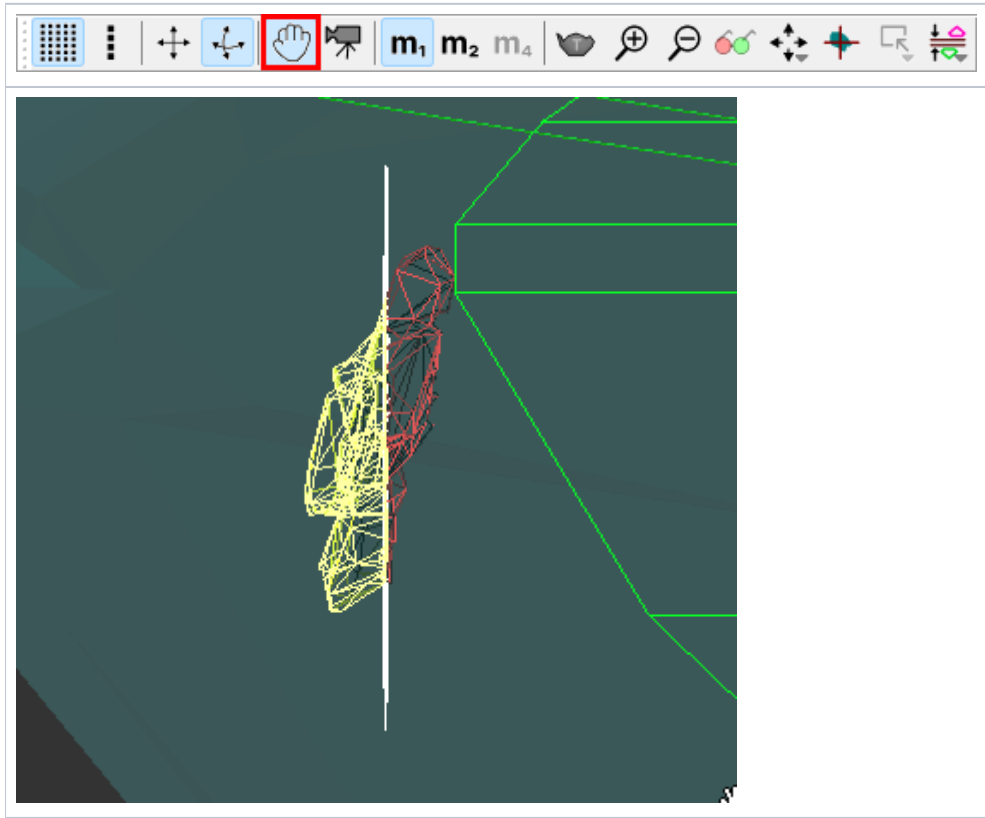


The saw disk of the sandwich will be created relative to the nearest diamond and positioned parallel to its nearest facet at the distance specified during the sandwich creation.

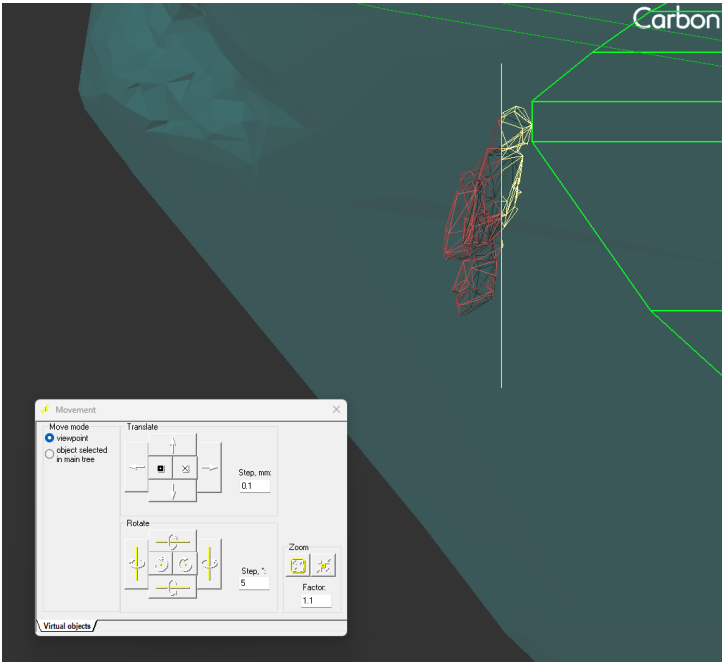


After creation ex-part sandwich becomes active.

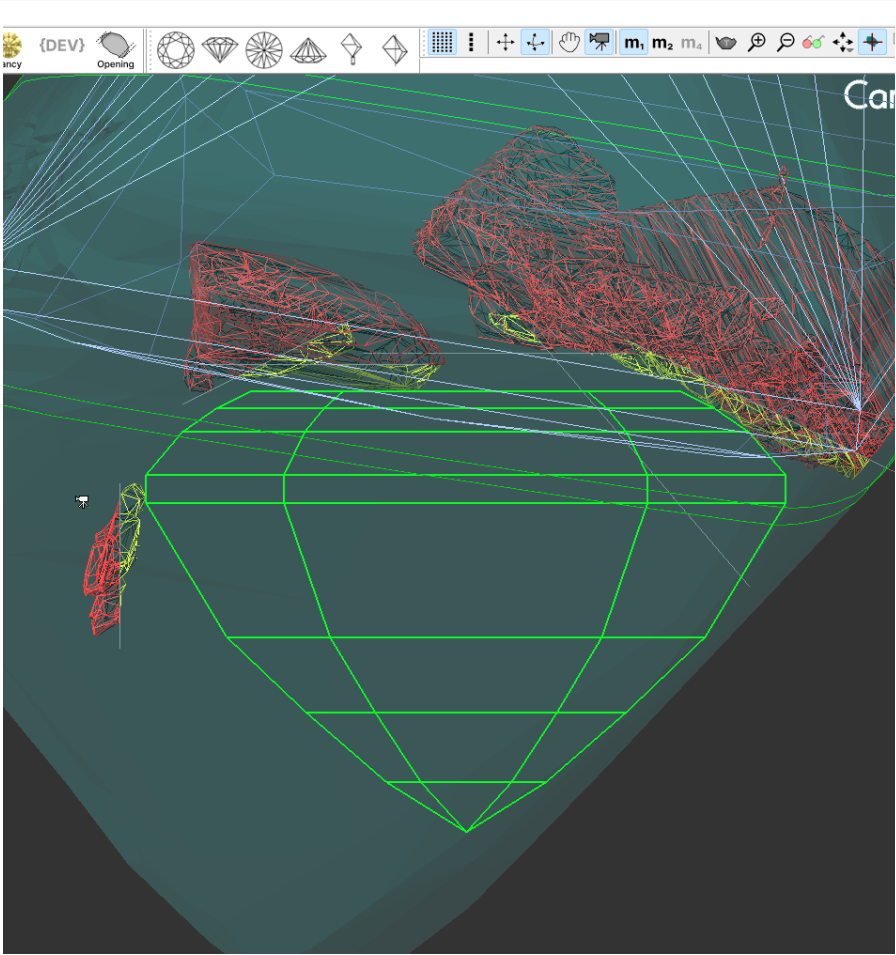
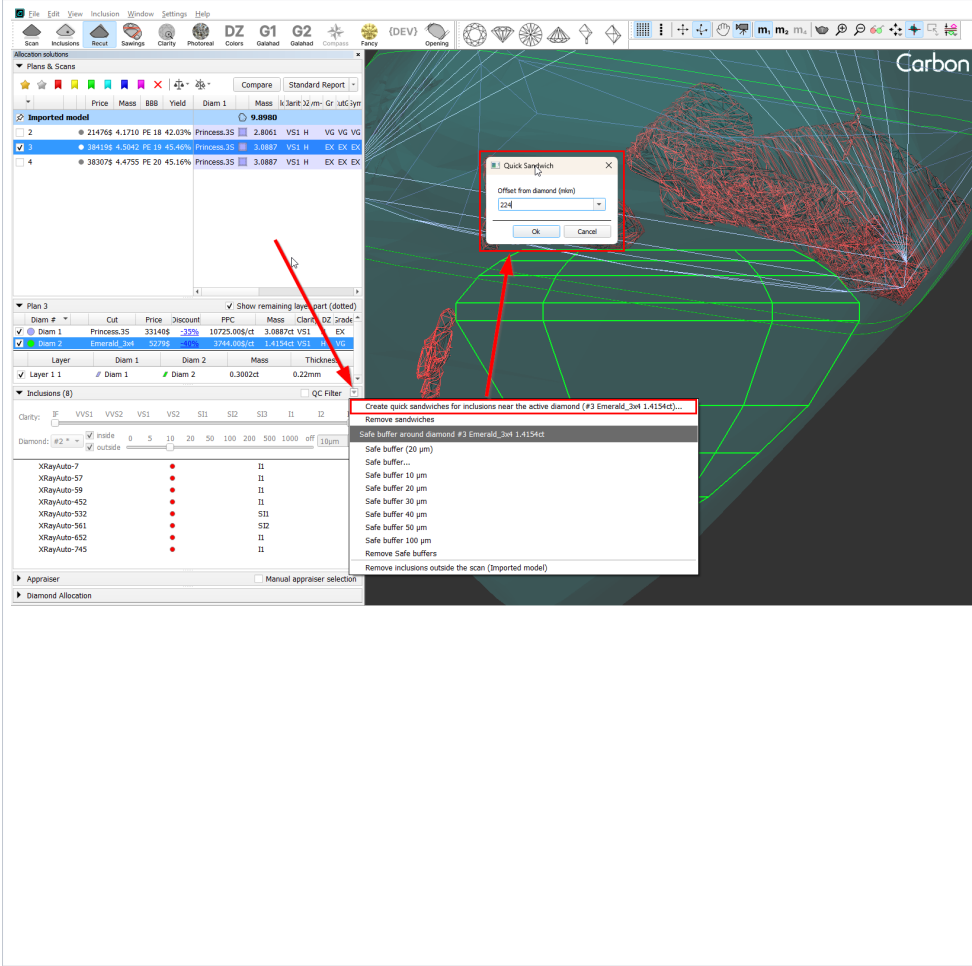
2. If it is necessary to change the position of the saw disk, you need to activate object move mode (hand icon on the toolbar). After that, the saw disk can be moved similarly to other objects in "hand" mode. This means using: Shift for flat-parallel movement, 'v' for rotation around the vertical axis, 'h' for rotation around the horizontal axis, and 'c' for rotation around the axis normal to the scene.



The position of saw disk also could be changes via Movement panel:



3. Additionally, there is an option to apply the Quick Sandwich to all inclusions near the active diamond.



### Equal Price Pair (Swim), Twin (Swim), Bound Swim (Vary Forms and Params)

Several new **dialog-based optimization algorithms** have been introduced:

- **Equal Price Pair (Swim)** - tries to adjust the solution so that all diamonds have the same value.
- **Twin (Swim)** - performs everything the *Symmetry Solution* does, but also equalizes the diamonds' parameters.

Diam1

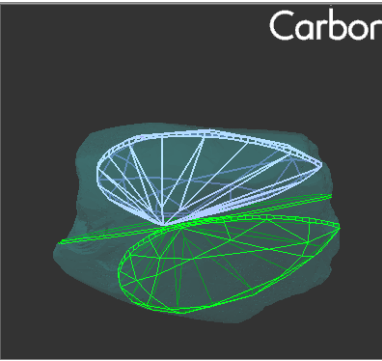
Appraiser Editor

Pear\_ID\_GS

Profile: Profile\_EX

Show Presets

| Absolute Proportions    |       | Absolute Symmetry |        | Relative Proportions |        |        | Relative Symmetry |        |        | Discounts |  |  |
|-------------------------|-------|-------------------|--------|----------------------|--------|--------|-------------------|--------|--------|-----------|--|--|
| Parameter               | Grade | Value             | [ FR ] | [ GD ]               | [ VG ] | [ EX ] | [ EX ]            | [ VG ] | [ GD ] | [ FR ]    |  |  |
| GirdleRatio             | EX    | 1.662             | 1,5    | 1,539                | 1,56   | 1,57   | 1,689             | 1,699  | 1,749  | 1,749     |  |  |
| Table                   | EX    | 60.104            | 53     | 53                   | 53,5   | 55,5   | 62,4              | 64,4   | 65,4   | 66,6      |  |  |
| CrownHeight             | EX    | 14.209            | 9      | 9,99                 | 10     | 10,4   | 17                | 17,9   | 18,5   | 18,8      |  |  |
| GirdleBezel             | EX    | 4.215             | 1,9    | 1,9                  | 2      | 2,1    | 4,5               | 5      | 5,5    | 6         |  |  |
| PavilionHeight          | EX    | 41.854            | 33     | 37                   | 38     | 39     | 46                | 46     | 48     | 51        |  |  |
| TotalHeight             | EX    | 60.278            | 56,8   | 57                   | 57,5   | 58,5   | 63                | 64,4   | 65,4   | 66        |  |  |
| CrownGoldStarSlope      | EX    | 35.796            | 30,7   | 30,8                 | 30,9   | 31,5   | 37,5              | 38,9   | 39,9   | 39,9      |  |  |
| PavilionGoldStarSlope   | EX    | 30.730            | 28,9   | 28,9                 | 28,9   | 29,5   | 36                | 37     | 38,9   | 39,9      |  |  |
| PavilionSilverStarSlope | EX    | 40.122            | 38,1   | 38,1                 | 38,1   | 38,1   | 45                | 47,1   | 48,1   | 49,1      |  |  |
| SweetLine               | EX    | -1.060            | -100   | -100                 | -100   | -100   | 100               | 100    | 100    | 100       |  |  |



Diam2

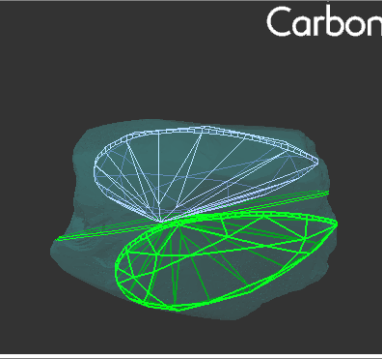
Appraiser Editor

Pear\_ID\_GS

Profile: Profile\_EX

Show Presets

| Absolute Proportions    |       | Absolute Symmetry |        | Relative Proportions |        |        | Relative Symmetry |        |        | Discounts |  |  |
|-------------------------|-------|-------------------|--------|----------------------|--------|--------|-------------------|--------|--------|-----------|--|--|
| Parameter               | Grade | Value             | [ FR ] | [ GD ]               | [ VG ] | [ EX ] | [ EX ]            | [ VG ] | [ GD ] | [ FR ]    |  |  |
| GirdleRatio             | EX    | 1.662             | 1,5    | 1,539                | 1,56   | 1,57   | 1,689             | 1,699  | 1,749  | 1,749     |  |  |
| Table                   | EX    | 60.104            | 53     | 53                   | 53,5   | 55,5   | 62,4              | 64,4   | 65,4   | 66,6      |  |  |
| CrownHeight             | EX    | 14.209            | 9      | 9,99                 | 10     | 10,4   | 17                | 17,9   | 18,5   | 18,8      |  |  |
| GirdleBezel             | EX    | 4.215             | 1,9    | 1,9                  | 2      | 2,1    | 4,5               | 5      | 5,5    | 6         |  |  |
| PavilionHeight          | EX    | 41.854            | 33     | 37                   | 38     | 39     | 46                | 46     | 48     | 51        |  |  |
| TotalHeight             | EX    | 60.278            | 56,8   | 57                   | 57,5   | 58,5   | 63                | 64,4   | 65,4   | 66        |  |  |
| CrownGoldStarSlope      | EX    | 35.796            | 30,7   | 30,8                 | 30,9   | 31,5   | 37,5              | 38,9   | 39,9   | 39,9      |  |  |
| PavilionGoldStarSlope   | EX    | 30.730            | 28,9   | 28,9                 | 28,9   | 29,5   | 36                | 37     | 38,9   | 39,9      |  |  |
| PavilionSilverStarSlope | EX    | 40.122            | 38,1   | 38,1                 | 38,1   | 38,1   | 45                | 47,1   | 48,1   | 49,1      |  |  |
| SweetLine               | EX    | -1.060            | -100   | -100                 | -100   | -100   | 100               | 100    | 100    | 100       |  |  |

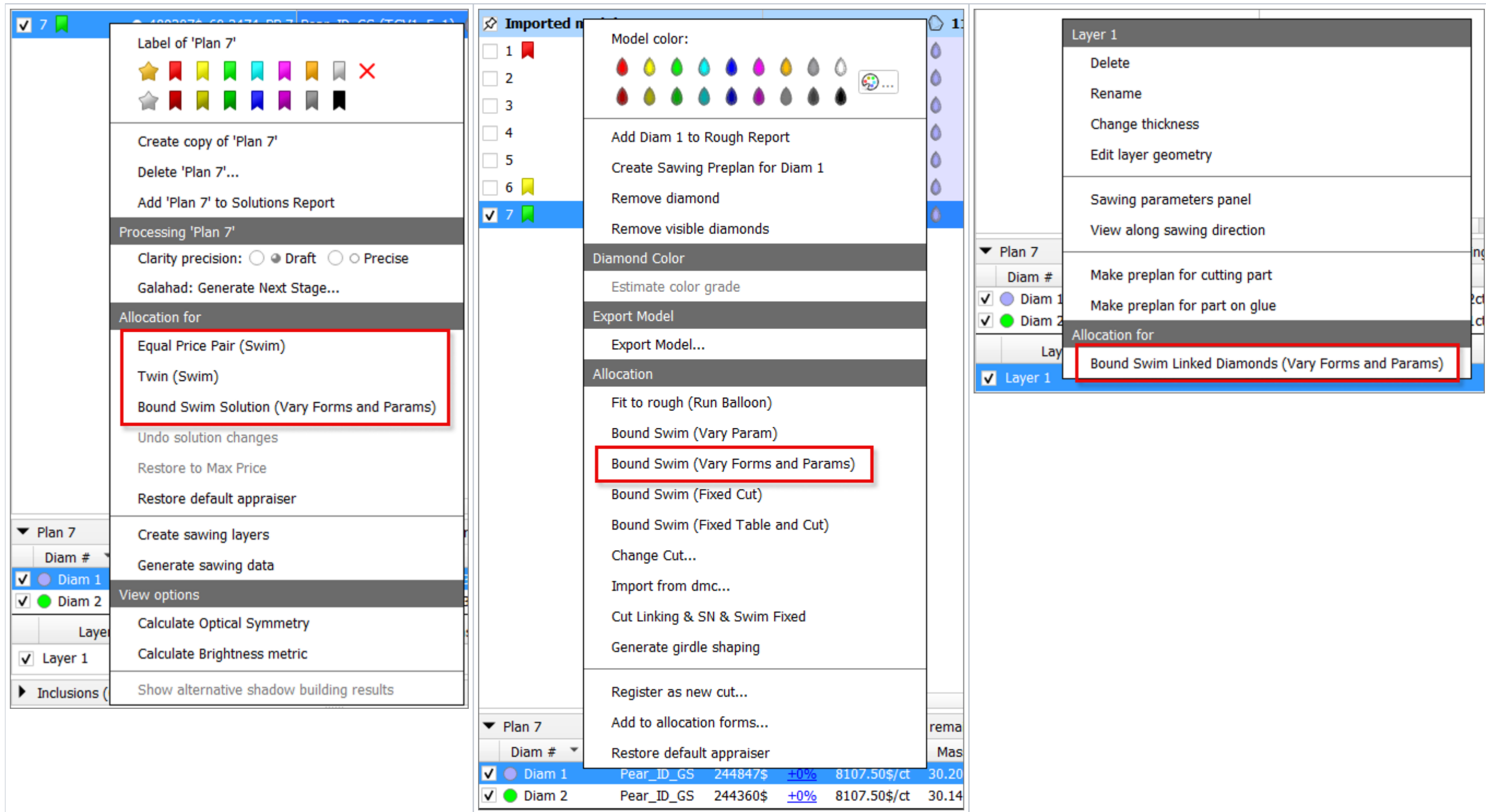


Project - [Example3\\_TWO\\_pear-30Ct+\\_each-W4-test2-UltraSymmetric.ox2z](#)

- **Bound Swim (Vary Forms and Params)** - an extended version of *Bound Swim (Vary Params)* that additionally iterates through different forms.

These algorithms are available in several places:

- **Equal Price Pair (Swim) and Twin (Swim)** - available only in the *solution context menu*.
- **Bound Swim (Vary Forms and Params)** - available in three locations:
  - in the *diamond context menu* - applies to the selected diamond,
  - in the *solution context menu* - applies to all diamonds in the solution,
  - in the *layer context menu* - applies to diamonds linked to that layer.



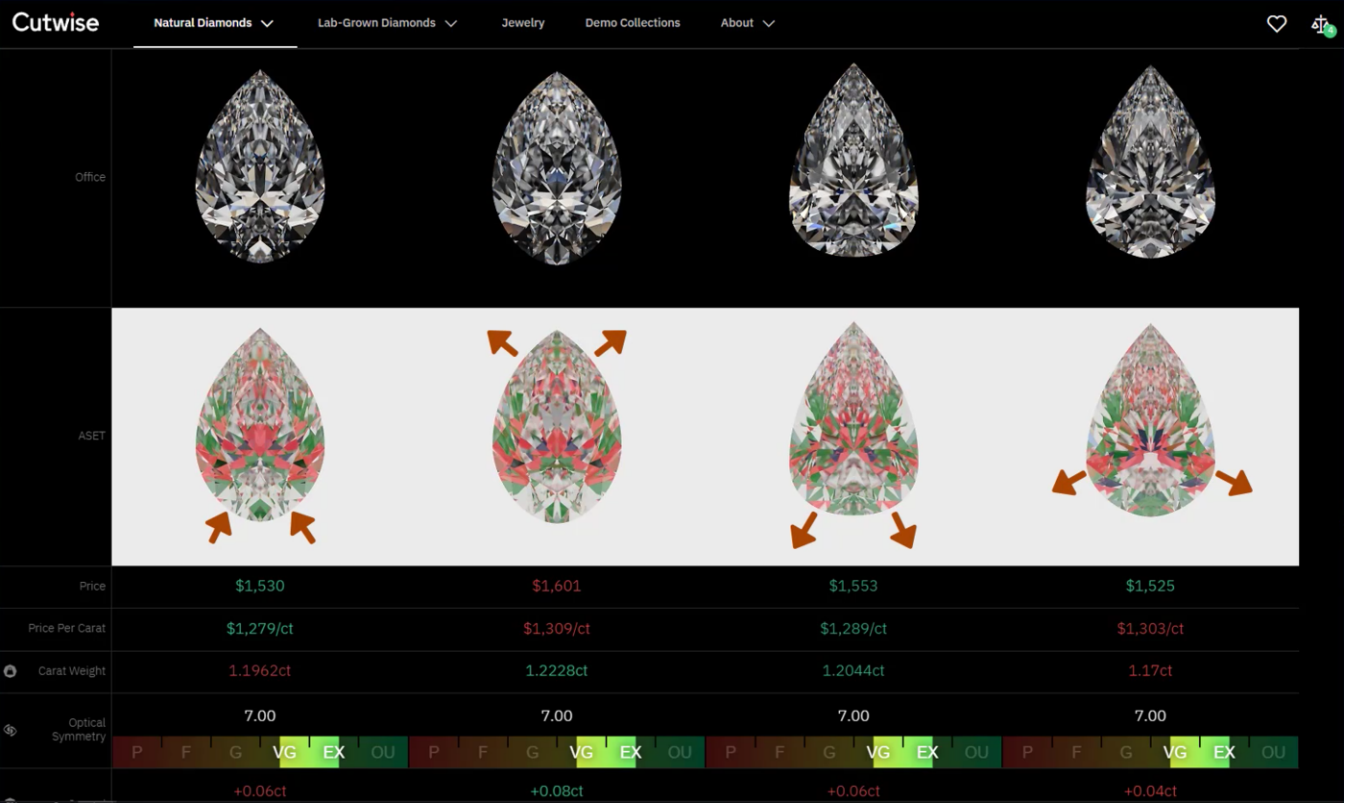
## Reports Improvements

Shape Deviation - new parameter

| Video   Shape Deviation parameter                     |                   |               |               |       |
|-------------------------------------------------------|-------------------|---------------|---------------|-------|
| Published:                                            | 2024, December 13 | Last Updated: | 2025, June 20 | v.1.8 |
| Your browser does not support the HTML5 video element |                   |               |               |       |

|                                                                                                                                                                                                                                                                                                                                                               |                                               |                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Video summary:</b> <ul style="list-style-type: none"><li>Introducing the new parameter: "Shape Deviation"</li><li>These parameters help to compare how the girdle shape differs from the ideal shape, just like the 2RRoundness parameter does for the Brilliant cut.</li><li>Parameter is used in appraisers, reports, SmartRecut, scan reports</li></ul> |                                               |                                                                                               |
| <b>Video keywords:</b> Parameters, girdle shape, comparison with ideal shape, quality control, reports                                                                                                                                                                                                                                                        |                                               |                                                                                               |
| <b>Data</b>                                                                                                                                                                                                                                                                                                                                                   | <a href="#">ShapeDeviation_demo.ox2z</a>      |                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                               | <a href="#">ShapeDeviation_scan_demo.ox2z</a> |                                                                                               |
| <b>Published in:</b>                                                                                                                                                                                                                                                                                                                                          | <b>Release Notes</b>                          | <a href="#">2025-12-11 - HP Carbon 3.0.3</a>                                                  |
|                                                                                                                                                                                                                                                                                                                                                               | <b>Documentation</b>                          | N/A                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                               | <b>Playlists</b>                              | N/A                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                               | <b>Also</b>                                   | <a href="#">As Separate Page</a>   <a href="#">On YouTube</a>   <a href="#">Specification</a> |

The realization of an unattractive girdle shape in a Fancy diamond often comes too late, after the stone has been cut and fails to attract buyers. Operators aiming to increase carat weight may enlarge the girdle shape without having the necessary knowledge and tools to assess its beauty.



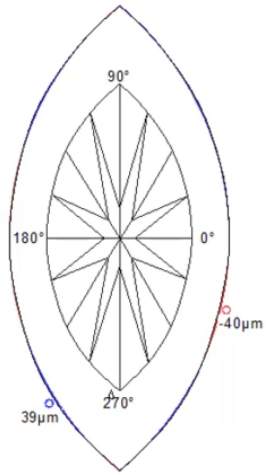
To address this issue, we have developed the Shape Deviation parameters. These parameters help to compare how the girdle shape differs from the ideal shape, just like the 2RRoundness parameter does for the Brilliant cut. The Shape Deviation Grade enables operators to easily reject unacceptable girdle shapes.

What is Shape Deviation?

