

2021-07-30 - HP Carbon 1.2.95

Here you can find information about what is new in HP Carbon version 1.2.95.

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

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In-house cuts and hybrid appraisers overview

Brief vocabulary	
In-house cut	= "your own", "created by you", "added to the system by you"
Hybrid appraiser	An appraiser that has both absolute and relative parts: <ul style="list-style-type: none">• The absolute part provides a maximum mass without a grade loss (industry-standard intervals).• The relative part allocates plans close to your own forms with excellent optical performance.

What can you do with version 1.2.95 that you could not do in the older versions?

The new version of the system provides a lot of new possibilities. They are described in the sections of these release notes. But the main changes in the release are related to in-house cuts and hybrid appraisers:

- For any number of your in-house (created by you) cuts, you can create its hybrid appraiser and thus get plans for beautiful and massy diamonds for these cuts.
- You can get excellent plans for both in-house and generic, including Brilliant via GIA Facetware, cuts in one run.
- You have the right appraiser at your fingertips - no need to manually select, no need to know or remember which one is needed.

Here is the brief abilities comparison:

Ability	Previous Version	New Version	Provided by what?
Using absolute appraisers when working with multiple cuts.	Yes*	Yes	-
Using hybrid (absolute+relative) appraisers when working with multiple cuts.	No	Yes	Create hybrid appraiser for in-house cut + Automatic appraiser selection
Creating for each in-house cut its hybrid appraiser.	No	Yes	Create hybrid appraiser for in-house cut
Editing appraiser of in-house cut via the user interface.	No	Yes	Create hybrid appraiser for in-house cut
Automatic detection and presenting in the user interface of the link between cut and its appraiser/active profile.	No	Yes	Automatic appraiser selection
Using simultaneously RBC (including optimization by GIA Facetware) and in-house cuts when working with multiple cuts.	No	Yes	Create hybrid appraiser for in-house cut + Automatic appraiser selection
Getting Smart Recut solutions for multiple selected cuts simultaneously.	No	Yes	Automatic appraiser selection + +Smart Recut
Getting Smart Recut solutions for a larger diamond in the multi-diamond solutions.	Yes	Yes	-
Getting in one click Smart Recut solutions for both diamonds in the multi-diamond solutions.	No	Yes	Automatic appraiser selection + +Smart Recut + "gold stars"
Automatic switch to correct appraiser when selecting a solution with a different cut.	No	Yes	Automatic appraiser selection

* Via adding in-house cut and then adding the corresponding section in one of the existing appraisers (by editing its text file).

Create hybrid appraiser for in-house cut

What is new?

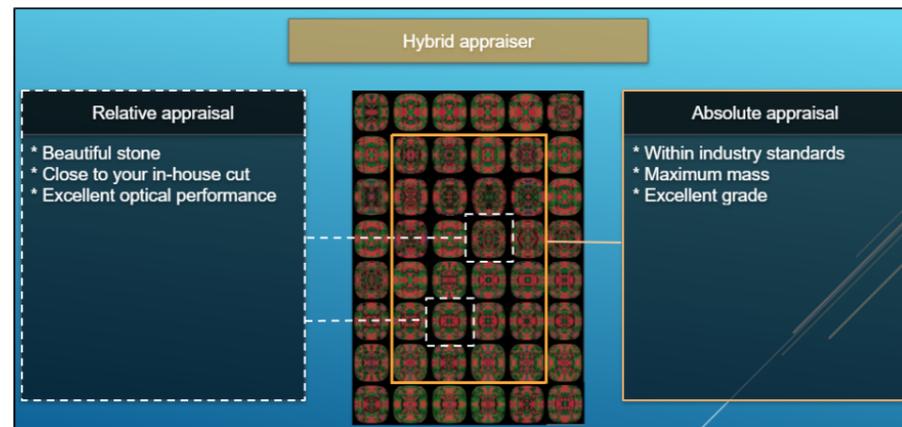
Now for your in-house cut, you can create *its* hybrid appraiser.