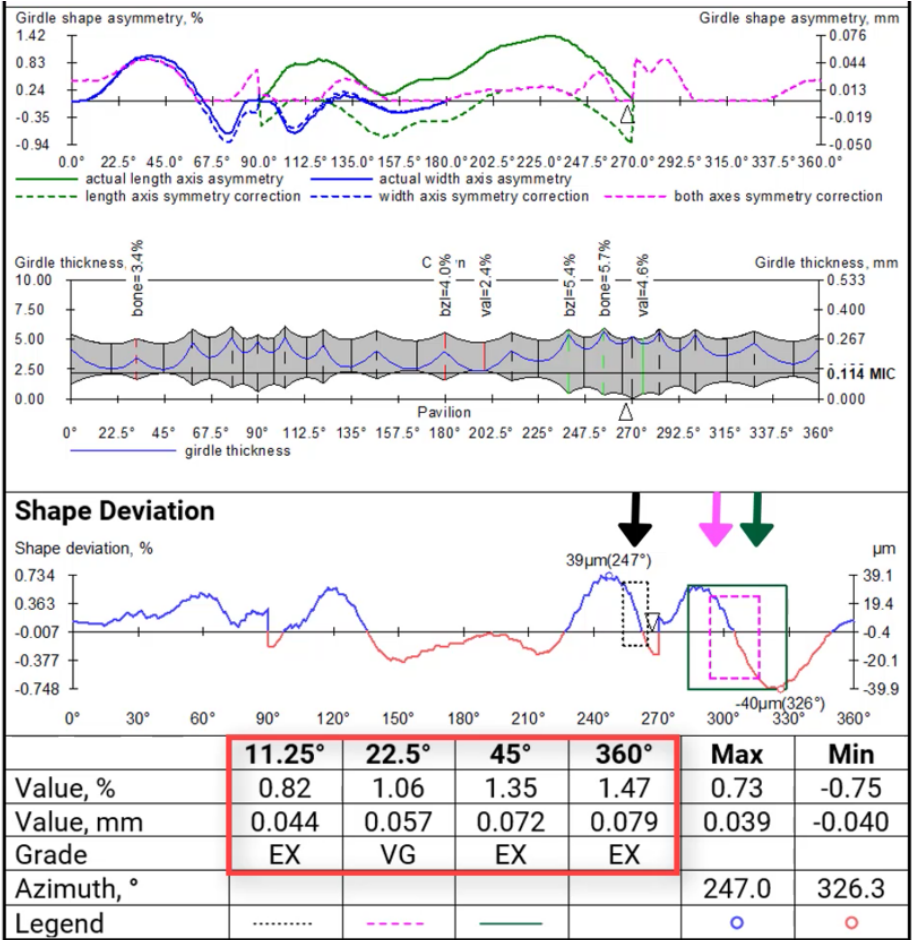
After aligning the girdle shape of the current model with the ideal girdle shape linked to the current cut, we calculate the distances between the two curves. These distances are presented as the Shape Deviation Plot and Shape Deviation Ideal Girdle. Next, we identify azimuth intervals of 11.25, 22.5, 45, and 360 degrees where maximum difference in distances between shapes are observed, and estimate these values. It is in these locations where the imperfections in the girdle shape are most noticeable. The Shape Deviation Plot highlights these areas with rectangular windows, along with indications of global maximum and minimum values.

13.2 327.9 342.5 352.7

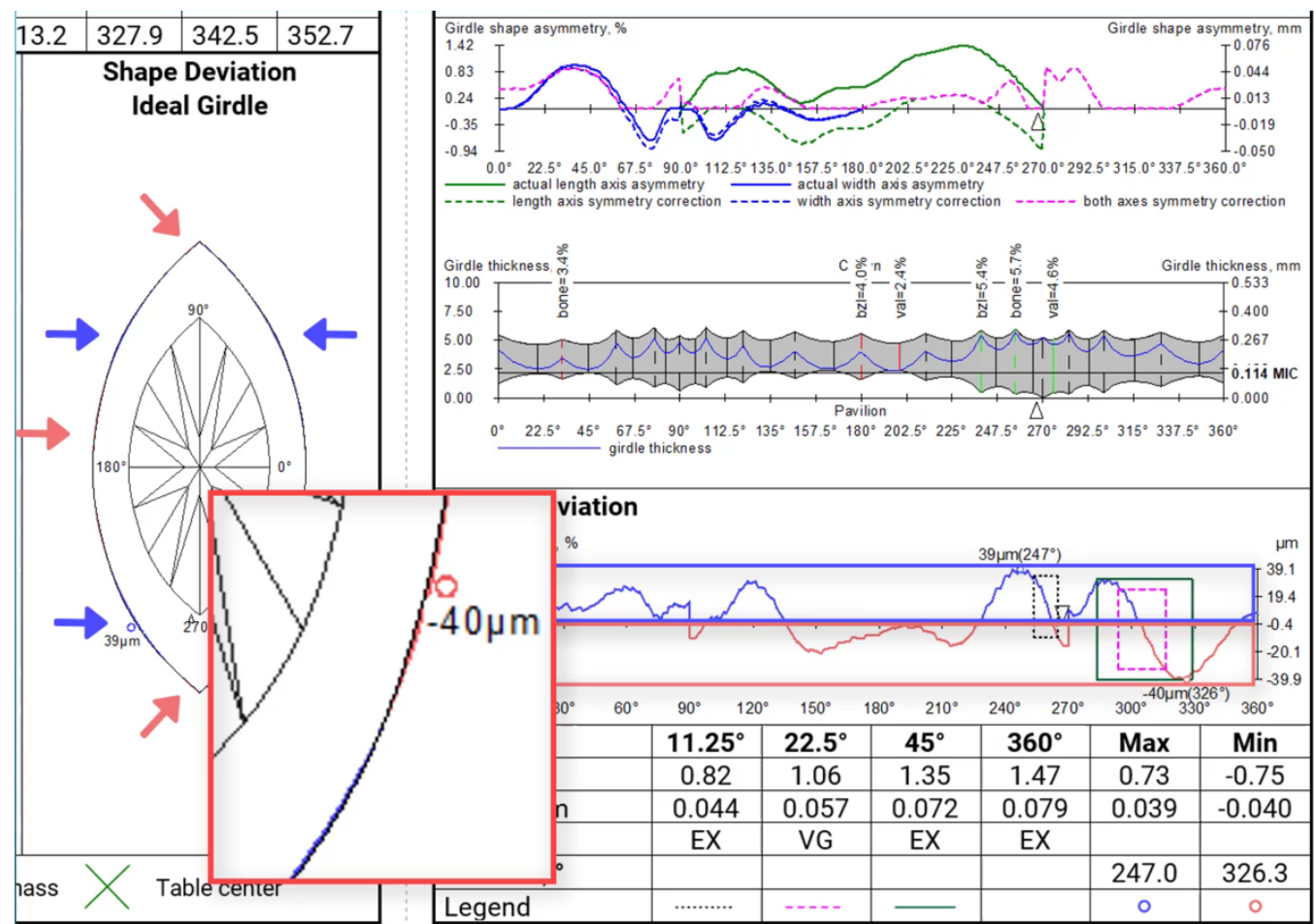
Shape Deviation  
Ideal Girdle



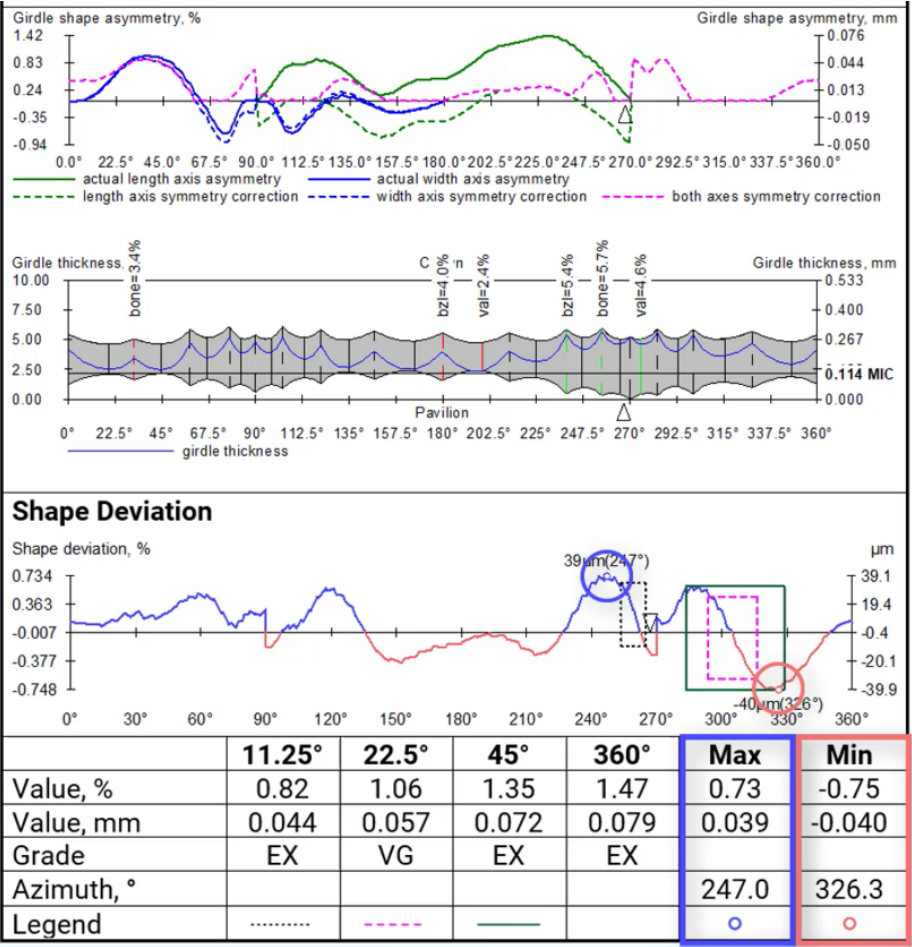
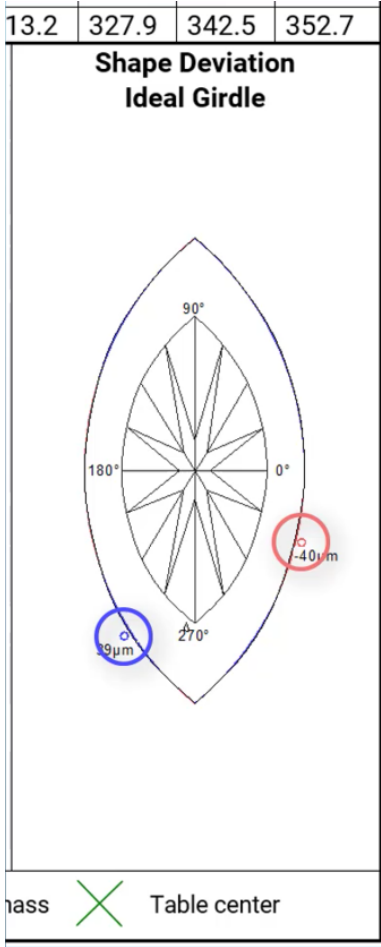
mass X Table center



Deviations where the current girdle shape is wider or narrower than the ideal shape are color-coded. This information is also depicted in the Shape Deviation Ideal Girdle image. Here, the current model is outlined in black, with areas highlighted in blue and red denoting the extent to which the girdle shape of the current cut deviates in width from the ideal girdle.



Global maximum and minimum values are also represented in both pictures.



Appraiser Editor

Marquise\_WBT\_P24C32\_GWGoldStar

Profile: Default (read only)

Show Presets

Absolute Proportions

Absolute Symmetry

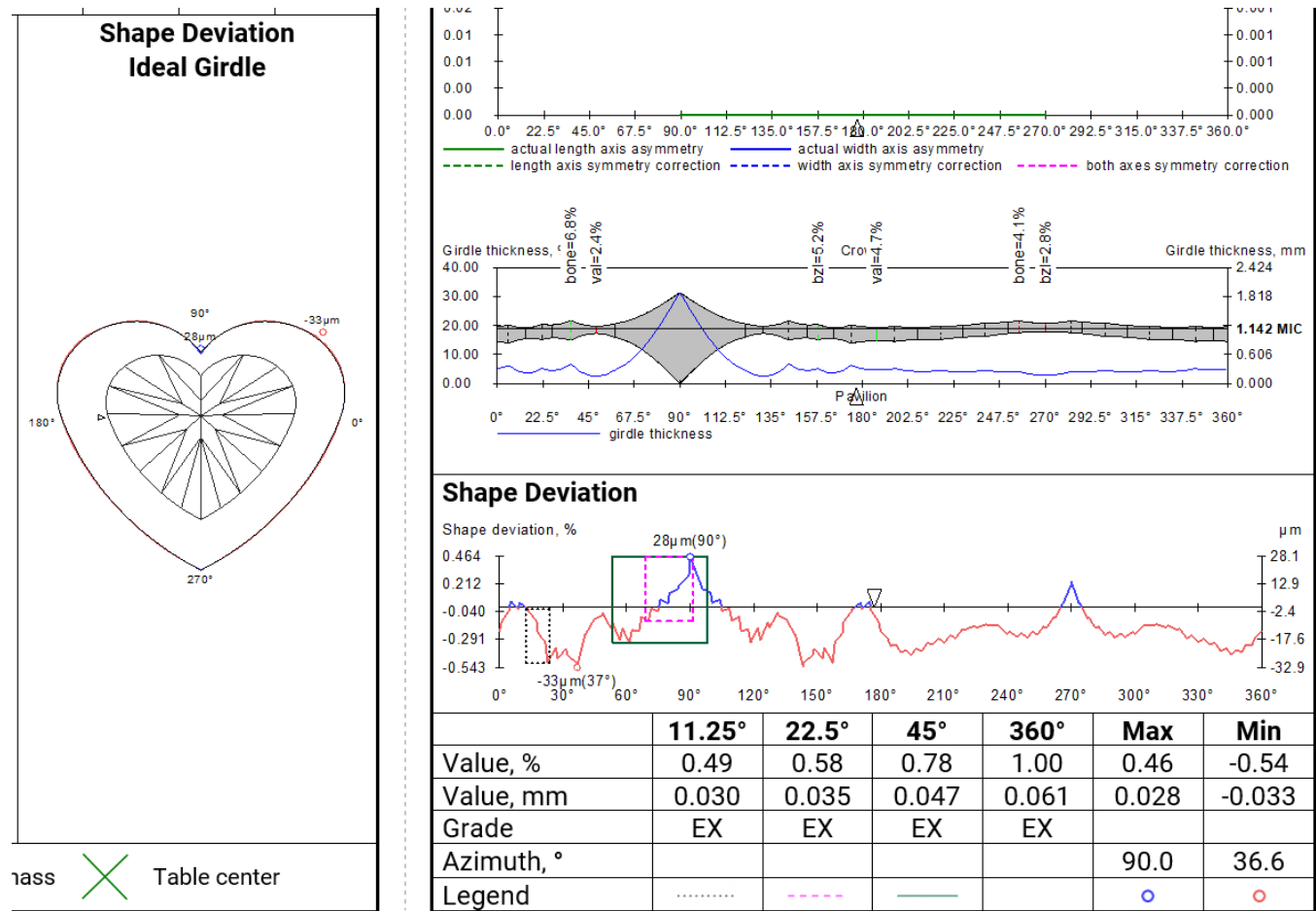
Relative Proportions

Relative Symmetry

Discounts

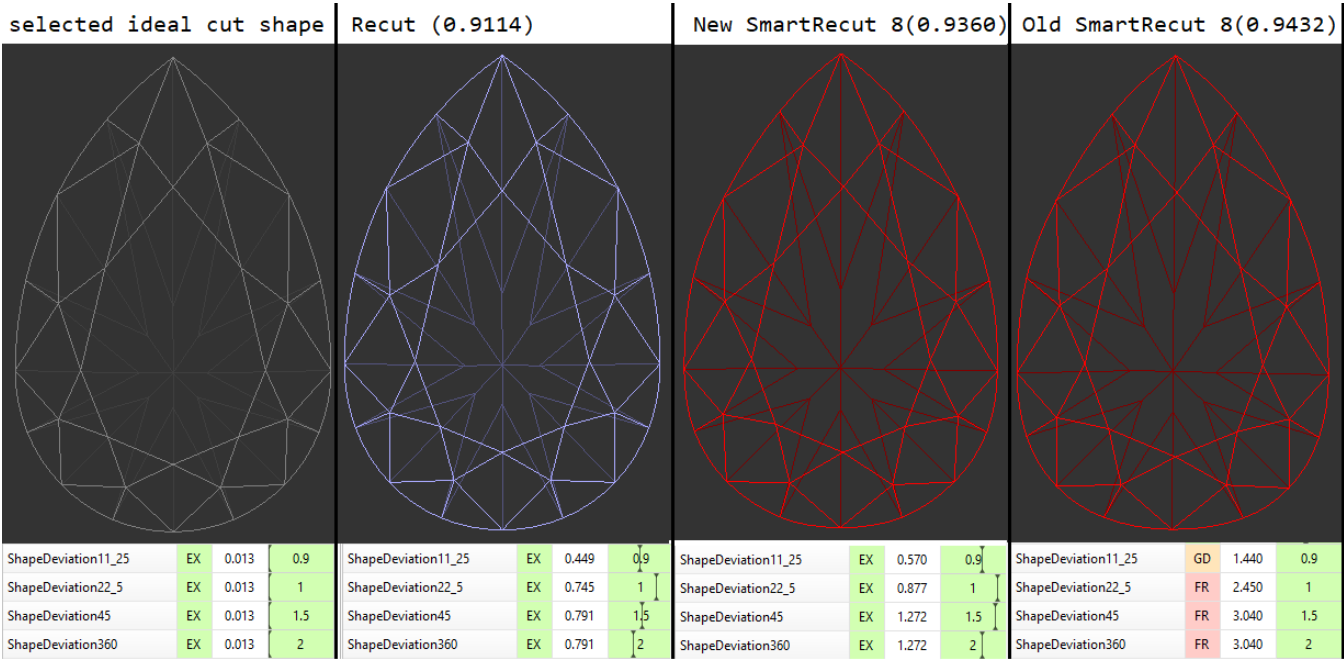
| Parameter           | Grade | Value | EX ] | VG ] | GD ] | FR ] |
|---------------------|-------|-------|------|------|------|------|
| TableOffsetLength   | EX    | 0.055 | 0.5  | 0.8  | 1.6  | 20   |
| TableOffsetWidth    | EX    | 0.077 | 0.5  | 0.8  | 1.6  | 20   |
| CuletOffsetLength   | EX    | 0.402 | 0.5  | 0.8  | 1.6  | 20   |
| CuletOffsetWidth    | EX    | 0.439 | 0.5  | 0.8  | 1.6  | 20   |
| CrownSlope          | EX    | 0.900 | 0.9  | 1.2  | 1.6  | 20   |
| PavilSlope          | EX    | 0.900 | 0.9  | 1.2  | 1.6  | 20   |
| ShapeDeviation11_25 | EX    | 0.663 | 0.9  | 1.2  | 1.6  | 20   |
| ShapeDeviation22_5  | EX    | 0.735 | 1    | 1.5  | 2    | 20   |
| ShapeDeviation45    | EX    | 0.984 | 1.5  | 2    | 2.5  | 20   |
| ShapeDeviation360   | EX    | 1.307 | 2    | 2.5  | 3    | 20   |

Shape deviation parameter is also available for non-convex shapes (for example, Heart shape):



### Shape Deviation in SmartRecut

SmartRecut controls the new parameter if they are present in the appraiser. There is a comparison of SmartRecut solution with and without using this parameter on the picture. It is important to note that this parameter prevents the continuous deterioration of the girdle shape in the SmartRecut on SmartRecut scenario.



Shape Deviation in reports

The parameter has been included into reports:

- RTF Full report for rounded fancies
- RTF Illustrated report for oval and marquise
- RTF Illustrated report for rounded fancies
- RTF Illustrated report for AnyCut
- HTML Illustrated report for oval and marquise
- HTML Illustrated report for rounded fancies
- HTML Illustrated report for AnyCut
- Export Report Data, Color

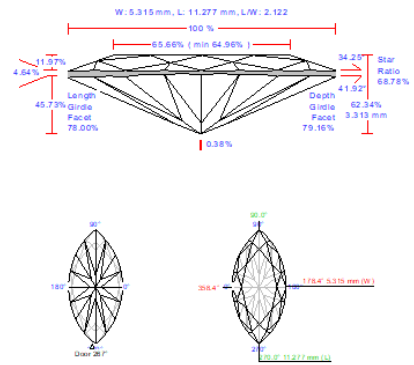
In the illustrated reports, the Shape Deviation is located in the bottom right corner or in the center:

|                   |            |
|-------------------|------------|
| Polished Marquise | 18.12.2025 |
|-------------------|------------|

|                    |                 |
|--------------------|-----------------|
| Model              | 94              |
| Expert name        | N/A             |
| Scale weight, ct   | N/A             |
| Corrected mass, ct | 1.10, 1.1042    |
| Spread             | 0.32 ct, 22.65% |

| Extra Facet Girdle / Nat No |           |             |                  |                  |              |
|-----------------------------|-----------|-------------|------------------|------------------|--------------|
| Width                       | Length    | Ratio (L/W) | Diameter Minimum | Diameter Maximum | Total height |
| 5.315 mm                    | 11.277 mm | 2.122       | 5.315 mm         | 11.277 mm        | 3.313 mm     |

| Crown height | Pavilion height | Table Widthwise | Culet    | Girdle   |          |          |
|--------------|-----------------|-----------------|----------|----------|----------|----------|
|              |                 |                 |          | Bezel    | Bone     | Valley   |
| 0.636 mm     | 2.430 mm        | 3.452 mm        | 0.020 mm | 0.246 mm | 0.235 mm | 0.165 mm |

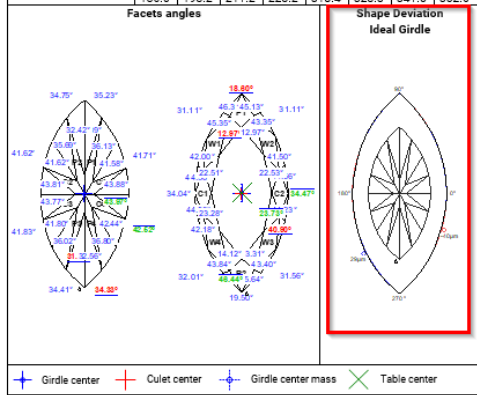


|                          |                                |
|--------------------------|--------------------------------|
| Appraiser title          | Marquise_WBT_F24C32_GWGoldStar |
| Overall cut grade        | EX                             |
| Symmetry appraiser title | Marquise_WBT_F24C32_GWGoldStar |
| Overall symmetry grade   | EX                             |
| Model building info      | N/A                            |

|              |  |
|--------------|--|
| Color        |  |
| Clarity      |  |
| Polish       |  |
| Fluorescence |  |

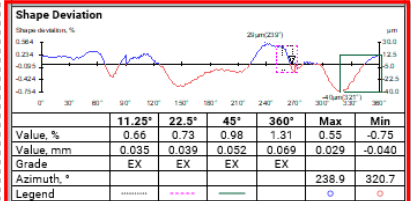
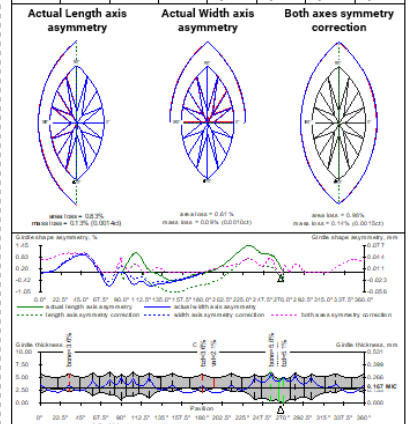
| Parameters                   | Avg              | Min              | Max              | Dev             | Cut Grade | Sym Grade |
|------------------------------|------------------|------------------|------------------|-----------------|-----------|-----------|
| Diameter, mm                 |                  | 5.315            | 11.277           | 5.962           | N/A       |           |
| Crown Curve angle, °         | 34.25            | 34.04            | 34.47            | 0.44            |           |           |
| Crown Head angle, °          | N/A              | N/A              | N/A              | N/A             |           |           |
| Crown Point angle, °         | 19.05            | 18.60            | 19.50            | 0.90            |           |           |
| Crown Wing angle, °          | 31.45            | 31.11            | 32.01            | 0.90            |           |           |
| Crown angle, °               | 34.25            | 34.04            | 34.47            | 0.44            | EX        | EX        |
| Crown SilverStar angle, °    | N/A              | N/A              | N/A              | N/A             | N/A       | N/A       |
| Pavilion Curve angle, °      | 41.92            | 41.62            | 42.52            | 0.90            |           |           |
| Pavilion Head angle, °       | N/A              | N/A              | N/A              | N/A             |           |           |
| Pavilion Point angle, °      | 34.68            | 34.33            | 35.23            | 0.90            |           |           |
| Pavilion Wing angle, °       | N/A              | N/A              | N/A              | N/A             |           |           |
| Pavilion angle, °            | 41.92            | 41.62            | 42.52            | 0.90            | EX        | EX        |
| Pavilion SilverStar angle, ° | N/A              | N/A              | N/A              | N/A             | N/A       | N/A       |
| Table Widthwise, %           | 64.96            |                  |                  |                 | EX        |           |
| Table Lengthwise, %          | 66.36            |                  |                  |                 |           |           |
| Girdle Bezel, %              | 4.64             | 3.55             | 5.08             | 1.52            | EX        | N/A       |
| Girdle Bone, %               | 4.42             | 3.60             | 5.82             | 2.22            |           | N/A       |
| Girdle Valley, %             | 3.11             | 2.09             | 4.31             | 2.23            | N/A       | N/A       |
| Facet Twist, °               | 9.06             | 7.99             | 10.22            | 2.23            |           | N/A       |
| Star :<br>Upper ratio, %     | 68.78 :<br>31.22 | 64.34 :<br>35.66 | 74.79 :<br>27.21 | 8.37 :<br>72.97 |           | N/A       |
| Star angle, °                | 23.01            | 22.51            | 23.79            | 1.22            |           |           |
| Upper girdle angle, °        | 43.99            | 40.90            | 46.43            | 5.54            |           | N/A       |
| Lower girdle angle, °        | 38.59            | 31.63            | 43.97            | 12.34           |           | N/A       |
| Crown height, %              | 11.97            | 11.65            | 12.63            | 0.98            | EX        | N/A       |
| Pavilion height, %           | 45.73            | 44.64            | 46.84            | 2.20            |           |           |
| Total height, %              | 62.34            |                  |                  |                 | EX        |           |
| Culet, %                     | 0.38             | 0.07             | 0.58             | 0.51            | N/A       | N/A       |

| Azimuths, °          | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lower girdle azimuth | 6.6   | 16.8  | 33.4  | 40.7  | 137.4 | 146.9 | 164.7 | 172.8 |
|                      | 186.6 | 194.5 | 211.7 | 224.5 | 317.4 | 328.3 | 344.7 | 352.0 |
| Star azimuth         | 11.7  | 38.3  | 141.1 | 167.7 | 191.7 | 218.4 | 321.1 | 347.7 |
| Upper girdle azimuth | 6.0   | 17.9  | 32.8  | 44.8  | 133.8 | 148.4 | 162.2 | 173.4 |
|                      | 186.0 | 198.2 | 211.2 | 228.2 | 313.4 | 328.8 | 341.5 | 352.6 |



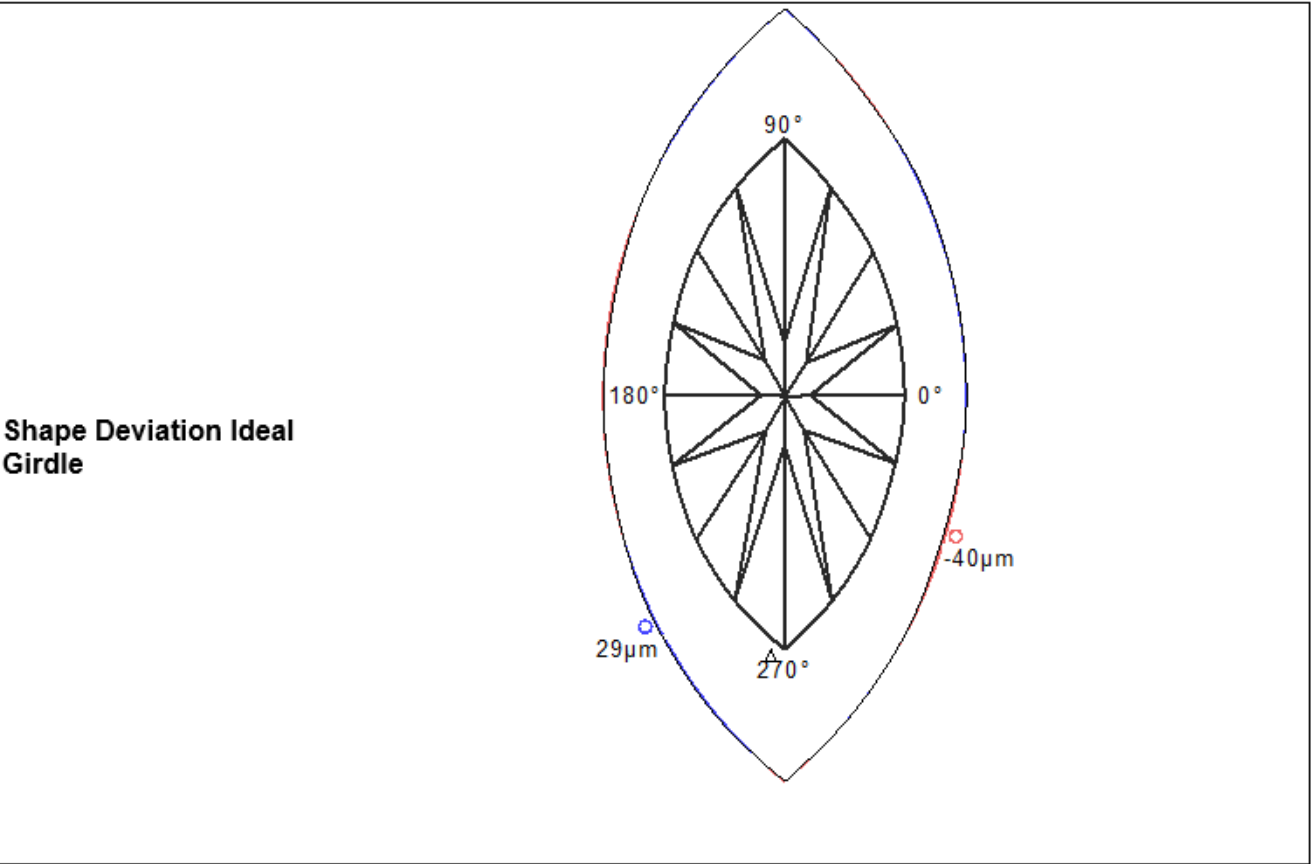
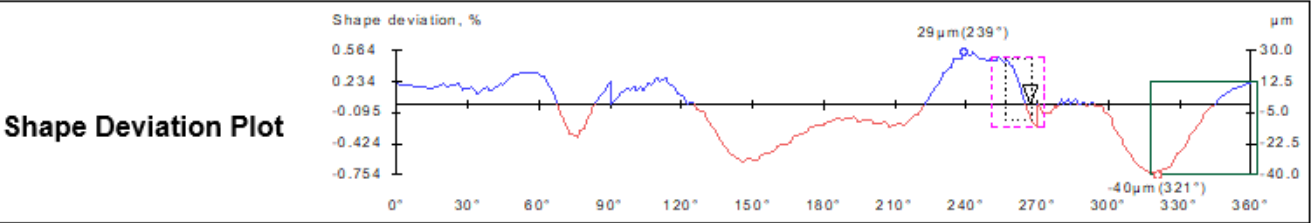
| 1     | 2     | 3     | 4     | Offset by table axis              |            |             |
|-------|-------|-------|-------|-----------------------------------|------------|-------------|
|       |       |       |       | Distance                          | Width wise | Length wise |
| 34.04 | 34.47 | N/A   | N/A   | Culet-Table, %                    |            |             |
| N/A   | N/A   | N/A   |       | 1.04 ± 0.15                       | 0.36       | 0.97        |
| 18.60 | 19.50 |       |       |                                   |            |             |
| 31.11 | 31.11 | 31.56 | 32.01 |                                   |            |             |
| 34.04 | 31.11 | 18.60 | 31.11 | Girdle-Culet, %                   |            |             |
| N/A   | N/A   | N/A   |       | 0.96 ± 0.14                       | 0.44       | 0.85        |
| 41.71 | 41.62 | 41.83 | 42.92 | Girdle-Table, %                   |            |             |
| N/A   | N/A   | N/A   |       | 0.14 ± 0.11                       | 0.08       | 0.12        |
| 35.23 | 34.75 |       |       |                                   |            |             |
| N/A   | N/A   | N/A   | N/A   | Girdle to table-culet line offset |            |             |
| 41.71 | 35.23 | 34.75 | 41.62 | 0.18 ± 0.10                       | 0.10       | 0.10        |
| N/A   | N/A   | N/A   |       |                                   |            |             |

| 1     | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|-------|------|------|------|------|------|------|------|
| 3.71  | 4.55 | 5.03 | 5.03 | 3.55 | 5.07 | 5.08 | 5.07 |
| 3.60  | 4.73 | 4.88 | 3.60 | 3.60 | 5.82 | 5.47 | 3.71 |
| 2.22  | 2.46 | 3.10 | 3.67 | 3.72 | 3.38 | 2.65 | 2.09 |
| 2.09  | 2.64 | 4.18 | 4.31 | 4.28 | 3.76 | 3.11 | 2.09 |
| 10.22 | 8.98 | 7.99 | 9.04 | N/A  | N/A  | N/A  | N/A  |



In the full report, this parameter is placed on a separate page.

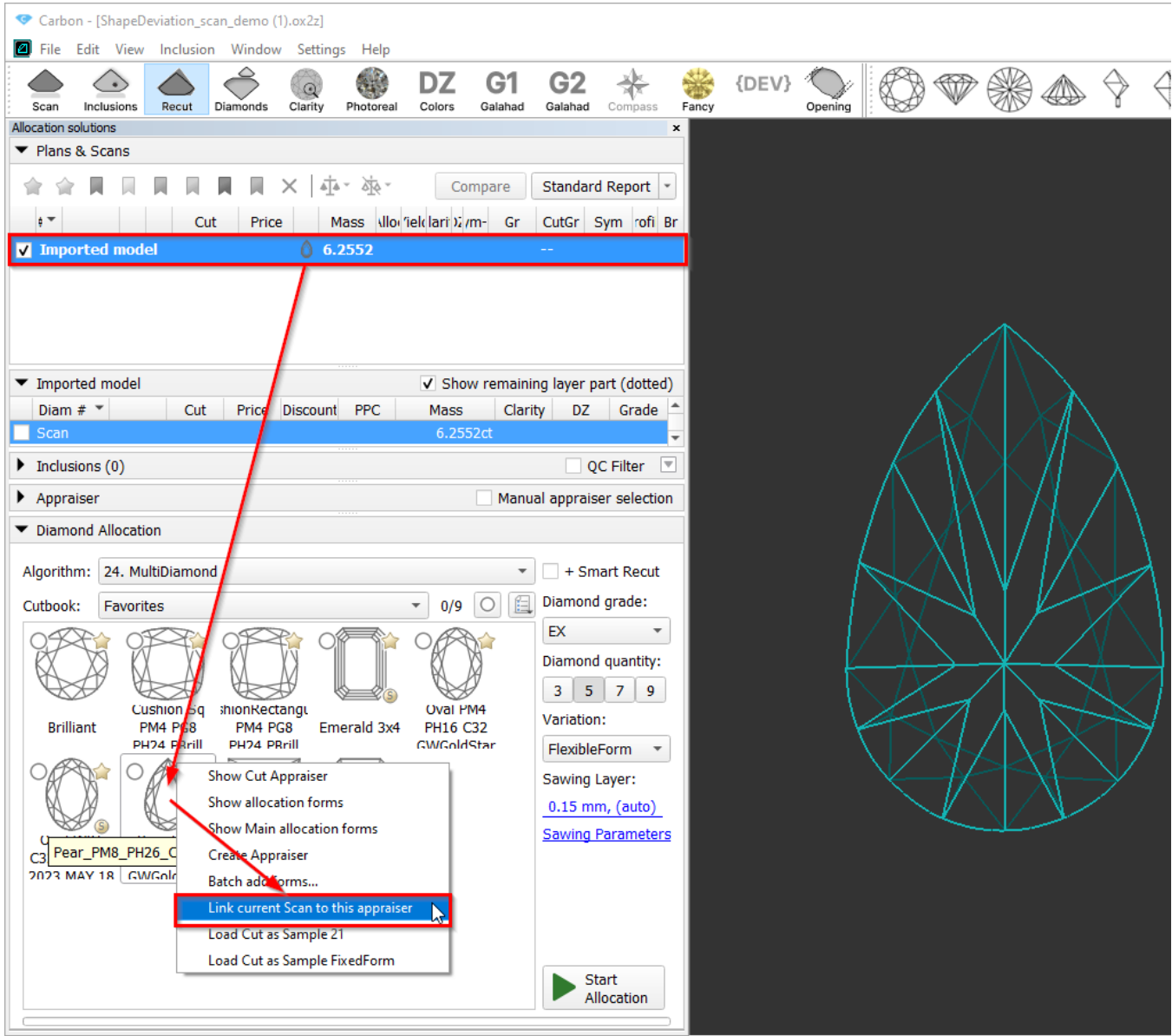
| Girdle Shape |    | 11.25° | 22.5° | 45°   | 360°  | Max   | Min    |
|--------------|----|--------|-------|-------|-------|-------|--------|
| Value        | %  | 0.66   | 0.73  | 0.98  | 1.31  | 0.55  | -0.75  |
| Value        | mm | 0.035  | 0.039 | 0.052 | 0.069 | 0.029 | -0.040 |
| Grade        |    | EX     | EX    | EX    | EX    |       |        |
| Azimuth      | °  |        |       |       |       | 238.9 | 320.7  |
| Legend       |    | .....  | ----- | ————  |       | ○     | ○      |



The description of Shape deviation parameter and corresponding bookmarks are available in [Shape Deviation](#).

Shape Deviation for scans

The Shape Deviation parameter can be utilized not only for solutions but also for scans of finished diamonds. To do this, select the scan, right-click on the **corresponding** cut in the "Cut Book," and choose "Link current scan to this appraiser." The scan can then be evaluated in the Appraiser Editor or Polish Report can be built.



Registration of in-house cuts with ShapeDeviation control

| Video   Cut registration with Shape Deviation                                                                                                                                                                                    |               |                                               |                 |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------|-----------------|-------|
| Published:                                                                                                                                                                                                                       | 2025, June 20 | Last Updated:                                 | 2025, August 11 | v.1.3 |
| Your browser does not support the HTML5 video element                                                                                                                                                                            |               |                                               |                 |       |
| <b>Video summary:</b> <ul style="list-style-type: none"><li>• Agreement between Planning and QC Inspection</li><li>• New cut registration with Shape Deviation</li><li>• Article "Which appraiser template to choose?"</li></ul> |               |                                               |                 |       |
| <b>Video keywords:</b> Shape Deviation, girdle shape control, cut registration, Goodwin templates, allocation forms                                                                                                              |               |                                               |                 |       |
| Data                                                                                                                                                                                                                             | N/A           |                                               |                 |       |
| Published in:                                                                                                                                                                                                                    | Release Notes | 2025-12-11 - HP Carbon 3.0.3                  |                 |       |
|                                                                                                                                                                                                                                  | Documentation | N/A                                           |                 |       |
|                                                                                                                                                                                                                                  | Playlists     | N/A                                           |                 |       |
|                                                                                                                                                                                                                                  | Also          | As Separate Page   On YouTube   Specification |                 |       |

Users can register their [in-house](#) cuts with ShapeDeviation control using three new templates "Goodwin\_GirdleShape\_\*". Three new templates differ by the number of Gold and Silver Stars in facet types. The first registered form will be used as a reference for the ShapeDeviation parameter. Take care in selecting it. For evaluating ShapeDeviation, its Girdle Ratio will be adjusted according to the current solution. In the future, we will enable registering multiple reference shapes and provide tools to assist in selecting reference shapes; ensuring the validity of the user's set of girdle references; creating a girdle reference for the current solution based on the user's multiple references.

One girdle shape reference form does not limit the number of allocation forms. For the best results, Goodwin cuts should have many different high-quality allocation forms.

Which appraiser template to choose?

The **green option** is recommended for rounded fancy cuts. The necessity and usefulness of the green option for step cuts are still under question, so both green and yellow options are possible for them.

-  AnycutBasic : Goodwin type cuts support AnycutBasic appraiser as well, but with the lack of important advantage of having slope angles in the appraiser.
-  Goodwin\* : The appraiser control Crown and Pavilion Slopes. The selection of the most important cut facets is performed automatically. The only advantage of this type of templates over other options is the 2C3P version, which is well suited for rectangular cushions with a two-tier pavilion.
-  Goodwin\_Starts\* : The appraiser control Crown and Pavilion Slopes. The selection of the most important cut facets is done by the user using gold and silver stars. This prevents the desynchronization of values at all stages of the diamond's life cycle.
-  Goodwin\_GirdleShape\_Starts\* : The appraiser additionally control the Shape Deviation parameter, responsible for the beauty of the girdle shape.

 You can read the full article about choosing an appraiser: [Which appraiser template to choose?](#)

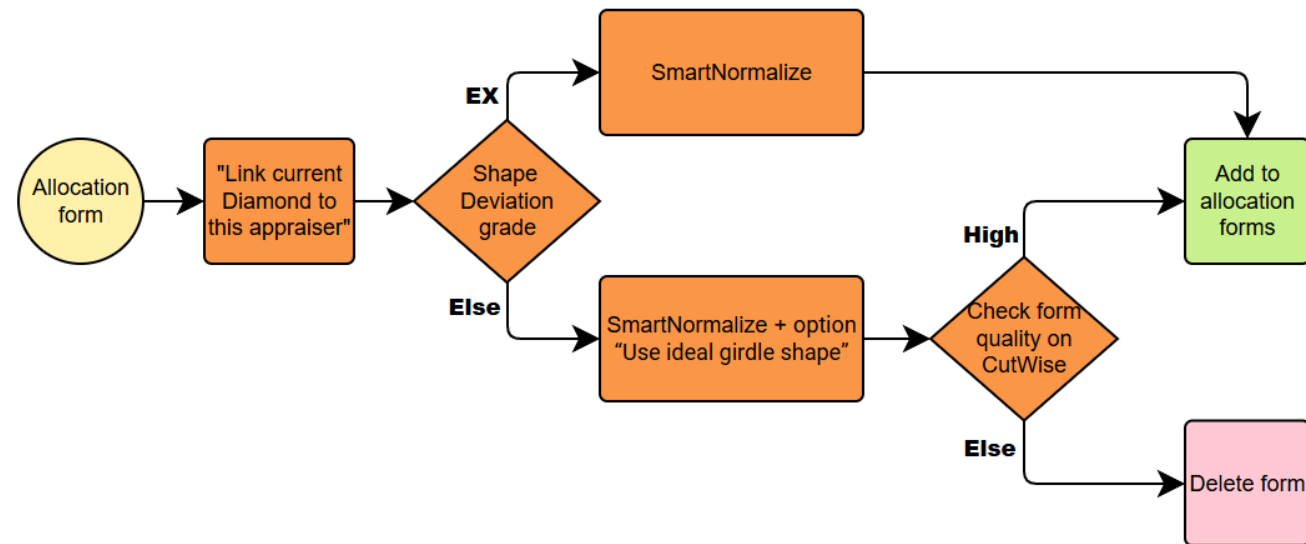
Add allocation forms with Shape Deviation

| Video   Add allocation forms with Shape Deviation                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                               |                 |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------|-----------------|-------|
| Published:                                                                                                                                                                                                                                                                                                                                                                              | 2025, June 20                                        | Last Updated:                                                                 | 2025, August 14 | v.1.3 |
| Your browser does not support the HTML5 video element                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                                               |                 |       |
| <div>Video summary:</div> <ul style="list-style-type: none"><li>• Add allocation forms with Shape Deviation block scheme</li><li>• We recommend using allocation forms with an EX grade for Shape Deviation</li><li>• Transfer allocation forms collection</li><li>• Option "Link current Diamond to this appraiser"</li><li>• SmartNormalize option "Use ideal girdle shape"</li></ul> |                                                      |                                                                               |                 |       |
| Video keywords: Shape Deviation, girdle shape control, Goodwin, add allocation forms, SmartNormalize, linked appraiser                                                                                                                                                                                                                                                                  |                                                      |                                                                               |                 |       |
| Data                                                                                                                                                                                                                                                                                                                                                                                    | <a href="#">ShapeDeviation_forms_demo_final.ox2z</a> |                                                                               |                 |       |
| Published in:                                                                                                                                                                                                                                                                                                                                                                           | Release Notes                                        | <a href="#">2025-12-11 - HP Carbon 3.0.3</a>                                  |                 |       |
|                                                                                                                                                                                                                                                                                                                                                                                         | Documentation                                        | N/A                                                                           |                 |       |
|                                                                                                                                                                                                                                                                                                                                                                                         | Playlists                                            | N/A                                                                           |                 |       |
|                                                                                                                                                                                                                                                                                                                                                                                         | Also                                                 | <a href="#">As Separate Page</a>   <a href="#">On YouTube</a>   Specification |                 |       |

To make the allocation algorithms work correctly, we recommend using allocation forms with an EX grade by Shape Deviation parameter. How to get them? To solve this, we added the option "Use ideal girdle shape" in the SmartNormalize algorithm. How to achieve this? When working with the new cut, you will automatically get EX-grade solutions. The best of these can be normalized and added as forms. But if you've been using our products for a while, you already have a collection of good allocation forms for your cuts. These need to be transferred to the new versions of the cuts registered with the "Goodwin\_GirdleShape\_\*" templates.

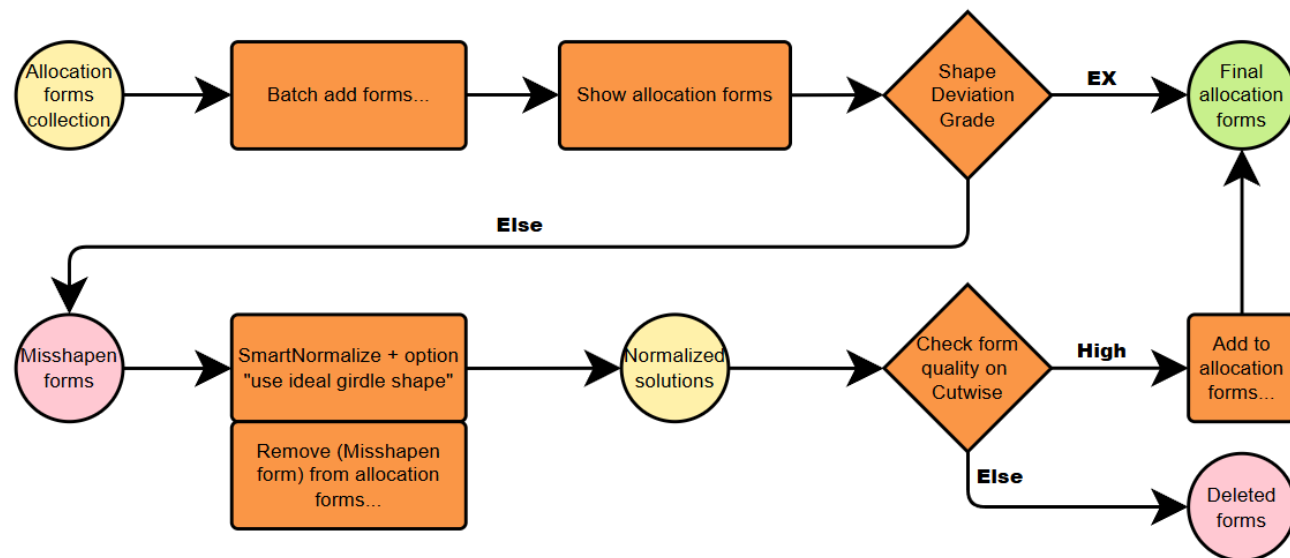
Scheme for one form or solution without Shape Deviation

Your old preforms must be evaluated for Shape Deviation of the new cut using the "Link current Diamond to this appraiser" feature. If the preform has an EX grade by Shape Deviation, you can normalize it as usual with minimal changes and register it in the new cut. If the old preform has not EX Shape Deviation grade, the girdle shape must be corrected using SmartNormalize with the new option "Use ideal girdle shape". Before registering this form, check in CutWise that the girdle shape change did not harm the optical properties of the preform.



### Scheme for many forms transit

If you have many forms in your collection, we recommend using the "Batch Add Forms" command to speed up the process. This command automatically transfers the forms without checking for Shape Deviation. So you'll only need to fix the "Misshapen Forms". To view these, use the "Show Allocation Forms" command. Then, apply the previously described procedure to correct Shape Deviation for the "Misshapen Forms". Finally, don't forget to remove the "Misshapen Forms" from your new cut, since they have already been added.



### Link current Diamond to this appraiser

Now you can evaluate your solutions, made by any method, using any appraiser you want. For example, this helps you find shape deviation values based on the ideal girdle shape from another appraiser. This is especially useful if your current solution was made with an old appraiser and will be used as the allocation form for cutting with shape deviation.

How to do it:

1. Select your solution.
2. Find the cut whose appraiser you want to use for viewing.
3. In the cut's context menu, select the command "Link current Diamond to this appraiser."

Allocation solutions

Plans & Scans

★ ☆ ★ ★ ★ ★ ★ ★ ★ ★

Compare

Standard Report

| #                                                                      | Cut                     | Price  | Mass   | Alloc     | Yield | Clarity | Color | Gr | CutGr | Sym | Br | Profile  |
|------------------------------------------------------------------------|-------------------------|--------|--------|-----------|-------|---------|-------|----|-------|-----|----|----------|
| <div> <input type="checkbox"/> Imported model <div>3.5900</div> </div> |                         |        |        |           |       |         |       |    |       |     |    |          |
| <input type="checkbox"/> 94                                            | Marquise_WBT_P24C32_... | 5005\$ | 1.1042 | SR 30.64% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input checked="" type="checkbox"/> 109                                | Pear_wBT.P24C...        | 3845\$ | 1.1660 | SR 32.31% | SI2 D | EX      | EX    | EX | EX    | EX  | EX | Profile1 |
| <input type="checkbox"/> 86                                            | Marquise_WBT_P24C32_... | 4662\$ | 1.1112 | SR 30.92% | VS2 D | VG      | VG    | VG | VG    | VG  | VG | Default  |
| <input type="checkbox"/> 93                                            | Marquise_WBT_P24C32_... | 4960\$ | 1.0958 | SR 30.36% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 96                                            | Marquise_WBT_P24C32_... | 4960\$ | 1.0952 | SR 30.36% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 98                                            | Marquise_WBT_P24C32_... | 4960\$ | 1.0935 | SR 30.36% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 99                                            | Marquise_WBT_P24C32_... | 4914\$ | 1.0870 | SR 30.08% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 95                                            | Marquise_WBT_P24C32_... | 4914\$ | 1.0869 | SR 30.08% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 97                                            | Marquise_WBT_P24C32_... | 4914\$ | 1.0866 | SR 30.08% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 92                                            | Marquise_WBT_P24C32_... | 4914\$ | 1.0806 | SR 30.08% | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |
| <input type="checkbox"/> 83                                            | Marquise_WBT_P24C32_... | 4823\$ | 1.0646 | 29.53%    | VS2 D | EX      | EX    | EX | EX    | EX  | EX | Default  |

Plan 109

Show remaining layer part (dotted)

Inclusions (12 of 797)

QC Filter

Appraiser

Manual appraiser selection

Cut: Pear\_wBT.P24C32

Appraiser: Pear\_wBT.P24C32

Profile: Profile1

Absolute+Relative

Show Editor

Diamond Allocation

Algorithm: 23. Single (FixedForm)

+ Brilliance based

+ Smart Recut

Cutbook: Favorites

Brilliant

Pear wBT P24C32

Princess 4S

Radiant

Marquise WBT P24C32 GWGoldStar

Oval PM4 PH16 C32 GWGoldStar

Pear PM8 PH26 C32 GWGoldStar

2023 MAY 18 GWGoldStar

Show Cut Appraiser

Show allocation forms

Show Main allocation forms

Create Appraiser

Batch add forms...

Link current Diamond to this appraiser

Load Cut as Sample 21

Load Cut as Sample FixedForm

Diamond grade: EX

Diversity levels:

Cut 0%

Grade 0%

Clarity 0%

Sawing Layer: 0.13 mm, (auto)

Sawing Parameters

Start Allocation

After that, fields related to the appraiser will show the linked appraiser's name, with a warning symbol next to the label. Reports will also be built using the linked appraiser.

Allocation solutions

Plans & Scans

★

📅

📅

📅

📅

✖

🔍

🔍

Cut

Price

Mass

Alloc

Yield

Lat:22:m

Gr

CutGr

Sym

Br

Profile

Imported model

3.5900

94

Marquise\_WBT\_P24C32....

5005\$

1.1042

SR 30.64% VS2 D

EX

EX

EX

Default

109

Pear\_wBT\_P24C32....

3845\$

1.1660

SR 32.31% SI2 D

GD

GD

GD

Default

86

Marquise\_WBT\_P24C32....

4662\$

1.1112

SR 30.92% VS2 D

VG

VG

VG

Default

93

Marquise\_WBT\_P24C32....

4960\$

1.0958

SR 30.36% VS2 D

EX

EX

EX

Default

96

Marquise\_WBT\_P24C32....

4960\$

1.0952

SR 30.36% VS2 D

EX

EX

EX

Default

98

Marquise\_WBT\_P24C32....

4960\$

1.0935

SR 30.36% VS2 D

EX

EX

EX

Default

99

Marquise\_WBT\_P24C32....

4914\$

1.0870

SR 30.08% VS2 D

EX

EX

EX

Default

95

Marquise\_WBT\_P24C32....

4914\$

1.0869

SR 30.08% VS2 D

EX

EX

EX

Default

97

Marquise\_WBT\_P24C32....

4914\$

1.0866

SR 30.08% VS2 D

EX

EX

EX

Default

92

Marquise\_WBT\_P24C32....

4914\$

1.0806

SR 30.08% VS2 D

EX

EX

EX

Default

83

Marquise\_WBT\_P24C32....

4823\$

1.0646

29.53% VS2 D

EX

EX

EX

Default

Plan 109

Show remaining layer part (dotted)

Inclusions (12 of 797)

QC Filter

Appraiser

Manual appraiser selection

Cut: Pear\_PM8\_PH26\_C32\_GWGoldStar

Appraiser: Pear\_PM8\_PH26\_C32\_GWGoldStar

Profile: Default

Absolute+Relative

Hide Editor

Diamond Allocation

Algorithm: 23. Single (FixedForm)

+ Brilliance based

+ Smart Recut

Cutbook: Favorites

0/11

Brilliant

Pear wBT P24C32

Princess 4S

Radiant

Cushion Sq PM4 PG8 PH24 PRill

ShionRectangl PM4 PG8 PH24 PRill

Emerald 3x4 GRID

Marquise WBT P24C32 GWGoldStar

Oval PM4 PH16 C32 GWGoldStar

Oval WBT C32 G64 P24 2023 MAY 18

Pear PM8 PH26 C32 GWGoldStar

Diamond grade:

EX

Diversity levels:

Cut 0%

Grade 0%

Clarity 0%

Sawing Layer: 0.13 mm, (auto)

Sawing Parameters

Start Allocation

Appraiser Editor

Pear\_PM8\_PH26\_C32\_GWGoldStar

Profile: Default (read only)

Show Presets

Absolute Proportions

Absolute Symmetry

Relative Proportions

Relative Symmetry

Discounts

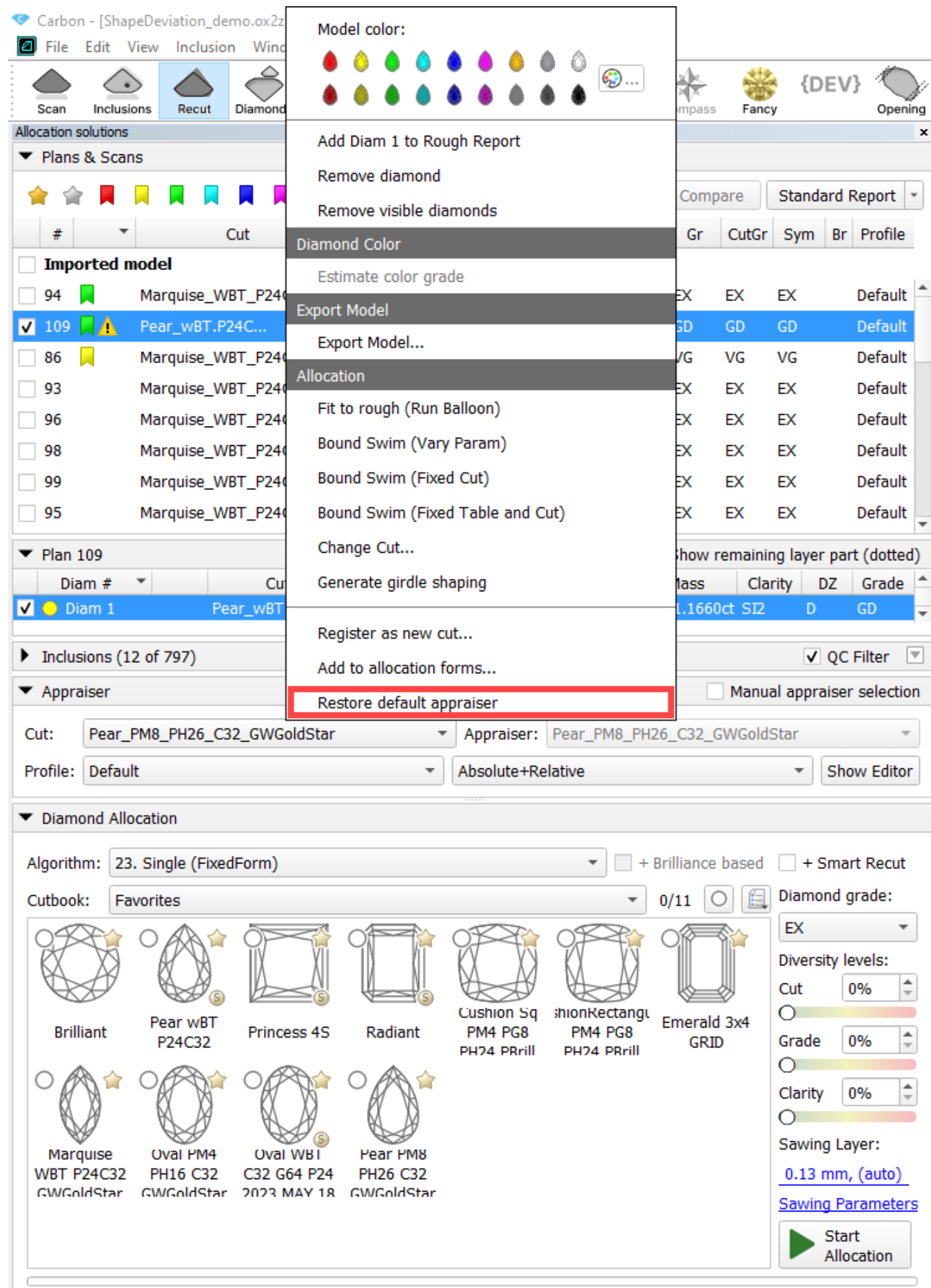
| Parameter             | Grade | Value  | FR    | GD    | VG    | EX    | VG   | GD   | FR   |
|-----------------------|-------|--------|-------|-------|-------|-------|------|------|------|
| GirdleRatio           | VG    | 1.511  | 1.48  | 1.49  | 1.5   | 1.525 | 1.65 | 1.69 | 1.74 |
| Table                 | EX    | 55.358 | 50    | 52    | 53    | 55    | 64   | 65   | 70   |
| CrownHeight           | EX    | 15.737 | 8     | 9     | 10    | 11    | 16.5 | 18.5 | 19.8 |
| GirdleBezel           | EX    | 4.491  | 2     | 2     | 2     | 2.3   | 5.5  | 6    | 6.5  |
| PavilionHeight        | EX    | 43.194 | 28    | 29.5  | 32.5  | 36.5  | 46   | 47.5 | 50   |
| TotalHeight           | EX    | 63.422 | 45    | 46    | 49.5  | 54.5  | 65   | 67.5 | 71   |
| CrownGoldStarSlope    | EX    | 35.500 | 26    | 27    | 29    | 30    | 38.5 | 39.5 | 41   |
| PavilionGoldStarSlope | EX    | 40.147 | 33    | 34    | 35    | 36    | 42   | 43   | 45   |
| SweetLine             | EX    | -0.429 | -1000 | -1000 | -1000 | 1000  | 1000 | 1000 | 1000 |

Import...

Show difference from: <don't show>

Export

To go back to the default appraiser, use the command "Restore default appraiser" in the diamond's context menu.



Option "Use ideal girdle shape" during SmartNormalize

Suppose we have a solution that we want to use as allocation forms for the Heart\_ShapeDeviation\_Demo cut. We apply the command “Link current Diamond to this appraiser” to the solution. In the appraiser and report, we see poor Shape Deviation by appraiser Heart\_ShapeDeviation\_Demo.

Allocation solutions

Plans & Scans

★ ☆ ★ ★ ★ ★ ★ ★ ★ ★

Compare Standard Report

✖

Cut

Price

Mass

Alloc

Yield

Jarit:J2/m-

Gr

CutGr

Sym

Br

Profile

Imported model

1.0192

Default

4

Heart\_FM8\_PH18\_C35\_G...

3960\$

0.9025

Form

88.30%

VS1

H

FR

VG

FR

Profile1

Plan 4

Show remaining layer part (dotted)

Diam #

Cut

Price

Discount

PPC

Mass

Clarity

DZ

Grade

1

Heart\_FM8\_PH18\_C35\_GWGoldStar

3960\$

±0%

4400.00\$/ct

0.9025ct

VS1

H

FR

Inclusions (0)

Nonconvex models are unsupported!

QC Filter

Appraiser

Manual appraiser selection

Cut: Heart\_ShapeDeviation\_Demo

Appraiser: Heart\_ShapeDeviation\_Demo

Profile: Profile1

Absolute+Relative

Hide Editor

Diamond Allocation

Algorithm: 22. SmartNormalize

Allow Girdle Extra Facets

Presets: All presets

Fix Girdle

Cut grade: EX

Fix Crown

Symmetry grade: EX

Fix Pavilion

Fix finished facets

Safe Boundaries

Use ideal girdle shape

Start Allocation

Heart\_ShapeDeviation\_Demo

Profile: Profile1

Show Presets

Absolute Proportions

Absolute Symmetry

Relative Proportions

Relative Symmetry

Discounts

| Parameter             | Grade | Value | EX ] | VG ] | GD ] | FR ] |
|-----------------------|-------|-------|------|------|------|------|
| TableOffsetLength     | EX    | 0.162 | 0.5  | 0.8  | 1.6  | 20   |
| TableOffsetWidth      | EX    | 0.000 | 0.5  | 0.8  | 1.6  | 20   |
| CuletOffsetLength     | EX    | 8.156 | 15   | 15   | 15   | 20   |
| CuletOffsetWidth      | EX    | 0.001 | 0.5  | 0.8  | 1.6  | 20   |
| CrownGoldStarSlope    | EX    | 0.000 | 0.9  | 1.2  | 1.6  | 20   |
| PavilionGoldStarSlope | EX    | 0.000 | 0.9  | 1.2  | 1.6  | 20   |
| ShapeDeviation11_25   | VG    | 1.033 | 0.9  | 1.2  | 1.6  | 20   |
| ShapeDeviation22_5    | FR    | 2.116 | 1    | 1.5  | 2    | 20   |
| ShapeDeviation45      | FR    | 2.953 | 1.5  | 2    | 2.5  | 20   |
| ShapeDeviation360     | GD    | 2.953 | 2    | 2.5  | 3    | 20   |

Image from report

90°

128µm

-69µm

180°

0°

270°

Import...

Show difference from: <don't show>

Export

Load profile

Discard

Apply

This means we need to run SmartNormalize with the “Use ideal girdle shape” option.

Diamond Allocation

Algorithm: 22. SmartNormalize

Allow Girdle Extra Facets

Presets: All presets

Fix Girdle

Cut grade: EX

Fix Crown

Symmetry grade: EX

Fix Pavilion

Fix finished facets

Safe Boundaries

Use ideal girdle shape

Start Allocation

As a result, we get a range of solutions with Shape Deviation values from near zero up to the original value in one preset. The SmartNormalize results automatically use the same linked appraiser as the input solution, so you can evaluate the results with it.



Algorithm: 22. SmartNormalize

☐ Allow Girdle Extra Facets

Presets: All presets

☐ Fix Girdle

Cut grade: EX

☐ Fix Crown

Symmetry grade: EX

☐ Fix Pavilion

☐ Fix finished facets

☐ Safe Boundaries

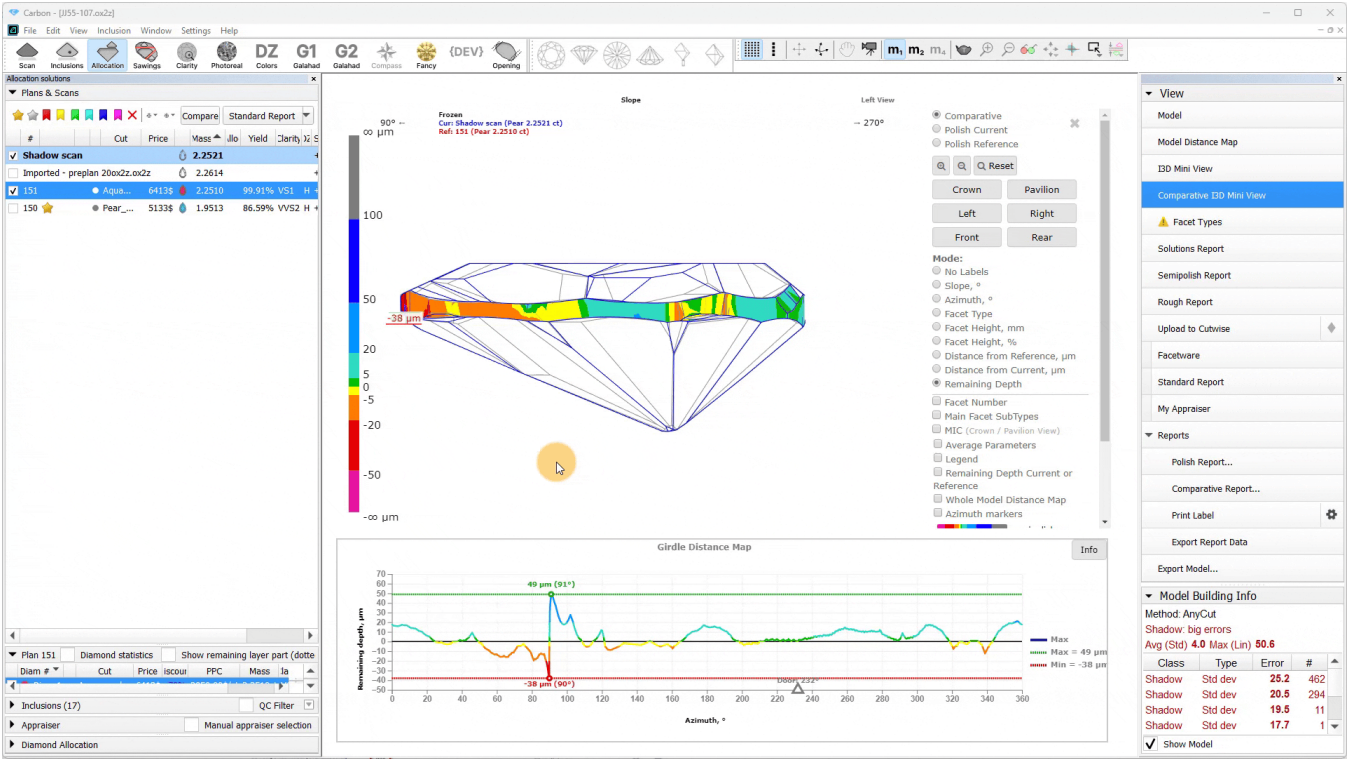
☒ Use ideal girdle shape

➡

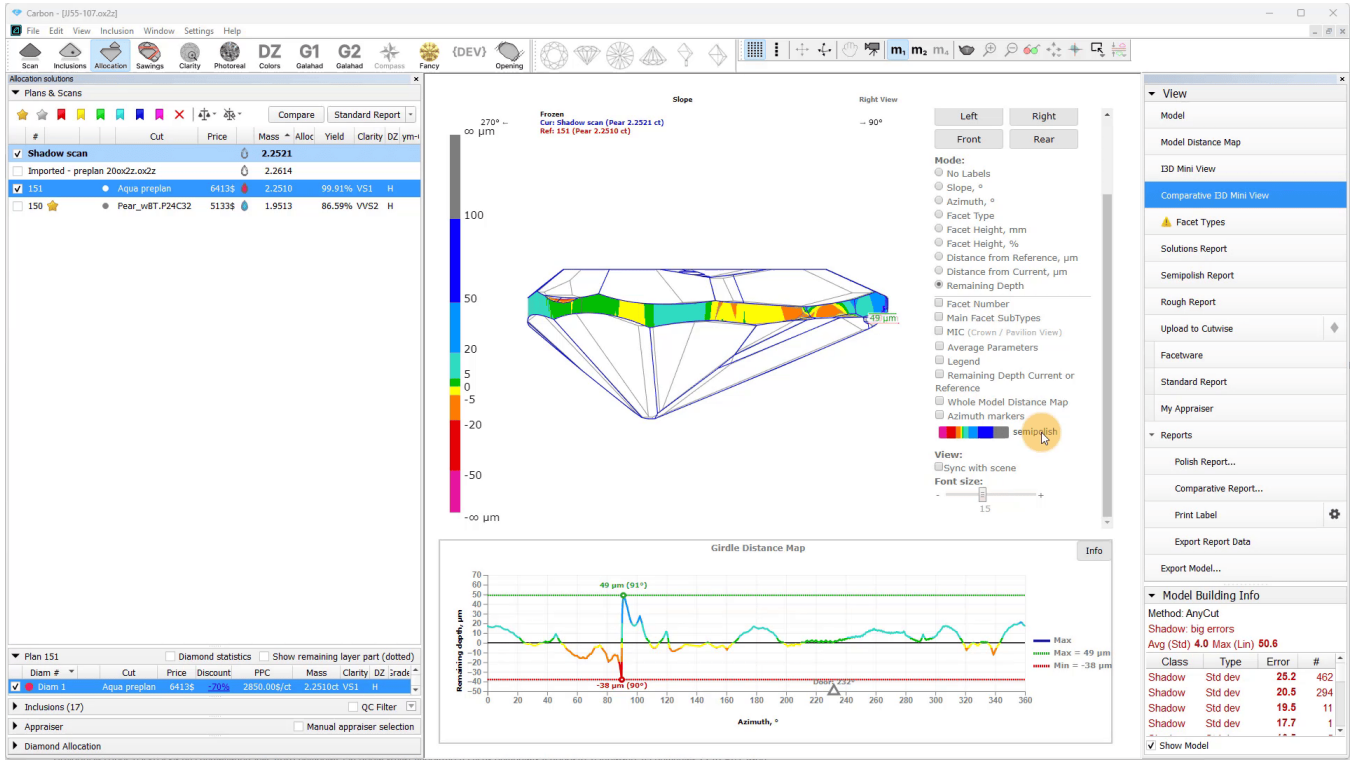
Ideal girdle shape will be taken from appraiser Heart\_ShapeDeviation\_Demo.

### Remaining depth mode changes for Comparative I3D reports

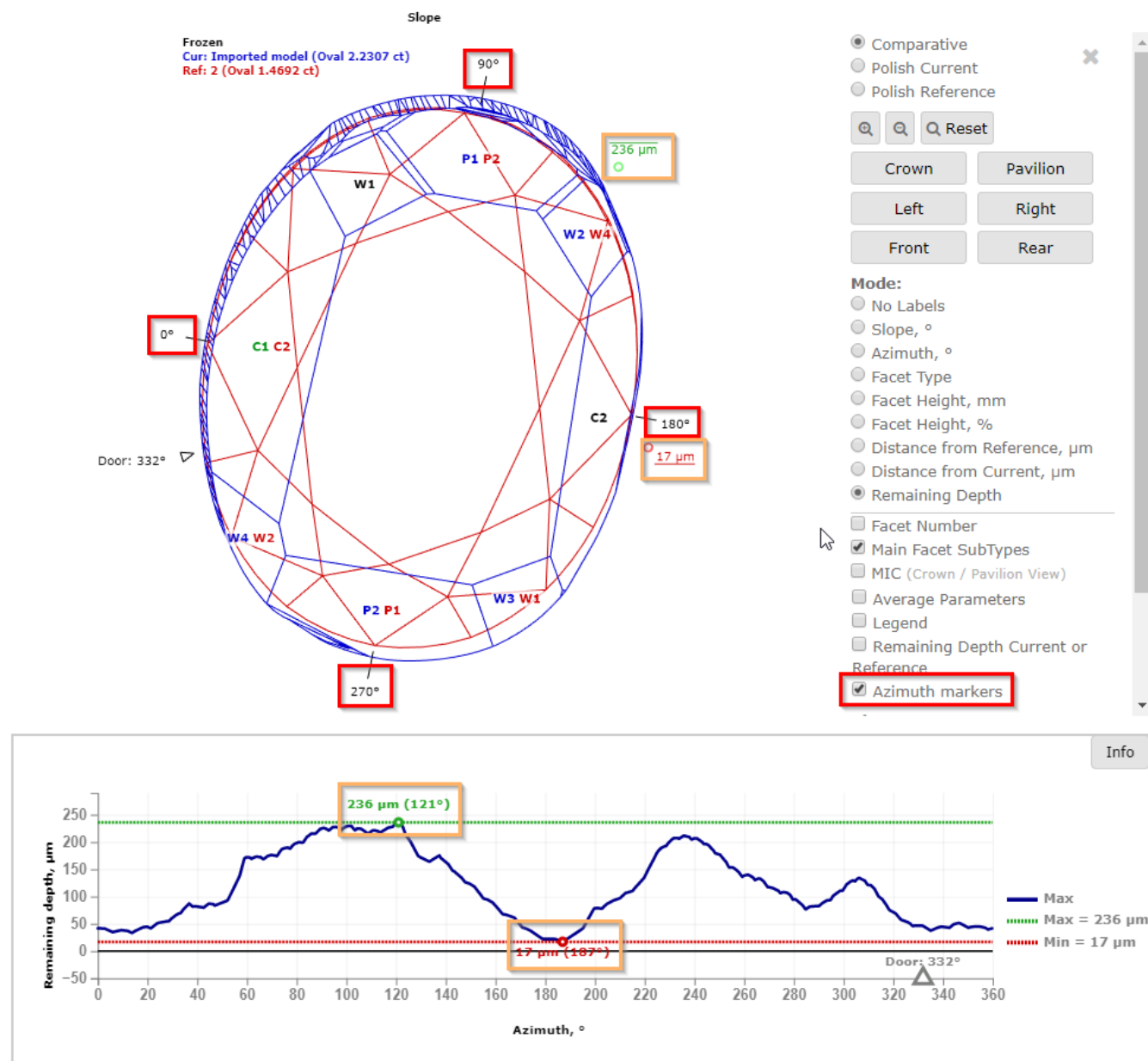
We've reintroduced **Remaining Depth** in a new and improved form - now it delivers faster performance and noticeably higher color accuracy. Alongside the girdle comparison, you can now compare complete models for a more comprehensive analysis. The **girdle distance graph** has also been enhanced with palette-based coloring, making it easier to visually link the graph to the model view.



Also you can now choose a color palette. Currently, there are two options available: **semipolish** and **rough**, each suited to different purposes, as their names suggest. **Semipolish** is the original palette used in RD, while the **rough** palette is adapted from the Carbon Viewer.

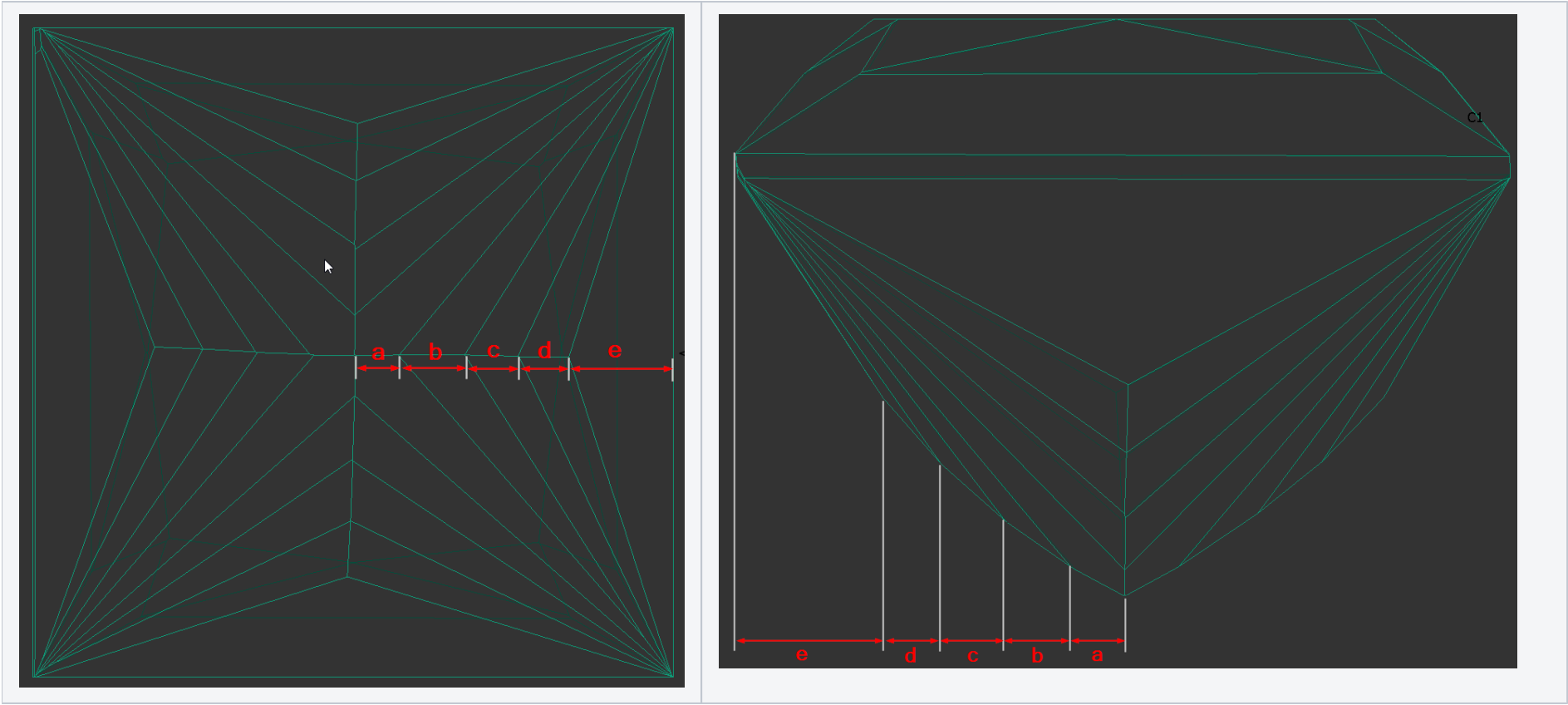


In I3D Comparative Remaining Depth mode, min/max indication added to the graph plot and 3D scene.  
Azimuth markers were added to the 3D scene to make a more convenient navigation between the graph plot and the scene.



## Facets Edge Width for Princess cut

The parameters are calculated in mm and %. If Princess Cut has RT <= 1.05, then the parameters in % are calculated in relation to the width, and if more than 1.05, then the parameters in relation to the length are also added. The distances are calculated in projection on the plane of the table.



The bookmarks follow.

"a":  
"PAV\_MAIN\_FACET\_EDGE\_WIDTH\_MM",  
"PAV\_MAIN\_FACET\_EDGE\_WIDTH\_PC",  
"PAV\_MAIN\_FACET\_EDGE\_LENGTH\_MM",  
"PAV\_MAIN\_FACET\_EDGE\_LENGTH\_PC".

"d", "c", "b" ( numbering i comes from the girdle - that's how it was decided to number the chevrons ):  
"CHEVRONi\_EDGE\_WIDTH\_MM",  
"CHEVRONi\_EDGE\_WIDTH\_PC",  
"CHEVRONi\_EDGE\_LENGTH\_MM",  
"CHEVRONi\_EDGE\_LENGTH\_PC",

"e":  
"PAV1\_MAIN\_FACET\_EDGE\_WIDTH\_MM",  
"PAV1\_MAIN\_FACET\_EDGE\_WIDTH\_PC",  
"PAV1\_MAIN\_FACET\_EDGE\_LENGTH\_MM",  
"PAV1\_MAIN\_FACET\_EDGE\_LENGTH\_PC",

### Heart Groove measurements

We added the following dimensions (in mm and as a percentage with respect to width).

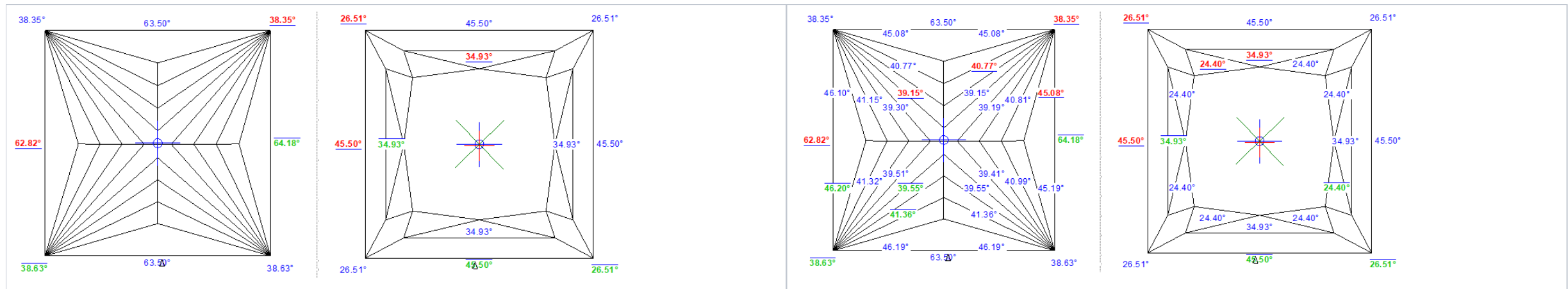
See new bookmarks:

1. Dimension "A" - "HEART\_GROOVE\_WIDTH\_MM", "HEART\_GROOVE\_WIDTH\_PC"
2. Dimension "B" - "HEART\_GROOVE\_DEPTH\_CRN\_MM", "HEART\_GROOVE\_DEPTH\_CRN\_PC"  
[blocked URL](#)
3. Dimension "C" - "HEART\_GROOVE\_DEPTH\_PAV\_MM", "HEART\_GROOVE\_DEPTH\_PAV\_PC"  
[blocked URL](#)
4. Dimension "D" - "HEART\_GROOVE\_HEIGHT\_MM", "HEART\_GROOVE\_HEIGHT\_PAV\_PC"  
[blocked URL](#)

### Princess reports - improved pictures

Information about chevrons and star facets has been added to the pictures:

| Before | Now |
|--------|-----|
|--------|-----|



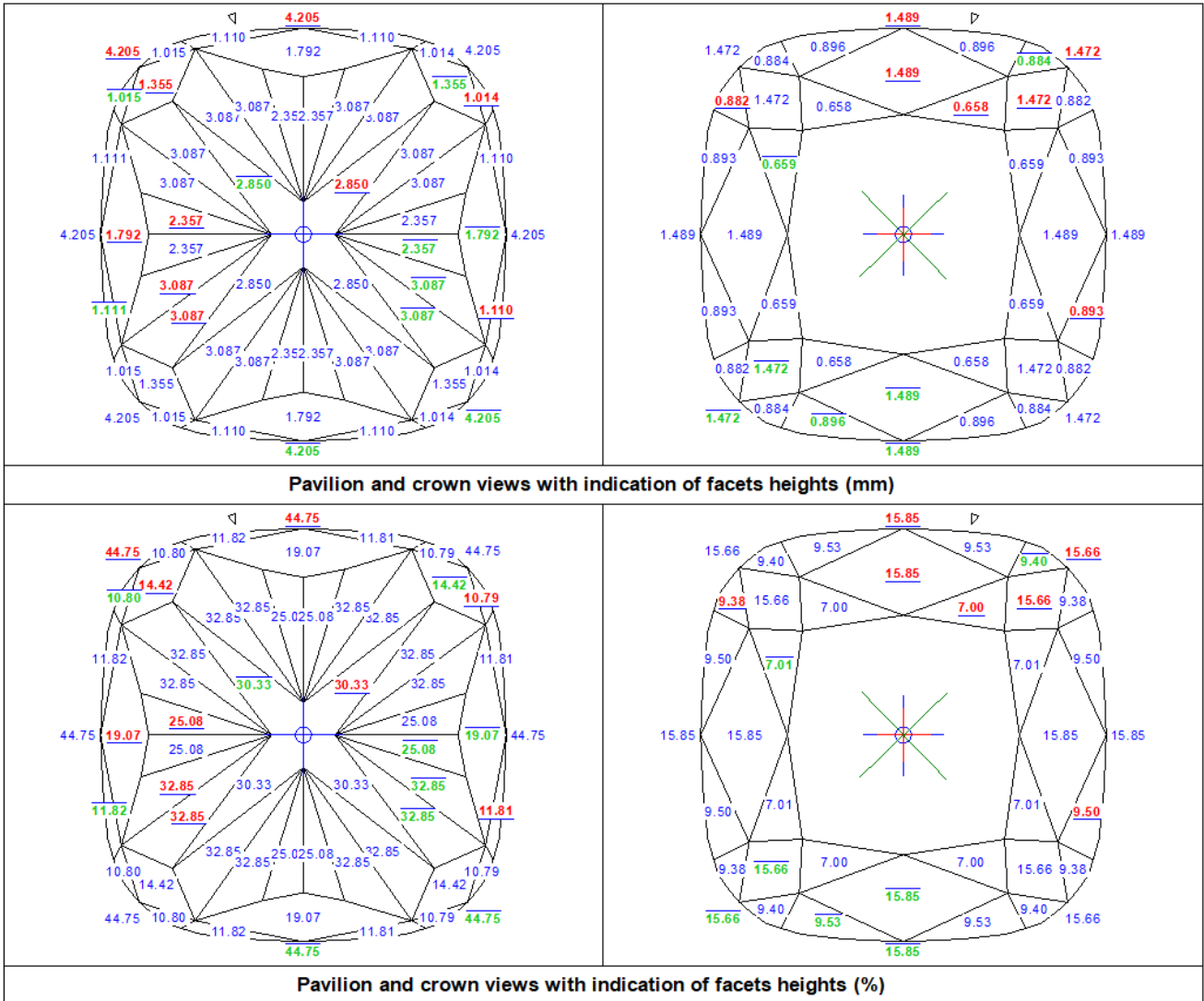
## The new images and bookmarks are available for custom reports

The new images containing Crown and Pavilion Height, along with Facets Height Data, are available under bookmarks "PAVILION\_HEIGHT\_PC\_REPORT", "PAVILION\_HEIGHT\_MM\_REPORT", "CROWN\_HEIGHT\_PC\_REPORT", and "CROWN\_HEIGHT\_MM\_REPORT".

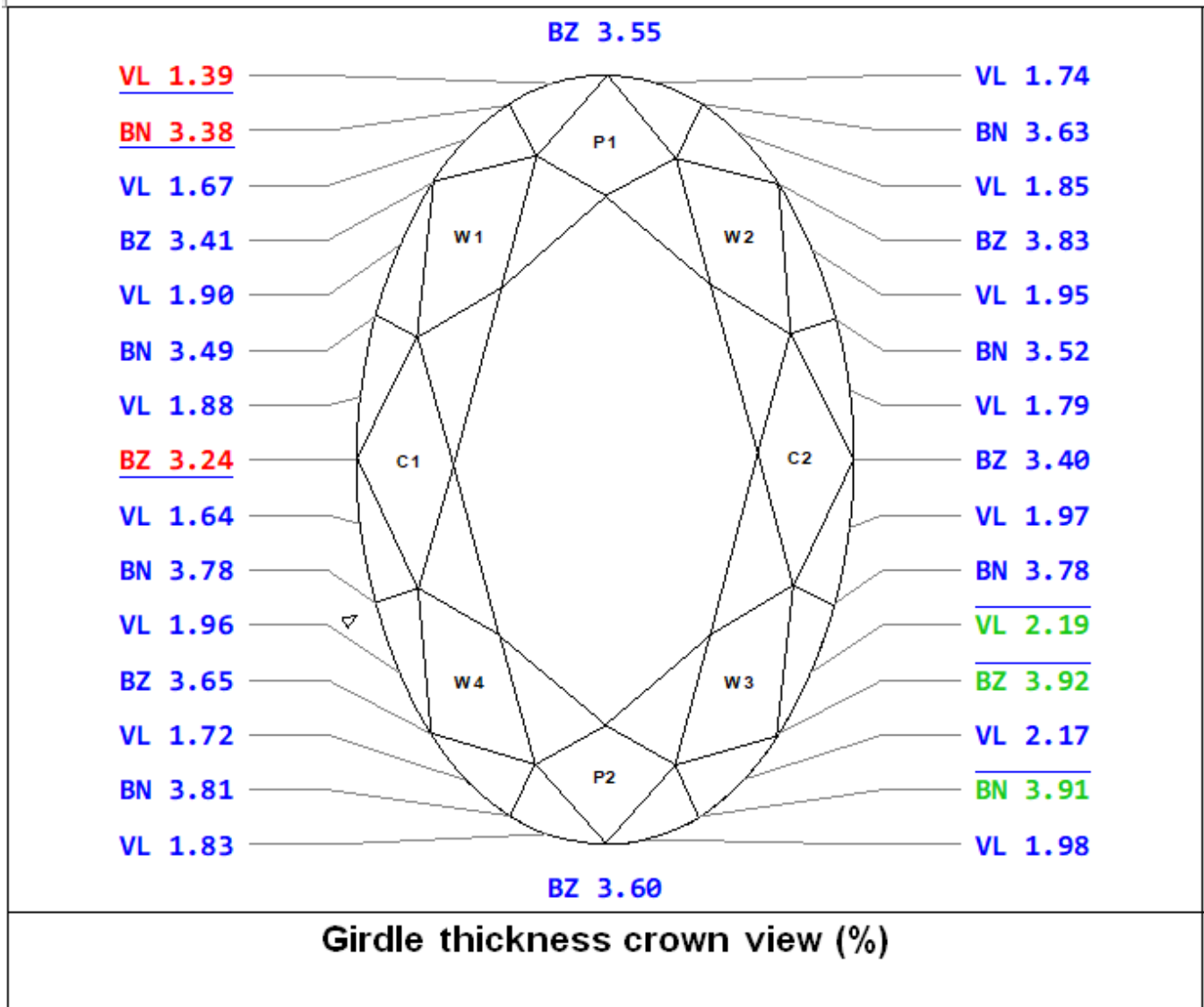
The new images can be found in following reports:

- FULL\_REPORT\_FOR\_CUSHION.RTF
- FULL\_REPORT\_FOR\_SQUARE\_CUSHION.RTF

## Facets heights



The new Girdle Height image with Valley was added to FULL\_REPORT\_FOR\_BRILLIANT.RTF and FULL\_REPORT\_FOR\_ROUNDED\_FANCIES.RTF and available under the bookmark "GIRDLE\_THICKNESS\_PC\_CRN\_VIEW\_COLUMN."



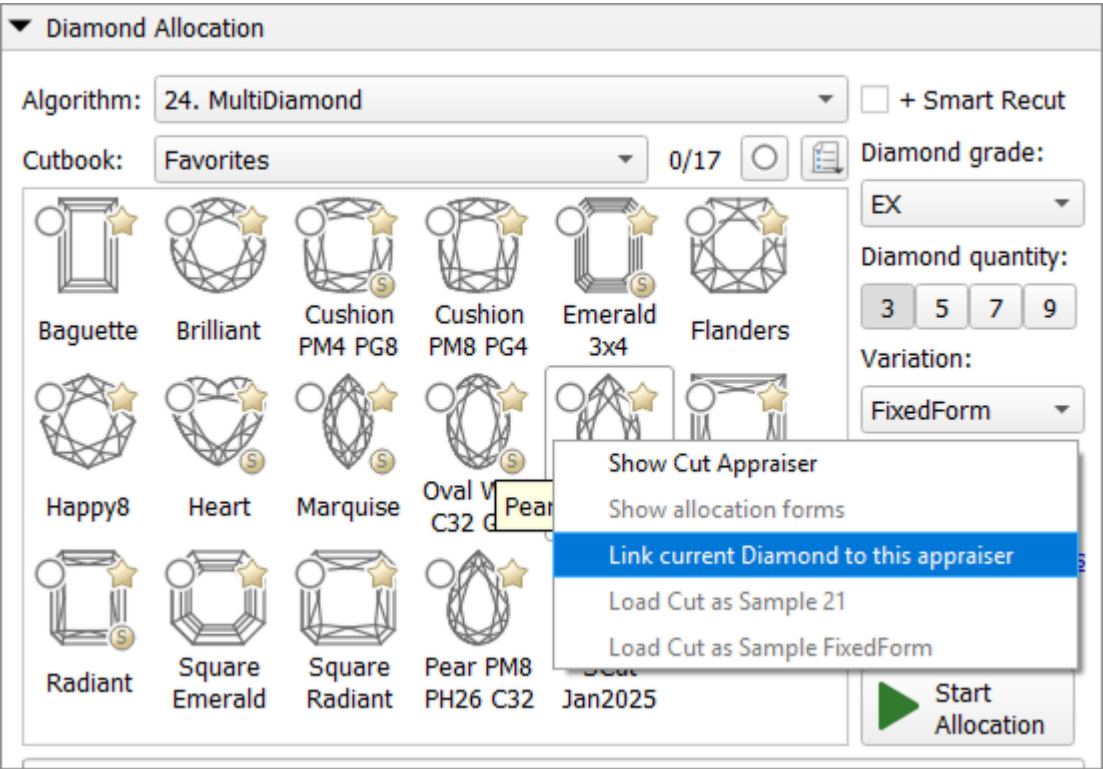
The new bookmarks for Square StepCut and Square Radiant have been added to the RTF report:

- CORNER\_ANGLE\_SQUARE\_MM\_...
- CORNER\_ANGLE\_SQUARE\_PC\_...
- PAV\_CORNER\_ANGLE\_SQUARE\_MM\_...
- PAV\_CORNER\_ANGLE\_SQUARE\_PC\_...
- CRN\_CORNER\_ANGLE\_SQUARE\_MM\_...
- CRN\_CORNER\_ANGLE\_SQUARE\_PC\_...
- PAV\_GIRDLE\_SIDE\_SQUARE\_MM\_...
- PAV\_GIRDLE\_SIDE\_SQUARE\_PC\_...
- CRN\_GIRDLE\_SIDE\_SQUARE\_MM\_...
- CRN\_GIRDLE\_SIDE\_SQUARE\_PC\_...

## Appraisers & Pricelists

Link current Scan to this appraiser

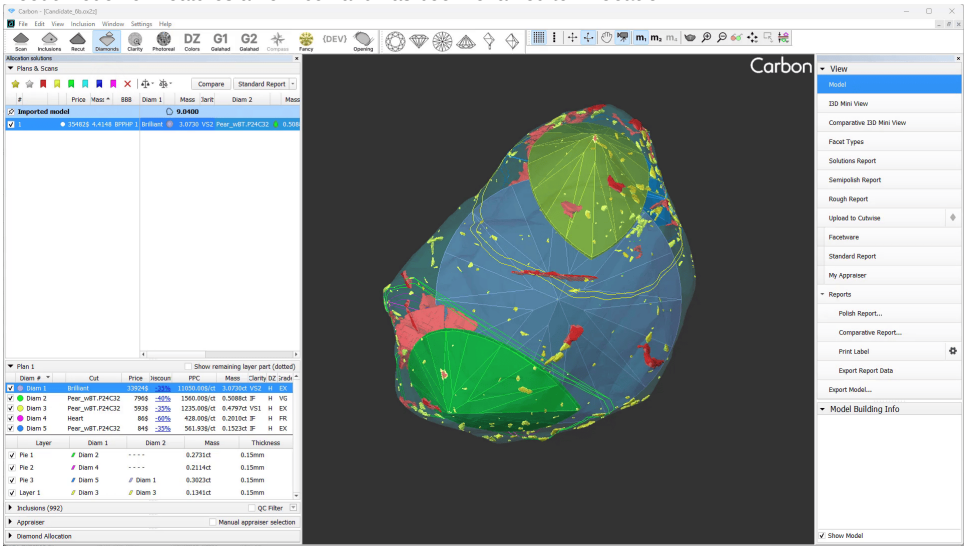
The cut name set using "Link current Scan to this appraiser" was overwritten by the automatically defined name after changing the Facet Types.



## User interface updates

### Modes renaming and relocation

- **Diamonds** mode has been relocated to the right-hand panel alongside other scene display modes and renamed to **Model Distance Map**.
- **Recut** mode now features a new icon and has been renamed to **Allocation**.



## Batch Operations Panel for Inclusions

The Batch Operations panel provides tools for performing actions on multiple inclusions simultaneously, significantly streamlining the inclusion management workflow.

The panel is divided into two main operation groups: **Select** and **Status**.

### 1. Select Operations

This group contains functions for managing the selection of items in the inclusions list.

- All Button: Selects all items currently visible in the list.
- Clarity Button: Opens the window to select inclusions based on a specific Clarity value. These inclusions will be added to those already selected.
- Clear Button: Deselects all items in the list.

Allocation solutions

Plans & Scans

★

★

🔖

🔖

🔖

🔖

🔖

✕

⚖️

🔍

Compare

Standard Report

#

Cut

Price

Mass

Color

Clarity

Fluorescence

Gr

CutGr

Sym

Profi

Br

Complexxxx

4.8670

Complexxxx

☐ Diamond statistics
 ☒ Show remaining layer part (dotted)

Diam #

Cut

Price

Discount

PPC

Mass

Clarity

DZ

Grade

Scan

4.8670ct

Inclusions (812)

☐ QC Filter
 

Clarity:

IF

VVS1

VVS2

VS1

VS2

SI1

SI2

SI3

I1

I2

I3

Diamond:

#1

☒ inside
 ☐ outside

0

5

10

20

50

100

200

500

1000

off

50µm

Select:

All

Clarity

Clear

Status:

●

●

●

●

●

●

Appraiser

Manual appraiser selection

Diamond Allocation

## 2. Status Operations

This group contains functions for setting the allocation status.

2.1. Single-Status Buttons

Buttons: Red, Yellow, Green, Gray. These buttons immediately set the corresponding status for **currently selected** inclusions.

Allocation solutions

Plans & Scans

★

★

★

★

★

★

×

⬆

⬆

Compare

Standard Report

#

Cut

Price

Mass

Volume

Field

Clarity

Color

Gr

CutGr

Sym

Profi

Br

Complexxxx

4.8670

Complexxxx

☐ Diamond statistics

☒ Show remaining layer part (dotted)

Diam #

Cut

Price

Discount

PPC

Mass

Clarity

DZ

Grade

Scan

4.8670ct

Inclusions (812)

☐ QC Filter

Clarity:

IF

VVS1

VVS2

VS1

VS2

SI1

SI2

SI3

I1

I2

I3

Diamond:

#1

☒ inside

0

5

10

20

50

100

200

500

1000

off

50µm

☐ outside

Select:

All

Clarity

Clear

Status:

☒

☐

☐

☐

☐

☐

☐

Appraiser

☐ Manual appraiser selection

Diamond Allocation

These operations assign statuses to inclusions based on their Clarity value. The status is applied to **all inclusions currently in the list** (i.e., those passing filter above). Clicking one of these buttons opens a configuration pop-up. Within the pop-up, sliders are used to define threshold values for the Clarity attribute. A pre-defined status scheme is applied based on these thresholds, assigning a status to each inclusion according to its Clarity value.

Allocation solutions

Plans & Scans

☆

☆

🔖

🔖

🔖

🔖

✕

⚖

⚖

CompareStandard Report

#

Cut

Price

Mass

Volume

Weight

Clarity

DZ

Gr

CutGr

Sym

Profi

Br

Complexxxx4.8670

Complexxxx

☐Diamond statistics☒Show remaining layer part (dotted)

Diam #

Cut

Price

Discount

PPC

Mass

Clarity

DZ

Grade

Scan4.8670ct

Inclusions (812)

☐QC Filter

Clarity: IFVVS1VVS2VS1VS2SI1SI2SI3I1I2I3

Diamond: #1

☒inside☐outside

051020501002005001000off

50µm

Select: AllClarityClearStatus:

●

●

●

●

🇷🇺

🇪🇺

🇬🇧

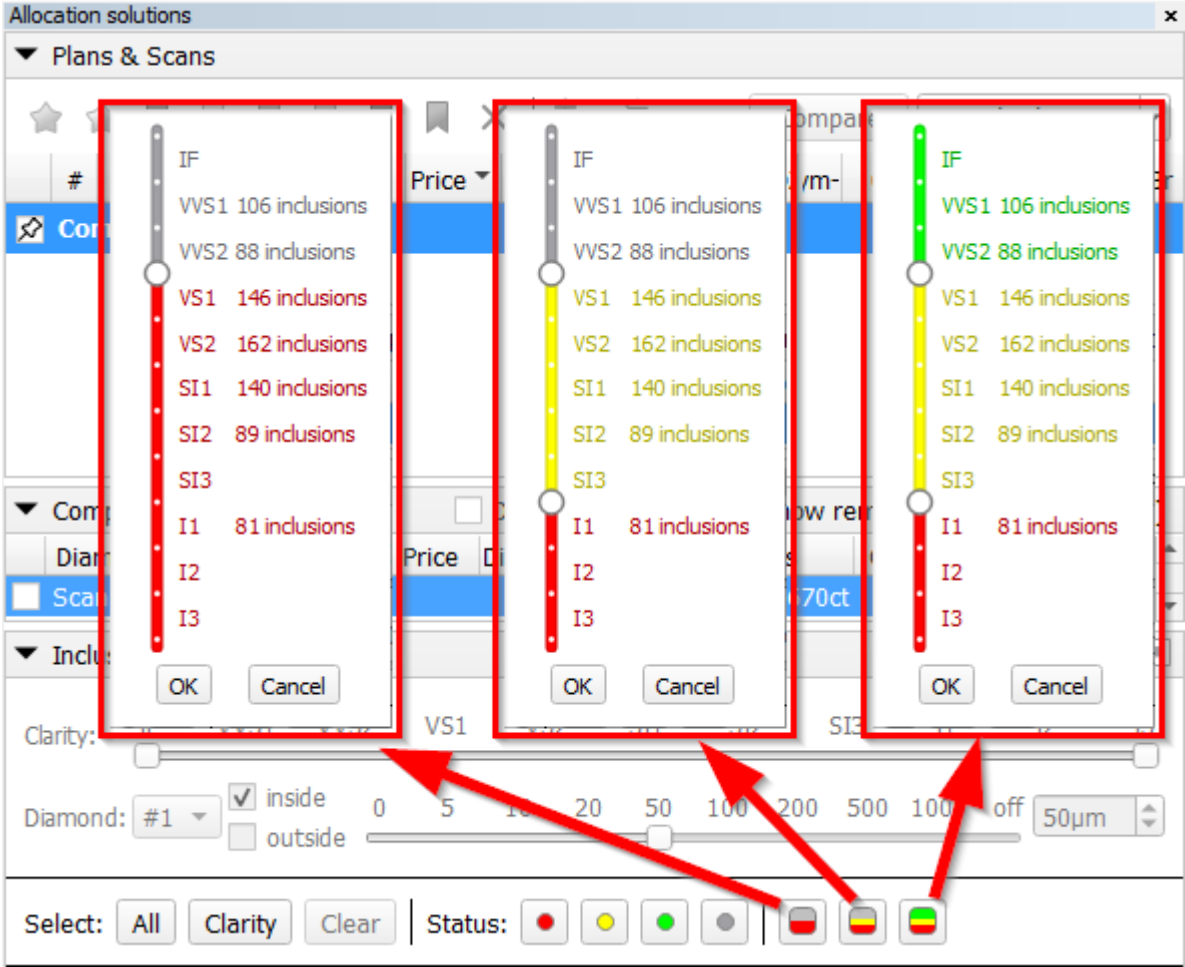
|             |   |      |   |
|-------------|---|------|---|
| XRayAuto-1  | ● | SI2  | ▼ |
| XRayAuto-2  | ● | SI1  | ▼ |
| XRayAuto-3  | ● | SI1  | ▼ |
| XRayAuto-4  | ● | SI2  | ▼ |
| XRayAuto-5  | ● | I1   | ▼ |
| XRayAuto-6  | ● | SI2  | ▼ |
| XRayAuto-7  | ● | I1   | ▼ |
| XRayAuto-8  | ● | SI2  | ▼ |
| XRayAuto-9  | ● | SI1  | ▼ |
| XRayAuto-10 | ● | I1   | ▼ |
| XRayAuto-11 | ● | SI2  | ▼ |
| XRayAuto-12 | ● | SI1  | ▼ |
| XRayAuto-13 | ● | VS1  | ▼ |
| XRayAuto-14 | ● | SI2  | ▼ |
| XRayAuto-15 | ● | VS1  | ▼ |
| XRayAuto-16 | ● | I1   | ▼ |
| XRayAuto-17 | ● | I1   | ▼ |
| XRayAuto-18 | ● | VS2  | ▼ |
| XRayAuto-19 | ● | VVS2 | ▼ |
| XRayAuto-20 | ● | I1   | ▼ |

Appraiser

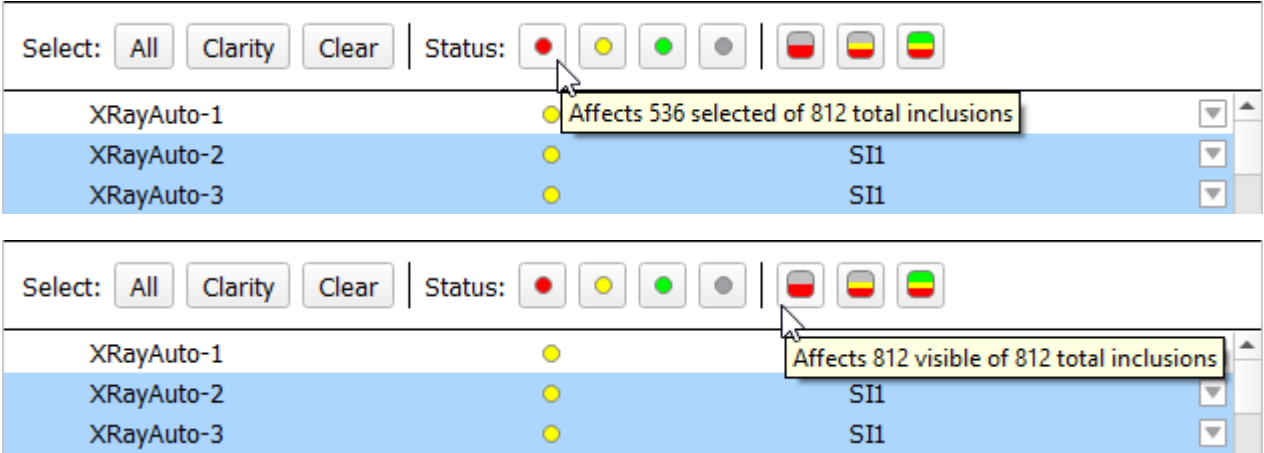
☐Manual appraiser selection

Diamond Allocation

Available Schemes: Gray-Red, Gray-Yellow-Red and Green-Yellow-Red.



All buttons in the **Status** group have descriptive tooltips. Hovering over a button provides a clear explanation of which inclusions will be affected by the operation.



### Scene rotation tool (Ox/Oy/Oz)

You can navigate the scene using your mouse. However, for more precise adjustments, you'll need to use the movement panel, which can sometimes be inconvenient.

We'd like to introduce Ox/Oy/Oz rotation modifiers.

| Video   Axes rotation modifier - rotation along Ox/Oy/Oz axes |                   |               |                    |       |
|---------------------------------------------------------------|-------------------|---------------|--------------------|-------|
| Published:                                                    | 2024, December 13 | Last Updated: | 2025, September 03 | v.1.3 |
| Your browser does not support the HTML5 video element         |                   |               |                    |       |

Video summary:

To rotate along those axes, simply press the H (Horizontal), V (Vertical) or (Center) keyboard button respectively and rotate the scene  
This tool is particularly useful in several situations, such as:

- Working alongside orientation buttons
- Integrating with context menu orientation options
- Facilitating object rotation.

Video keywords:

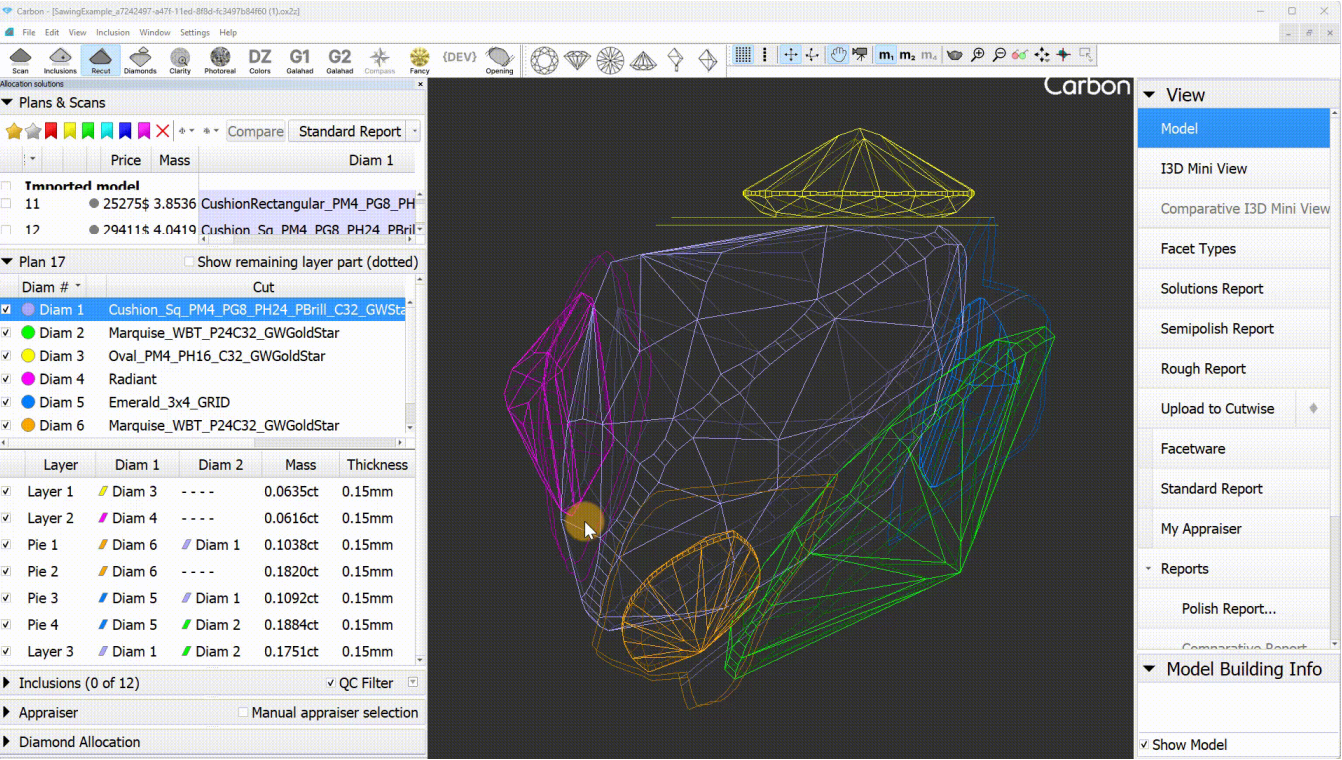
rotation, scene, axes

Data

[Sawing\\_test\\_oxy.ox2z](#)

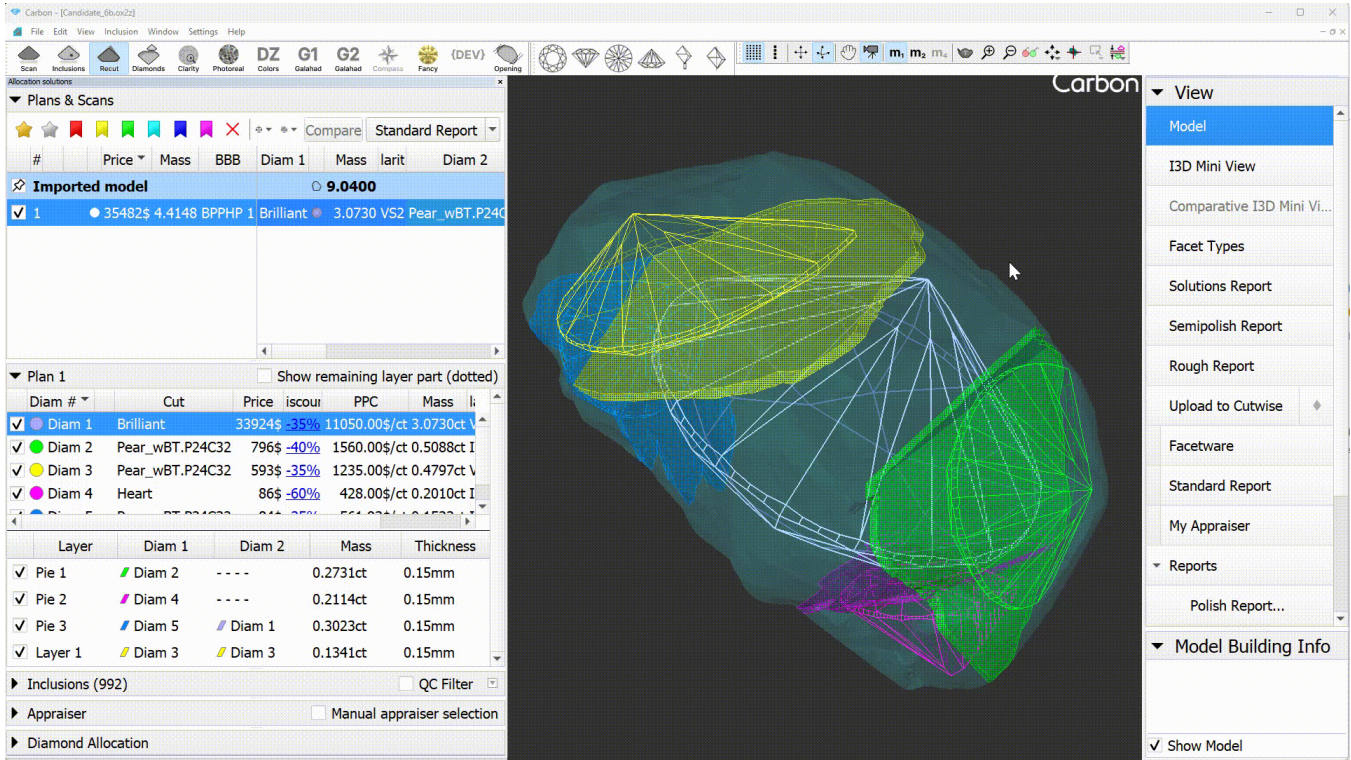
Layer selectable from the panel

Layers are now selectable like diamonds, enabling the use of object movement tools on the selected layer.



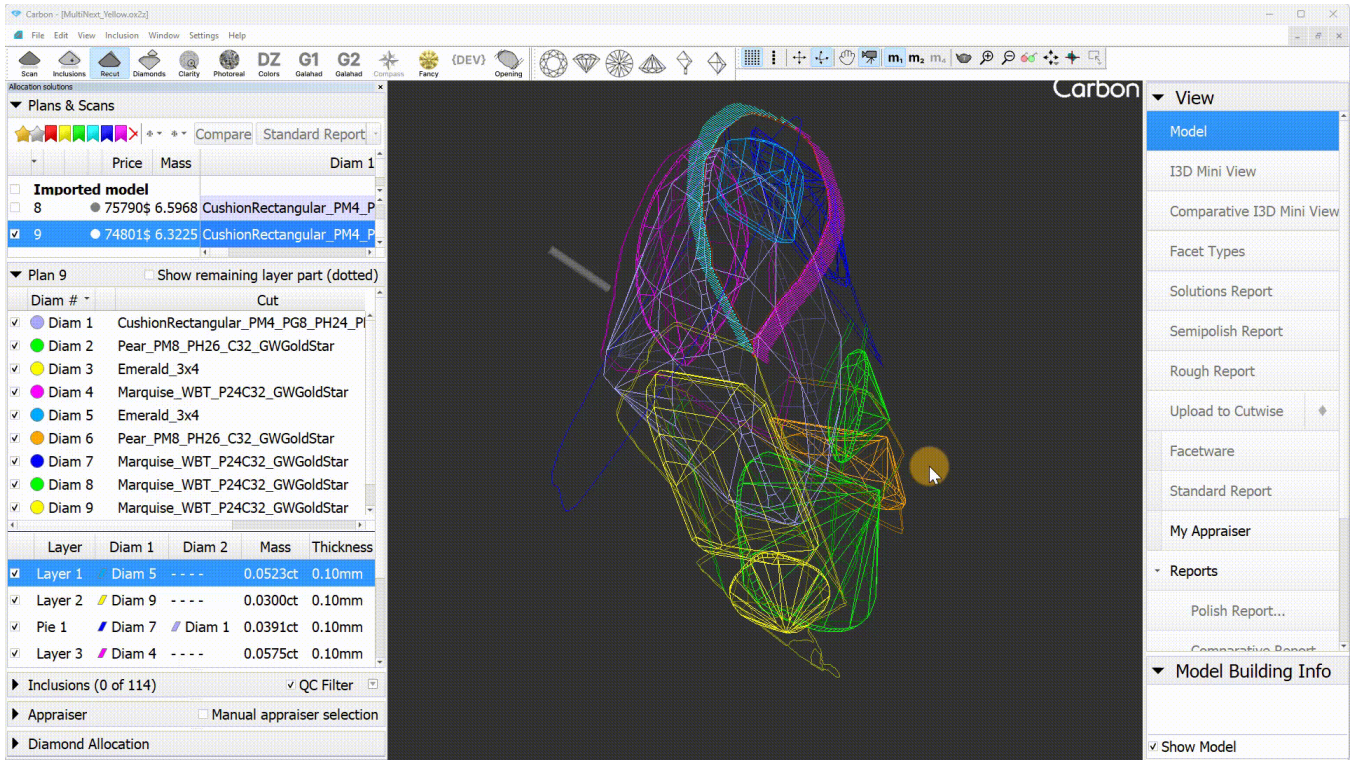
Objects selection tool

You can now select sawings directly on the scene with a simple click, just like diamonds. This is also useful for opening the context menu, which appears for the active diamond. In Lines mode, the active diamond is now visually distinguished on the scene with thicker lines.



## Operation "View along sawing direction"

A new context menu item, "View along sawing direction," has been introduced for layers. This command arranges the scene so that the layer becomes horizontal.



## Scene objects - layers

### Sawing layers thickness settings

An additional column has been added to the sawing thickness table to display the minimum mass value, indicating the interval for the corresponding thickness value.

Settings

Page Filter

General

Scanning

Automatic Actions

Reports

Allocation

Allocation

Layer

Saving Parameters

Thickness

Fixed layer thickness:

0.23

mm

Adaptive layer thickness:

| Thickness, mm | Min mass, ct | Max mass, ct |
|---------------|--------------|--------------|
| 0.065         | 0            | 0.5          |
| 0.075         | 0.5          | 1            |
| 0.1           | 1            | 2            |
| 0.13          | 2            | 5            |
| 0.15          | 5            | 10           |
| 0.22          | 10           | 40           |
| 0.3           | 40           | Unlimited    |

OK

Cancel

Apply

Saving parameters

The sawing layers have been upgraded with new data and an improved interface. The "Create sawing data" command in the solutions context menu has been replaced by two distinct commands: "Create sawing layers" and "Generate sawing data."



The parameters for sawing directions can be defined in "General Settings -> Allocation -> Sawing Parameters."

Settings

Page Filter

Allocation

General

Scanning

Automatic Actions

Reports

Allocation

Layer

Sawing Parameters

|          | Points step, $\mu\text{m}$ | Out step, $\mu\text{m}$ | Rounding radius, $\mu\text{m}$ | Sawing direction | Facet distance, $\mu\text{m}$ | Shaping offset, $\mu\text{m}$ |
|----------|----------------------------|-------------------------|--------------------------------|------------------|-------------------------------|-------------------------------|
| Plane    | 50                         | 50                      |                                | One Side         |                               |                               |
| Pie      | 50                         | 50                      | 50                             | One Side         |                               |                               |
| Shaping  | 50                         |                         |                                | One Side         |                               | 50                            |
| Faceting | 50                         | 50                      |                                | One Side         | 50                            |                               |

OK

Cancel

Apply

You can also set parameters for each layer individually by clicking on the "Sawing parameters panel" in the layer context menu.

The available parameters are:

For Plane:

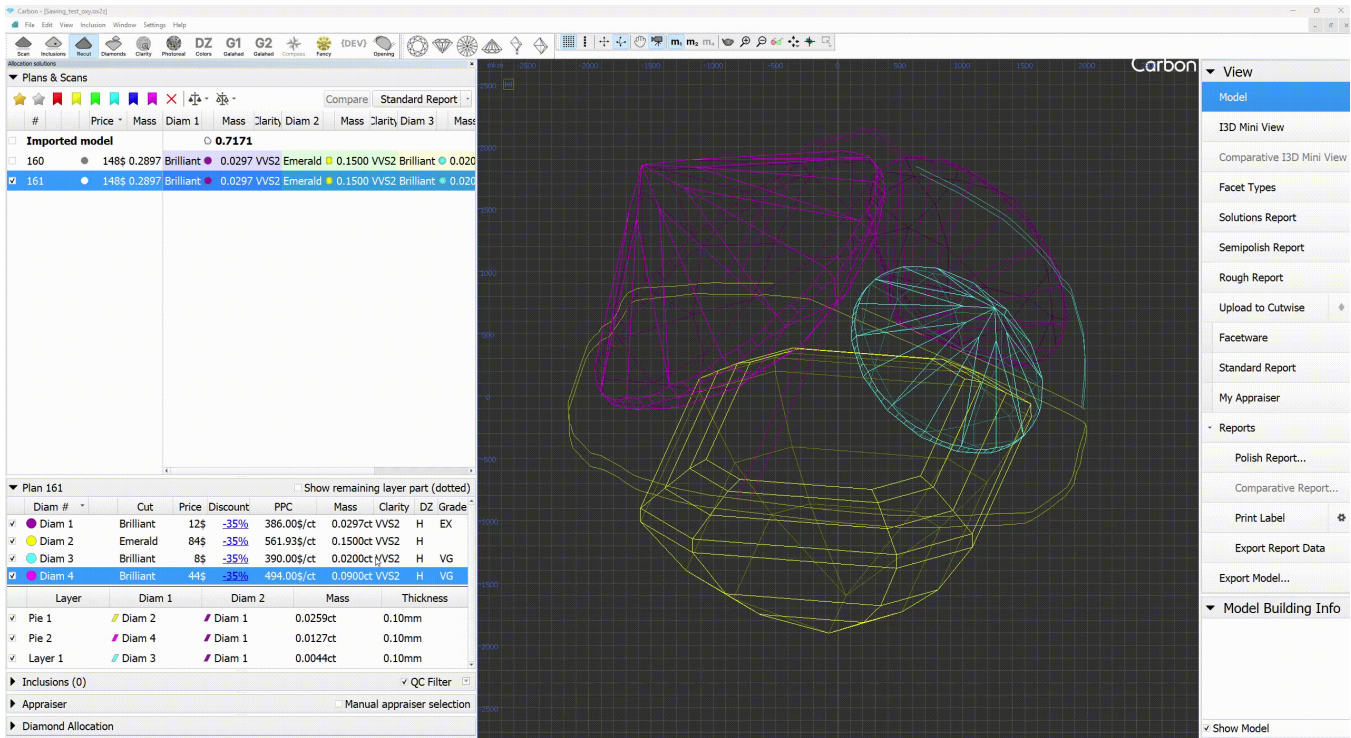
- Points step
- Out step
- Sawing angle
- Sawing direction

For Pie:

- Points step
- Out step
- Sawing direction

For Shaping:

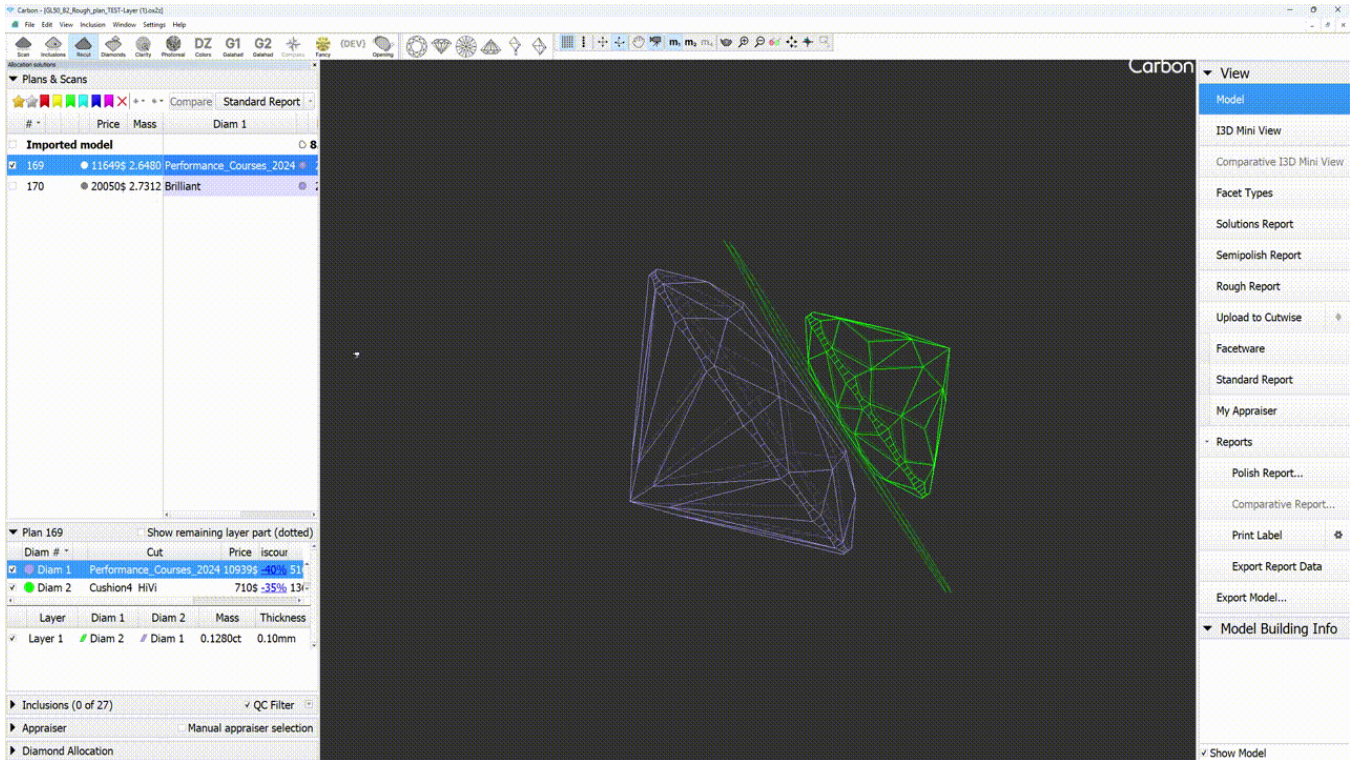
- Shaping offset
- Sawing direction



Here is a brief description of each parameter:

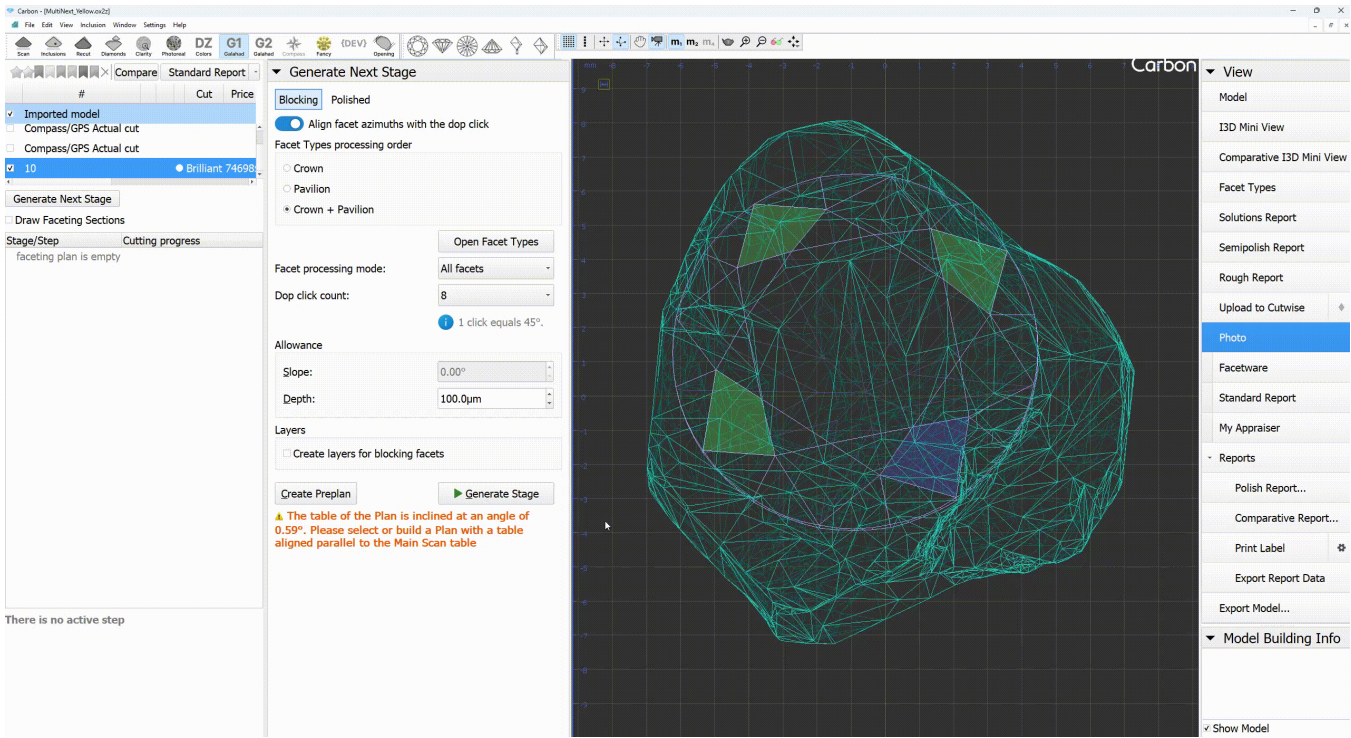
- Points step: The distance between key points along the rough diamond for laser sawing.
- Out step: An additional key point located outside the rough diamond for laser sawing.
- Sawing angle: Controls the sawing direction vector for individual layers.
- Sawing direction: Determines whether the sawing is done on one side or both sides.
- Shaping offset: The distance to the girdle for laser sawing.

To create a shaping, you can use the "Generate girdle shaping" command from the diamond context menu. For shaping sawings, there is additional data provided: a shaping contour around the girdle (yellow line).



## Blocking layers

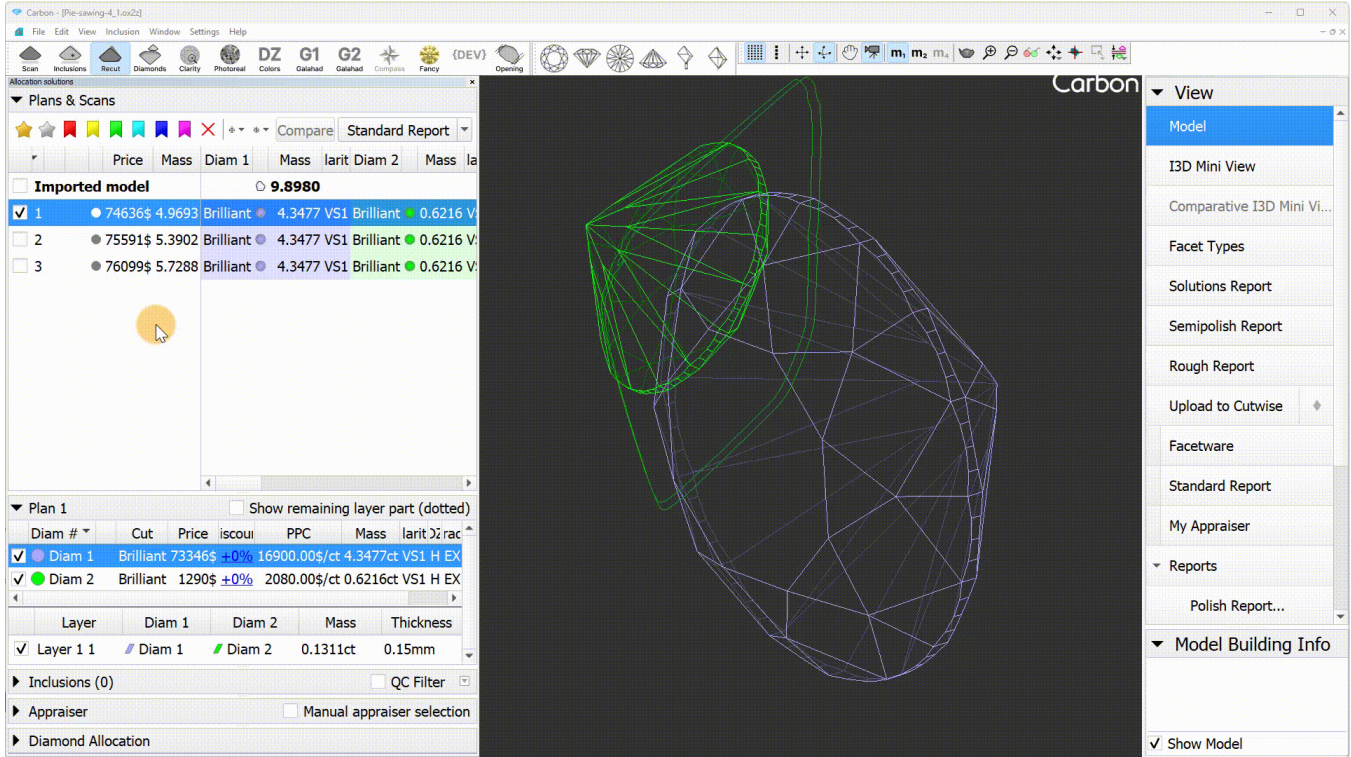
You now have the option to create blocking layers when generating a preplan. To do this, simply check the "Create layers for blocking facets" checkbox and click the "Create preplan" button. The sawings will be positioned with an offset from the facets. You can modify the offset value in "General Settings -> Allocation -> Sawing Parameters -> Facet Distance".

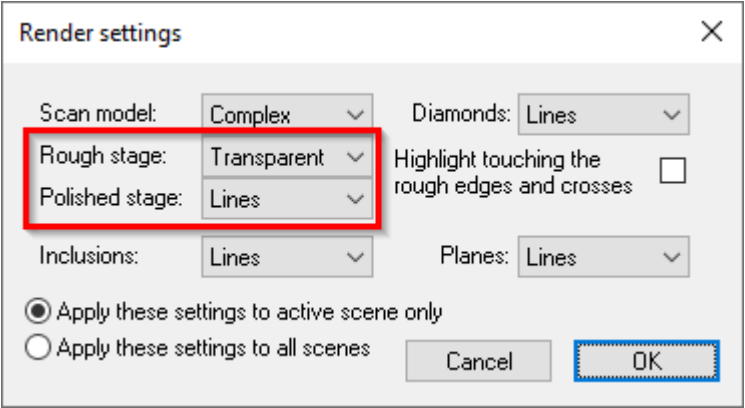


## Pinning Solutions in the Solution List. Rendering upgrades.

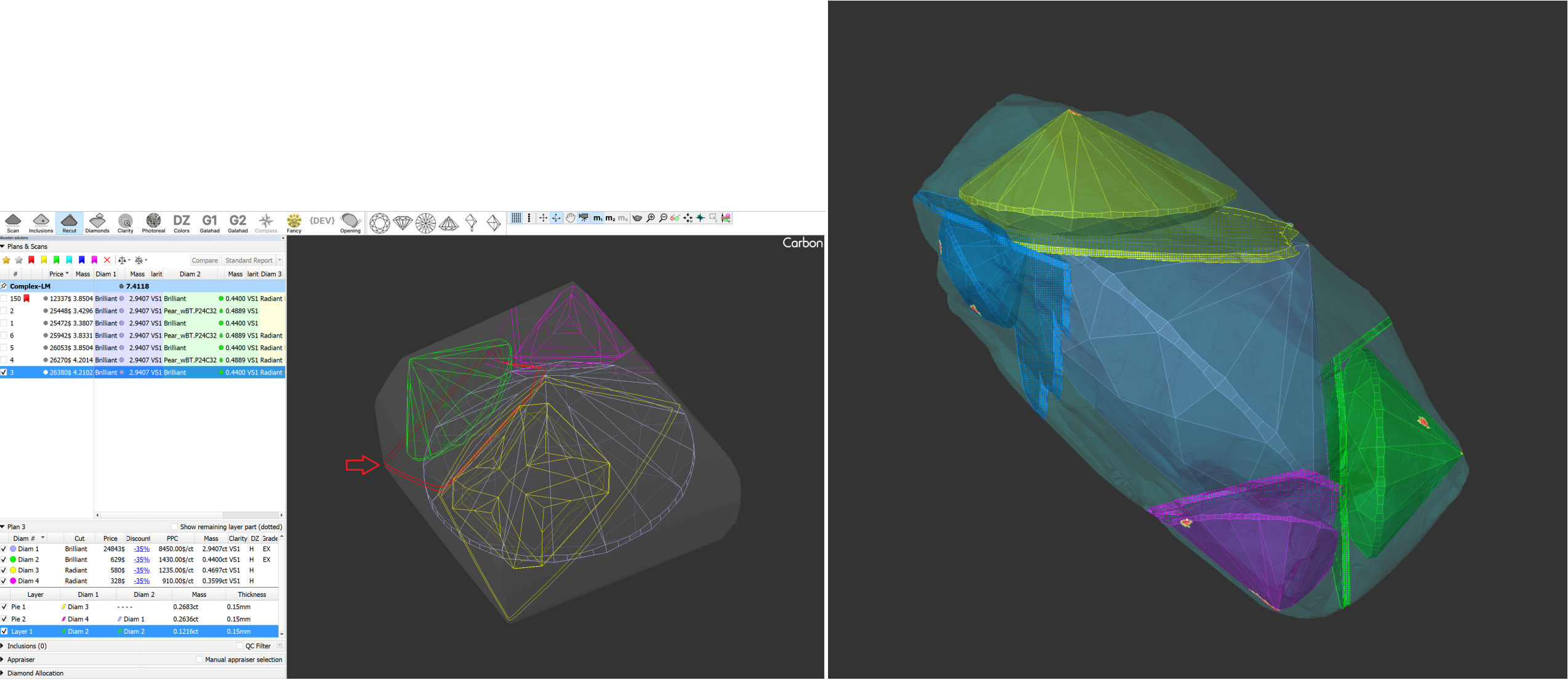
We have added the ability to pin solutions in the solution list. To pin a solution, right-click its checkbox; click the same area again to unpin it. The pinned solution remains visible on the scene at all times, regardless of your selection from the list. This is particularly useful for keeping scans (like the main scan) permanently displayed.

When loading a project, the **Main Scan** is automatically pinned if its processing stage is **Rough**, **Saw**, or **Bruted**. In **Recut mode**, scans with these stages appear transparently instead of in lines mode—this can be adjusted in the rendering settings, where separate display modes for **Rough** and **Polished** scans are now available.





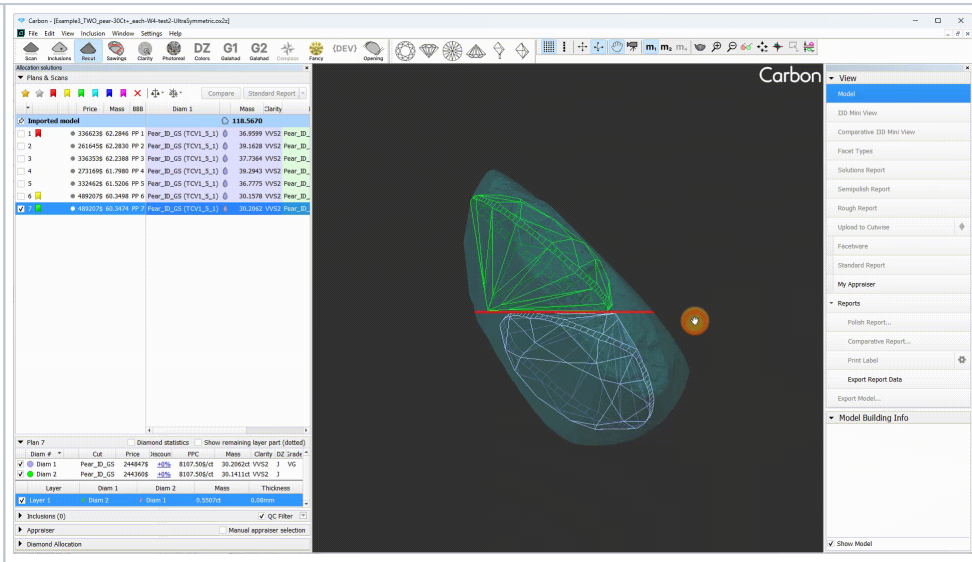
Saw rendering has been improved: non-visible parts are now shaded, and the **active layer** is highlighted in red with thicker lines. For users who prefer **solid mode**, this option can now be applied to layers(planes) in the **Rendering Settings**.



## Layer movement improvements

In the new version, the layer movement latency has been significantly reduced. This improvement enables smoother and more precise operation of the **Fast Swim** tool. Additionally, rotation around the center (when holding the **C** key) has become more intuitive.

| Before | Now |
|--------|-----|
|--------|-----|



A Diamond Statistics table has been introduced, which is displayed when the "Diamond statistics" checkbox is enabled.

- Automatic Activation: This checkbox is automatically selected when a solution containing 10 or more diamonds is chosen.
- Weight Grouping: For statistical purposes, diamonds are grouped into the following weight categories:
  - Up to 0.30 carats, in increments of 0.01 carats.
  - From 0.30 carats and above, in increments of 0.05 carats.
- Any weight group can be deleted by clicking the corresponding delete button.

| Plan 9                             |           |        |          |             |          |         |         |       |       |  | Plan 4                             |     |        |          |        |        |        |         |    |       |  |
|------------------------------------|-----------|--------|----------|-------------|----------|---------|---------|-------|-------|--|------------------------------------|-----|--------|----------|--------|--------|--------|---------|----|-------|--|
| Diamond statistics                 |           |        |          |             |          |         |         |       |       |  | Diamond statistics                 |     |        |          |        |        |        |         |    |       |  |
| Show remaining layer part (dotted) |           |        |          |             |          |         |         |       |       |  | Show remaining layer part (dotted) |     |        |          |        |        |        |         |    |       |  |
| Cut / Group                        | Qty       | Price  | Total ct | Avg ct      | Min ct   | Max ct  | Clarity | DZ    | Grade |  | Cut / Group                        | Qty | Price  | Total ct | Avg ct | Min ct | Max ct | Clarity | DZ | Grade |  |
| ALL DIAMONDS                       | 39        | 1086\$ | 5.2292   | 0.1341      | 0.1236   | 0.1345  |         |       |       |  | ALL DIAMONDS                       | 29  | 1496\$ | 3.2734   | 0.1129 | 0.0555 | 0.1404 |         |    |       |  |
| Brilliant                          |           |        |          |             |          |         |         |       |       |  | Brilliant                          |     |        |          |        |        |        |         |    |       |  |
| 0.13-0.14ct                        | 37        | 1039\$ | 4.9777   | 0.1345      | 0.1345   | 0.1345  | VS1     | H     | Poor  |  | 0.14-0.15ct                        | 1   | 66\$   | 0.1404   | 0.1404 | 0.1404 | 0.1404 | VS1     | H  | EX    |  |
| Prince                             |           |        |          |             |          |         |         |       |       |  | 0.13-0.14ct                        | 4   | 253\$  | 0.5543   | 0.1386 | 0.1383 | 0.1390 | VS1     | H  | EX    |  |
| 0.12-0.13ct                        | 1         | 23\$   | 0.1279   | 0.1279      | 0.1279   | 0.1279  | VS1     | H     | Poor  |  | 0.11-0.12ct                        | 22  | 1133\$ | 2.4565   | 0.1117 | 0.1113 | 0.1124 | VS1     | H  | EX    |  |
| Pear                               |           |        |          |             |          |         |         |       |       |  | 0.06-0.07ct                        | 1   | 23\$   | 0.0666   | 0.0666 | 0.0666 | 0.0666 | VS1     | H  | EX    |  |
| 0.12-0.13ct                        | 1         | 23\$   | 0.1236   | 0.1236      | 0.1236   | 0.1236  | VS1     | H     | Poor  |  | 0.05-0.06ct                        | 1   | 22\$   | 0.0555   | 0.0555 | 0.0555 | 0.0555 | VS1     | H  | EX    |  |
| Diam #                             | Cut       | Price  | Discount | PPC         | Mass     | Clarity | DZ      | Grade |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam 1                             | Brilliant | 28\$   | -70%     | 216.00\$/ct | 0.1345ct | VS1     | H       | Poor  |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam 2                             | Brilliant | 28\$   | -70%     | 216.00\$/ct | 0.1345ct | VS1     | H       | Poor  |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam 3                             | Brilliant | 28\$   | -70%     | 216.00\$/ct | 0.1345ct | VS1     | H       | Poor  |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam #                             | Cut       | Price  | Discount | PPC         | Mass     | Clarity | DZ      | Grade |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam 1                             | Brilliant | 66\$   | -35%     | 468.00\$/ct | 0.1404ct | VS1     | H       | EX    |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam 2                             | Brilliant | 66\$   | -35%     | 468.00\$/ct | 0.1390ct | VS1     | H       | EX    |       |  |                                    |     |        |          |        |        |        |         |    |       |  |
| Diam 3                             | Brilliant | 66\$   | -35%     | 468.00\$/ct | 0.1387ct | VS1     | H       | EX    |       |  |                                    |     |        |          |        |        |        |         |    |       |  |

### Sample Facet Types

When editing the Facet Types of a sample, the modified types are not saved to the sample file by default. However, this feature proves to be quite useful and convenient. Therefore, this functionality has been implemented.

To save the modified Facet Types to the sample file, the 'Ok + Update Sample File' button is provided.

Facets

| Facets | Element  | * | Tier | Type | SubType | No. | Color | Alias     |
|--------|----------|---|------|------|---------|-----|-------|-----------|
| ✕ 1    | Table    |   |      |      |         |     |       | Rename... |
| ✕ 6    | Crown    |   | Main |      |         |     |       | Rename... |
| ✕ 6    | Crown    |   | Half |      | 1       |     |       | Rename... |
| ✕ 6    | Crown    |   | Half |      | 2       |     |       | Rename... |
| ✕ 9    | Crown    |   | Star |      | 1       |     |       | Rename... |
| ✕ 0    | Crown    |   | Star |      | 2       |     |       | Rename... |
| ✕ 69   | Girdle   |   |      |      |         |     |       | Rename... |
| ✕ 6    | Pavilion |   | Main |      |         |     |       | Rename... |
| ✕ 6    | Pavilion |   | Half |      | 1       |     |       | Rename... |
| ✕ 6    | Pavilion |   | Half |      | 2       |     |       | Rename... |
| ✕ 6    | Pavilion |   | Half |      | 3       |     |       | Rename... |

Total: 121 facets

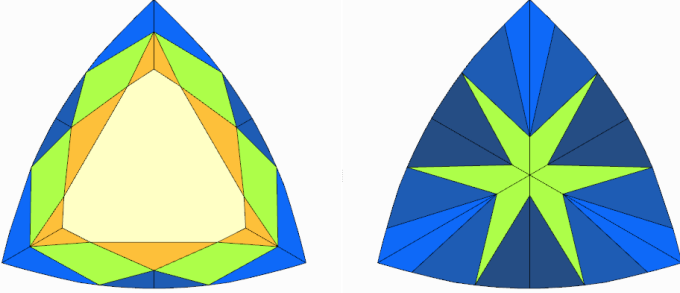
SortNew Group

Facet Types

Mode:

Facet Types

Processing order



From Sample...

Basic Types

Auto Types

Ok + Update Sample File

Ok

Export Sample

Make Report

Cancel

The button is disabled when the file is unavailable:

Facet Types

| Facets | Element  | * | Tier | Type | SubType | No. | Color | Alias     |
|--------|----------|---|------|------|---------|-----|-------|-----------|
| ✕ 1    | Table    |   |      |      |         |     |       | Rename... |
| ✕ 6    | Crown    |   |      | Main |         |     |       | Rename... |
| ✕ 6    | Crown    |   |      | Half |         | 1   |       | Rename... |
| ✕ 6    | Crown    |   |      | Half |         | 2   |       | Rename... |
| ✕ 9    | Crown    |   |      | Star |         | 1   |       | Rename... |
| ✕ 0    | Crown    |   |      | Star |         | 2   |       | Rename... |
| ✕ 69   | Girdle   |   |      |      |         |     |       | Rename... |
| ✕ 6    | Pavilion |   |      | Main |         |     |       | Rename... |
| ✕ 6    | Pavilion |   |      | Half |         | 1   |       | Rename... |
| ✕ 6    | Pavilion |   |      | Half |         | 2   |       | Rename... |
| ✕ 6    | Pavilion |   |      | Half |         | 3   |       | Rename... |

Total: 121 facets

SortNew Group

From Sample...Basic TypesAuto Types

Export SampleMake Report

Ok + Update Sample FileOk

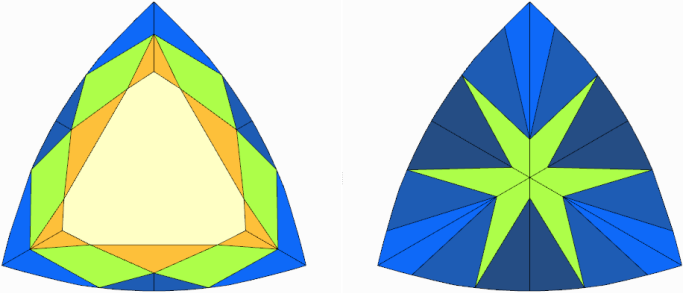
Cancel

Facet Types

Mode:

Facet Types

Processing order



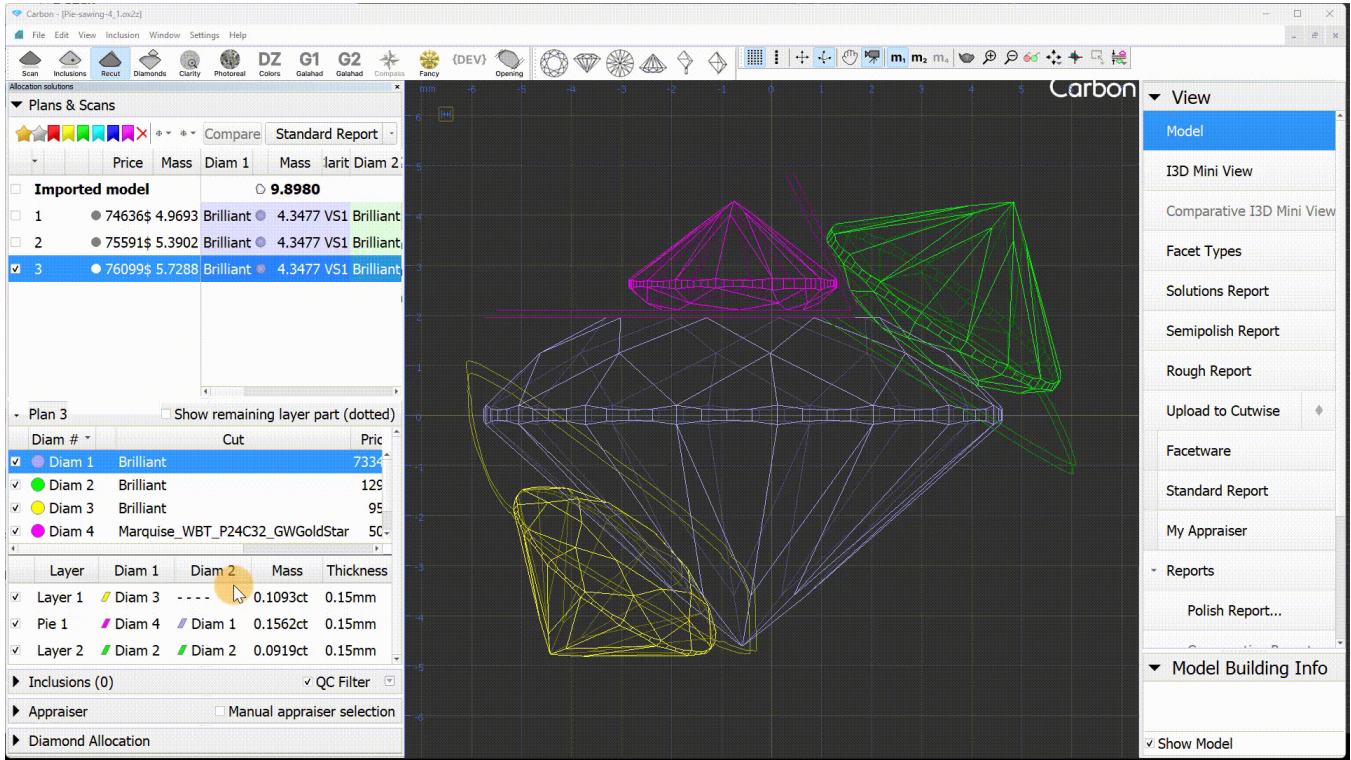
## Preplan updates

### Preplan Creation Improvements

The preplan creation process has been enhanced and stabilized. The "Create sawing preplan" feature now fully supports half-planes, pies, and shapes, including imported Sarin projects.

### New Preplan Creation Methods

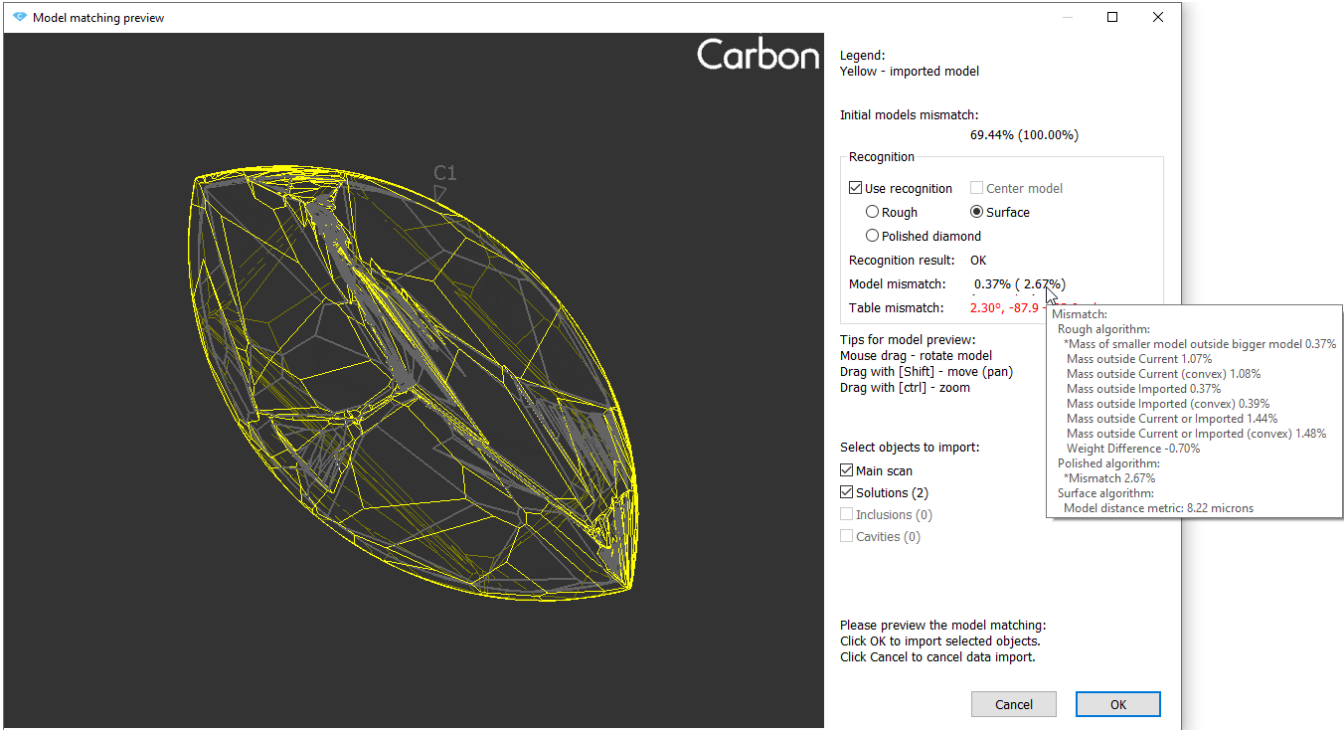
Two additional ways to create a preplan have been introduced: from the layer's context menu, you can select "Make preplan for cutting part" and "Make preplan for part on glue." "Make preplan for cutting part" creates a preplan for the part of the rough that should be cut off by the sawing. Typically, this is a sawing preplan for the diamond being cut. "Make preplan for part on glue," on the other hand, creates a preplan for the remaining rough part. This is the part of the rough, that remains at the glue point after being cut by this layer.



## Recognition updates

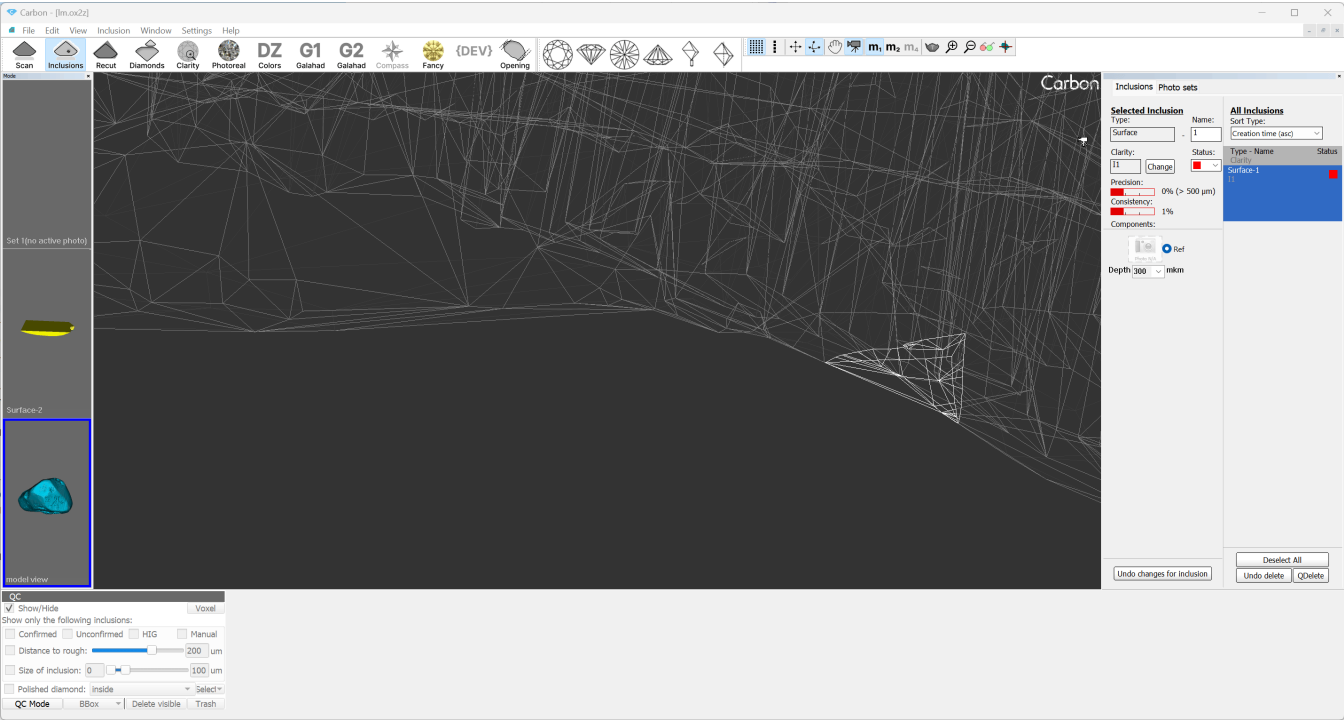
### Surface recognition update

- The "Surface" recognition now provides consistent results, regardless of the order in which models are opened or imported.
- A bug affecting recognition has been fixed; it occurred that an imported model was a preplan instead of a scan (this issue raised after unchecking the "Recognition" option).
- Mismatch data for "Surface" recognition is displayed. We've introduced the display of the *Model Distance Metric* value, which roughly corresponds to the average distance between the model's surfaces.

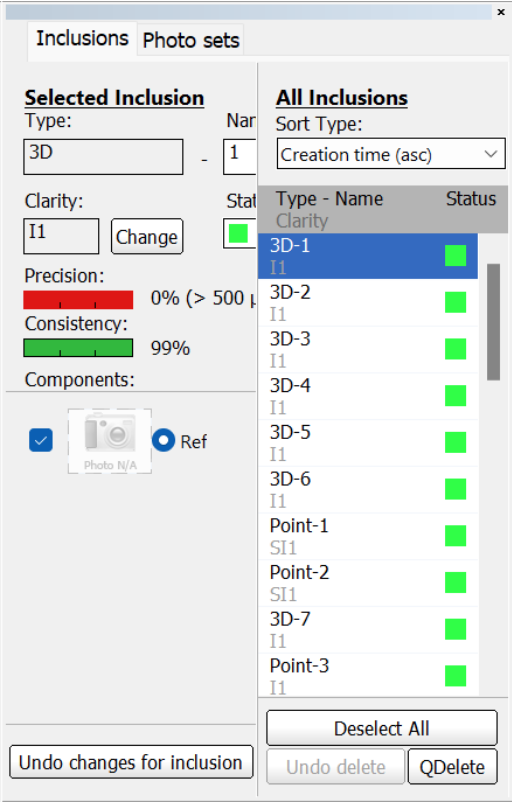


# Inclusion Mode improvements

- Batch removal of inclusions has been accelerated;
- Batch set of inclusion status has been accelerated;
- The "Select All Inclusions" context menu operation has been accelerated;
- Fix: the inclusion color status was not updating properly in the right pane of the Inclusion tab;
- Surface inclusions: depth combo box was updated. Now the depth value can be changed using the mouse wheel (like in spin boxes), as well as edited manually.



- Resolved an issue where the color status of newly created inclusions was not updating correctly when accessed via the context menu in the list.
- Fixed a problem that prevented the removal of inclusions from the scene in scenarios involving Cracks (with auxiliary inclusions such as deep point).
- Fixed crash when deleting inclusions in a certain scenario and project.
- In the Inclusions mode, the inclusion color statuses were not updating correctly in the list.



# Fixed problems and improvements

- Now the "Open Sample" dialog remembers the selected method, and the next time the dialog is opened, it will be automatically selected.

Open file with sample

Look in: D:\Testing\Sample

My Computer

| Name       | Size       | Type  | Date Modified    |
|------------|------------|-------|------------------|
| Sample.dmc | 61,100 KiB | dm... | 17.11.2017 10:09 |

File name:

Open

Files of type: Model files (\*.dmc, \*.mme, \*.gem)

Cancel

☐ Sample Legacy

☒ Sample 21

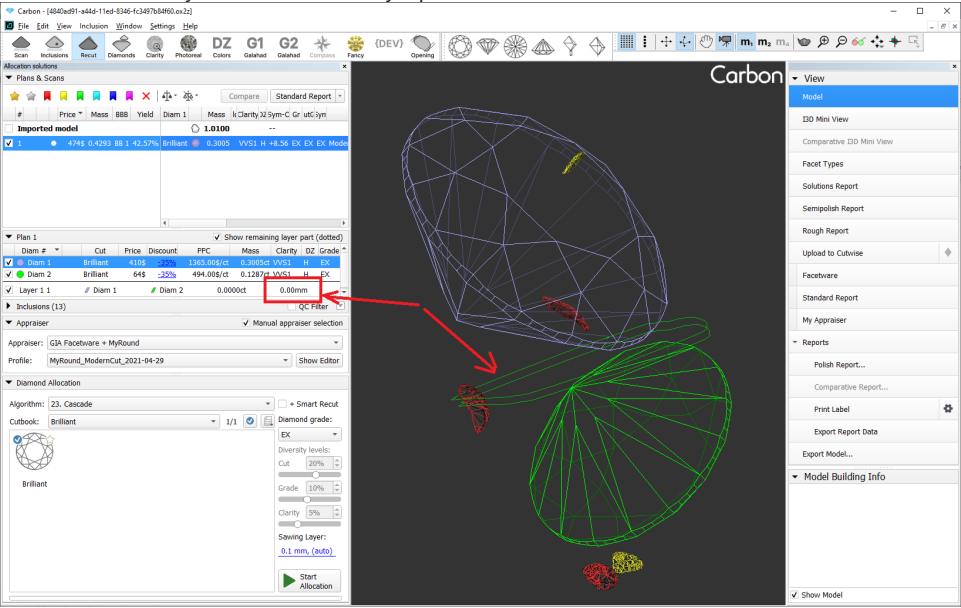
☐ Sample FixedForm

- Solution list. Restored cell background colors in multi-diamond mode.

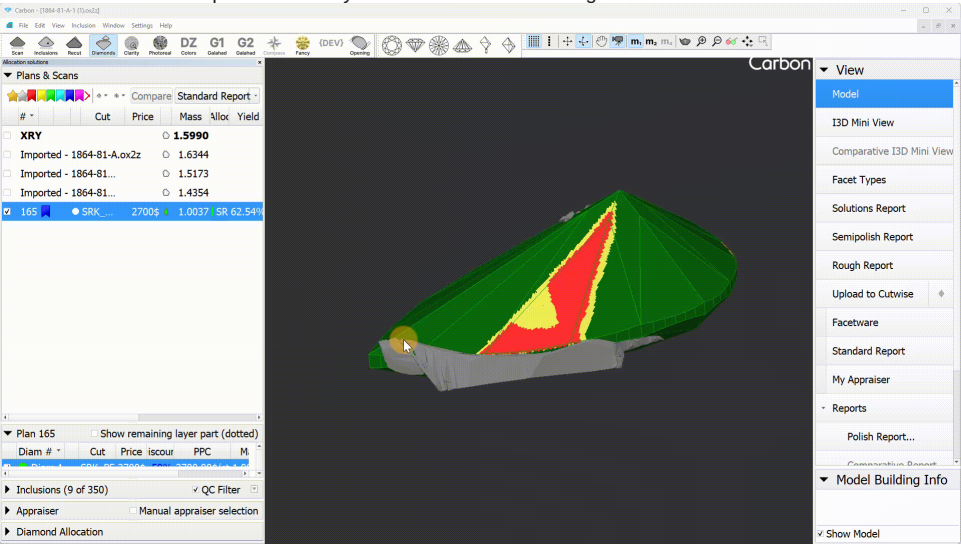
| was                  |        |        |       |        |           |        |        |         |       |    |       |           |         |                              |
|----------------------|--------|--------|-------|--------|-----------|--------|--------|---------|-------|----|-------|-----------|---------|------------------------------|
| Allocation solutions |        |        |       |        |           |        |        |         |       |    |       |           |         |                              |
| Plans & Scans        |        |        |       |        |           |        |        |         |       |    |       |           |         |                              |
| #                    | Price  | Mass   | BBB   | Yield  | Diam 1    | Mass   | Volume | Clarity | Color | Gr | CutGr | Sym       | Profile | Br                           |
| Imported model       |        |        |       |        |           |        |        |         |       |    |       |           |         |                              |
| 24                   | 2049\$ | 0.7638 | BB 24 | 41.19% | Brilliant | 0.6195 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1442  | VS2 G VG VG EX               |
| 23                   | 2055\$ | 0.7486 | BB 23 | 40.64% | Brilliant | 0.6195 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1291  | VVS2 G EX EX EX              |
| 22                   | 2064\$ | 0.7664 | BB 22 | 41.19% | Brilliant | 0.6115 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1548  | VS2 G VG VG EX               |
| 21                   | 2097\$ | 0.7411 | BB 21 | 39.56% | Brilliant | 0.6556 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.0855  | VVS2 G VG VG EX              |
| 20                   | 2107\$ | 0.7454 | BB 20 | 40.10% | Brilliant | 0.6556 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.0898  | VVS2 G EX EX EX              |
| 18                   | 2185\$ | 0.8176 | BB 18 | 43.89% | Brilliant | 0.6776 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1400  | SI1 G EX EX EX               |
| 19                   | 2185\$ | 0.8174 | BB 19 | 43.89% | Brilliant | 0.6776 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1397  | SI1 G EX EX EX               |
| 16                   | 2223\$ | 0.8306 | BB 16 | 44.98% | Brilliant | 0.6711 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1595  | SI1 G VG VG EX               |
| 17                   | 2223\$ | 0.8290 | BB 17 | 44.98% | Brilliant | 0.6705 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1585  | SI1 G EX EX EX               |
| 32                   | 2557\$ | 0.8471 | BB 32 | 45.52% | Brilliant | 0.7487 | SI2    | G       | EX    | EX | EX    | Brilliant | 0.0984  | VS2 G V... VG EX... Profile1 |
| 30                   | 2575\$ | 0.8837 | BB 30 | 47.69% | Brilliant | 0.7487 | SI2    | G       | EX    | EX | EX    | Brilliant | 0.1350  | SI1 G EX EX EX               |
| 31                   | 2575\$ | 0.8811 | BB 31 | 47.69% | Brilliant | 0.7487 | SI2    | G       | EX    | EX | EX    | Brilliant | 0.1324  | SI1 G EX EX EX               |

| now                  |        |        |       |        |           |        |        |         |       |    |       |           |         |                              |
|----------------------|--------|--------|-------|--------|-----------|--------|--------|---------|-------|----|-------|-----------|---------|------------------------------|
| Allocation solutions |        |        |       |        |           |        |        |         |       |    |       |           |         |                              |
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| 23                   | 2055\$ | 0.7486 | BB 23 | 40.64% | Brilliant | 0.6195 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1291  | VVS2 G EX EX EX              |
| 22                   | 2064\$ | 0.7664 | BB 22 | 41.19% | Brilliant | 0.6115 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.1548  | VS2 G VG VG EX               |
| 21                   | 2097\$ | 0.7411 | BB 21 | 39.56% | Brilliant | 0.6556 | VS2    | G       | EX    | EX | EX    | Brilliant | 0.0855  | VVS2 G VG VG EX              |
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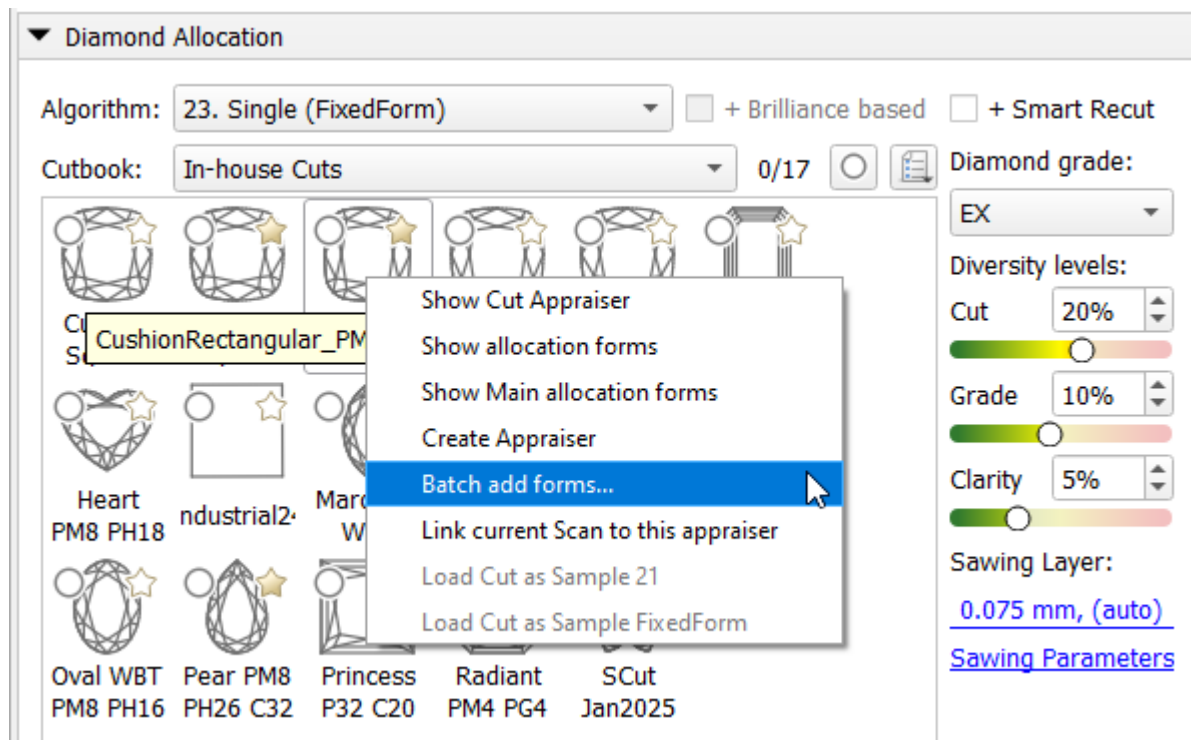
- Fixed the incorrect layer indication on the layer panel.



- The contact zone now updates correctly when the main scan changes.



- Layer movements will no longer reset the layer thickness.
- Improved facet marking transfer stability during "Batch add forms..." command. Fixed facet marking transfer bugs that made some forms unusable



- SmartNormalize algorithm is improved for complex non-convex cuts.
- Uploading data to Cutwise is significantly accelerated
- The pop-up window for the "Change layer thickness" command now correctly:
  - Responds to the **Esc** key
  - Handles **default values** properly when opened
- Fixed an issue where right-click + mouse wheel would move objects instead of zooming when object movement mode was active

- The "Undo solution changes" function now works consistently in all scenarios, including when any layer is selected in the solution.

Create copy of 'Plan 11'

Delete 'Plan 11'...

Export model of 'Plan 11'...

Add 'Plan 11' to Solutions Report

Processing 'Plan 11'

Clarity precision: ☐ Draft ☒ Precise

Galahad: Generate Next Stage...

Allocation

Fit to rough (Run Balloon)

Bound Swim (Vary Param)

Bound Swim (Fixed Cut)

Bound Swim (Fixed Table and Cut)

Change Cut...

Import from dmc...

Undo solution changes

Restore to Max Price

Register as new cut...

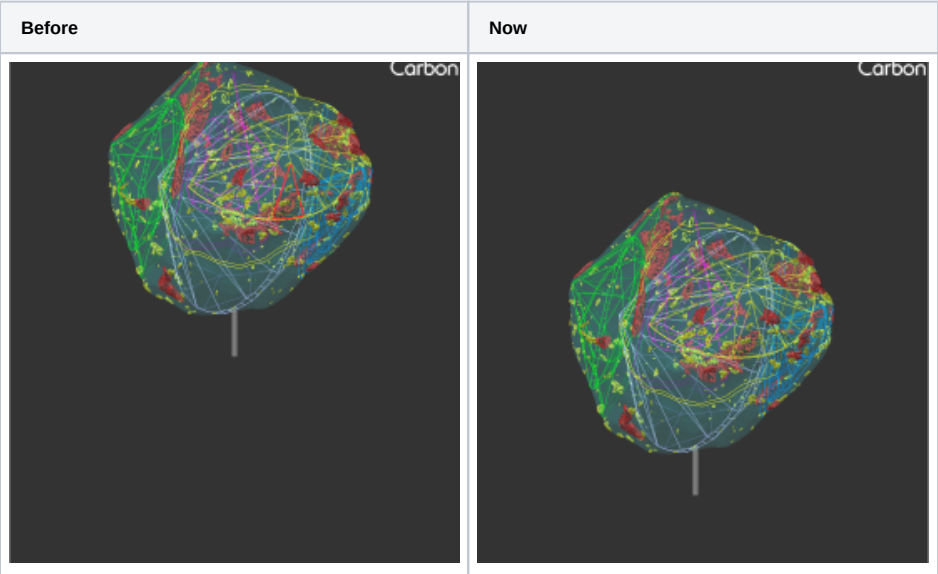
Add to allocation forms...

Restore default appraiser

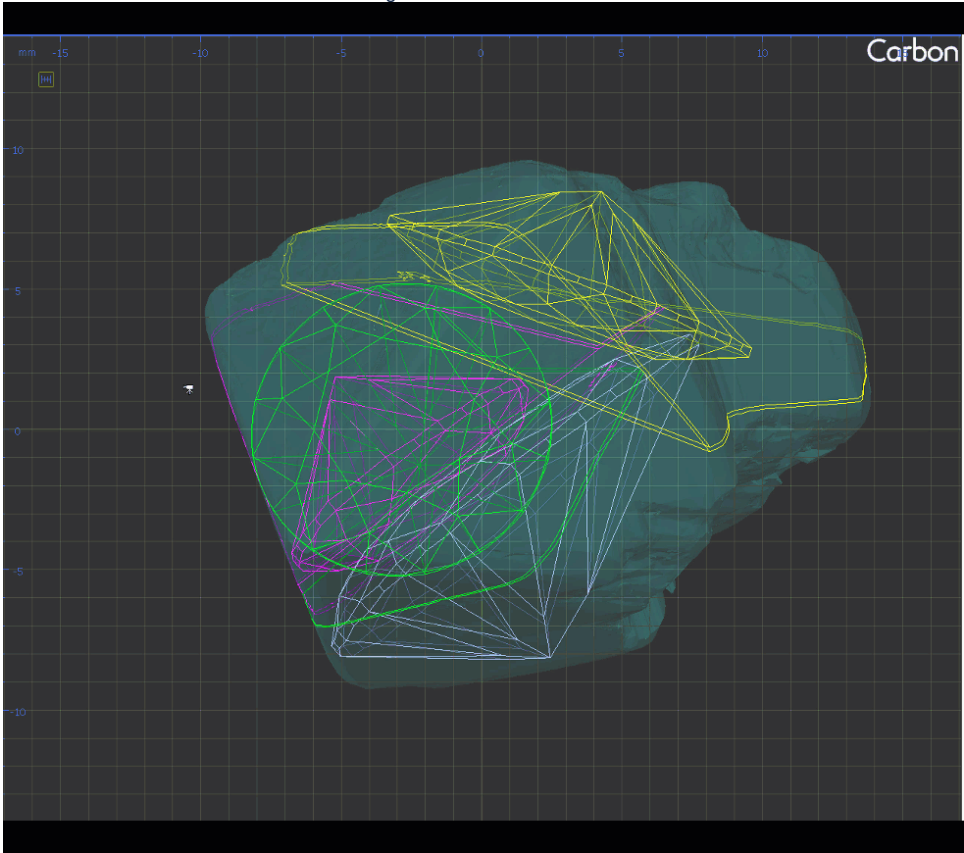
Create sawing layers

Generate sawing data

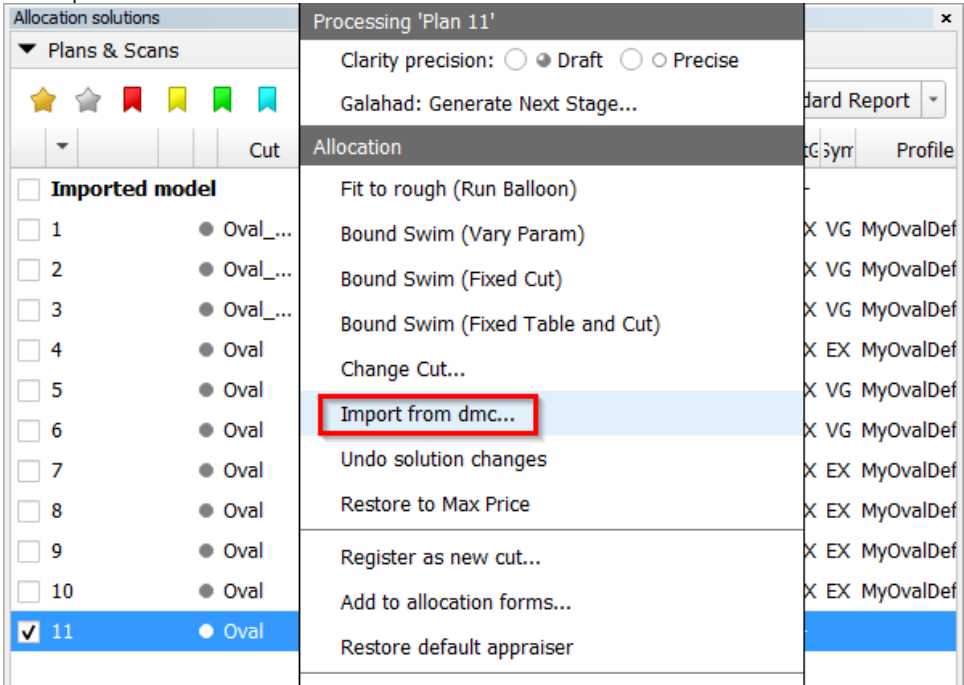
- Glue Point Orientation button now centralizes the solution



- Fixed unwanted scene rotation when closing the scene context menu

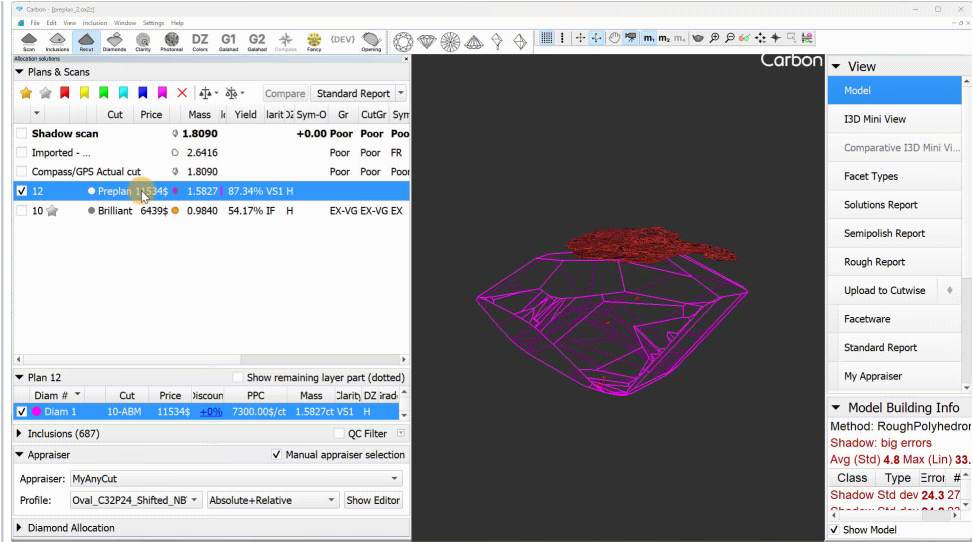
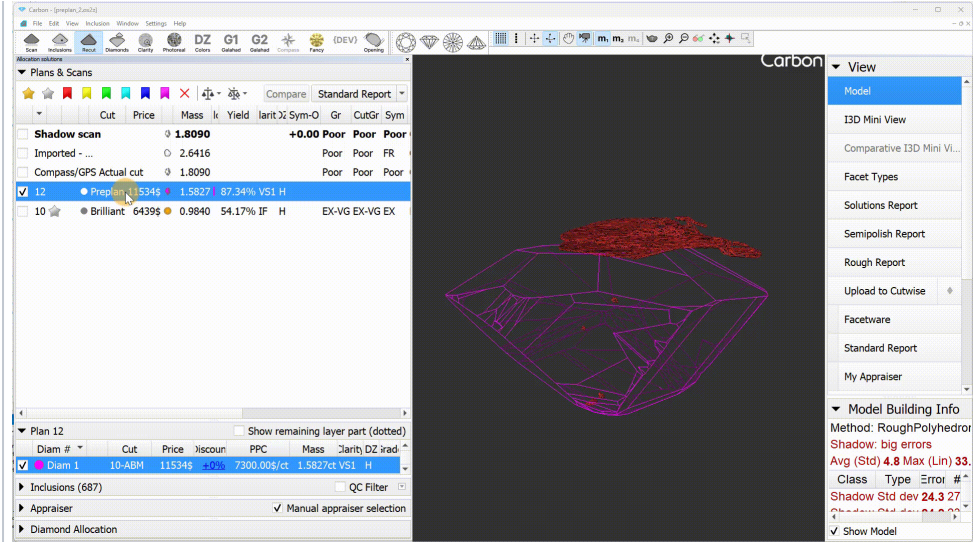


- Facet Types no longer disappear during certain actions as before:
  - Adding/deleting a layer.
  - Using "Create Sawing Data" or "Create Sawing Layers".
- The "Import from dmc..." item has been moved to the main context menu.

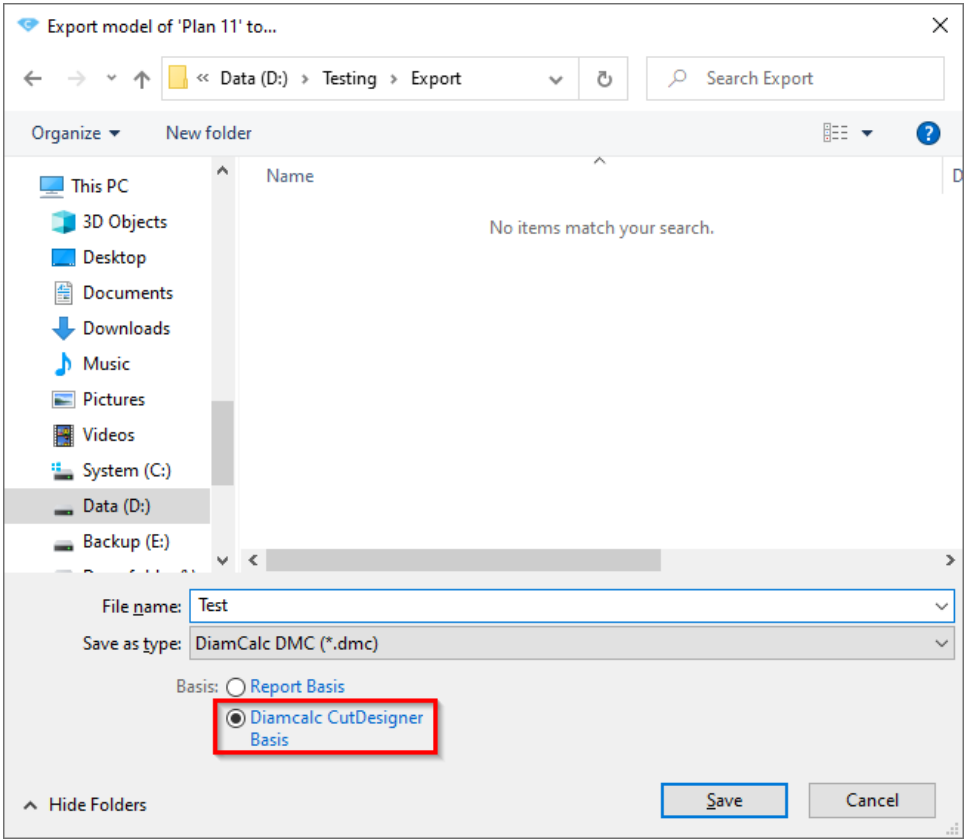


- Fixed the copying of preplans. Now, a copied preplan remains a preplan.

| was | now |
|-----|-----|
|     |     |



- An export option "Diamcalc CutDesigner Basis" was added to HPC to address the axis misalignment between HPC and CutDesigner. Previously, DMC files exported from HPC used a coordinate basis where pear-shaped diamonds were oriented nose-down, whereas CutDesigner expects the orientation to be right-facing.



- The issue with the N/A values in the report for the two-tier pear has been resolved.

| Parameter                 | Avg   | Min   | Max   | Dev   | Cut Grade | Sym Grade |
|---------------------------|-------|-------|-------|-------|-----------|-----------|
| Ratio (L/W)               | 1.501 | —     | —     | —     | N/A       | —         |
| Width, mm                 | 5.212 | —     | —     | —     | —         | —         |
| Length, mm                | 7.820 | —     | —     | —     | —         | —         |
| Diameter, mm              | —     | 5.211 | 7.820 | 2.608 | EX        | —         |
| Crown angle, °            | 34.48 | N/A   | N/A   | N/A   | EX        | N/A       |
| Crown SilverStar angle, ° | 21.82 | 21.37 | 22.27 | 0.90  | N/A       | N/A       |

| Parameter                 | Avg   | Min   | Max   | Dev   | Cut Grade | Sym Grade |
|---------------------------|-------|-------|-------|-------|-----------|-----------|
| Ratio (L/W)               | 1.501 | —     | —     | —     | N/A       | —         |
| Width, mm                 | 5.212 | —     | —     | —     | —         | —         |
| Length, mm                | 7.820 | —     | —     | —     | —         | —         |
| Diameter, mm              | —     | 5.211 | 7.820 | 2.608 | EX        | —         |
| Crown angle, °            | 39.19 | 38.91 | 39.48 | 0.56  | FR        | N/A       |
| Crown SilverStar angle, ° | 21.82 | 21.37 | 22.27 | 0.90  | N/A       | N/A       |