What is it for?

To get plans with the best combination of mass and performance, add your in-house cuts to the system, populate them with forms, then allocate plans close to these forms with a hybrid appraiser.

How?

1. Add what you consider beautiful as [your in-house cut](#).
2. Add [variations of forms](#).
3. Allocate future plans close to your forms by a *hybrid appraiser*.



A hybrid appraiser has both absolute and relative parts:

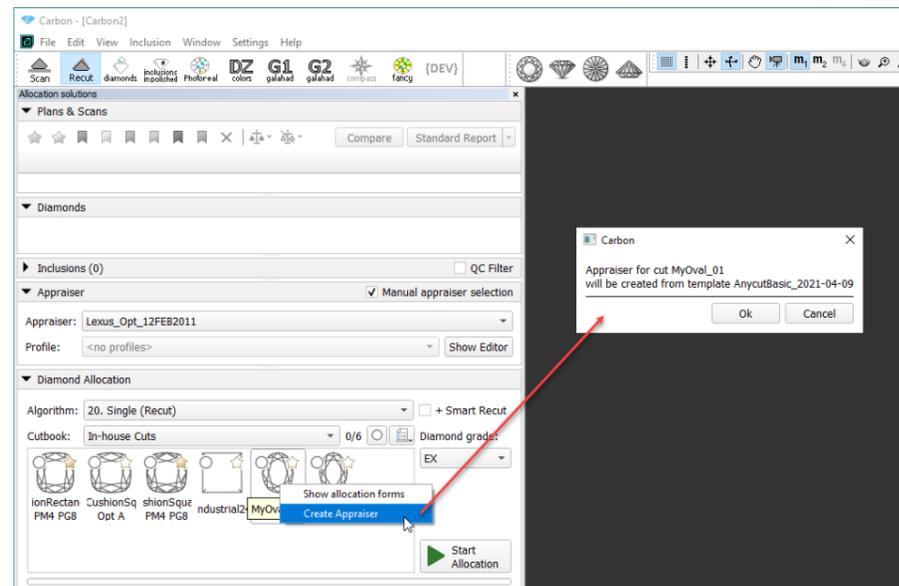
- The absolute part will provide a maximum mass without a grade loss (industry-standard intervals).
- The relative part will bind plans to your own forms with the excellent optical performance.

And thus:



To create for in-house cut its hybrid appraiser:

1. In the **Recut** mode, in the left panel, in the **Diamond Allocation** section, from the **Cutbook** select "In-house Cuts".
2. In the cut list, right-click your cut, and then from the context menu select **Create Appraiser**. The dialog is displayed.



3. In the dialog, read the information about the template and then click **OK**. Your new appraiser is created, named the same as the cut. Two profiles are automatically created for it.

i Notes

- * The new appraiser is created by **copying** the template. As for now, the only available template is the "AnycutBasic_2020-12-09" which is identical to the "MyAnyCut".
- * If you previously already created the appraiser for this cut, the system will suggest **rewriting** it - for the cut, only one **its** appraiser can be presented in the system.

4. In the **Appraiser** section, from the **Appraiser** list, select your appraiser.
5. Select the profile to be edited, then click **Show Editor**. The **Appraiser Editor** window is displayed.
6. In the **Appraiser Editor** set boundaries for your parameters and then click **Apply**. For hints on how to edit profiles, see [Configuring Profiles here](#).

! Pay special attention that the *absolute* part must be filled with the parameters corresponding to your cut.

The screenshot shows the Carbon2 software interface. The main window is titled 'Carbon - [Carbon2]'. The menu bar includes File, Edit, View, Inclusion, Window, Settings, and Help. The toolbar contains various icons for scanning, recutting, and appraising. The 'Appraiser Editor' window is open, showing the 'Oval_2021' profile. The table below lists the parameters and their values for 'Profile1'.

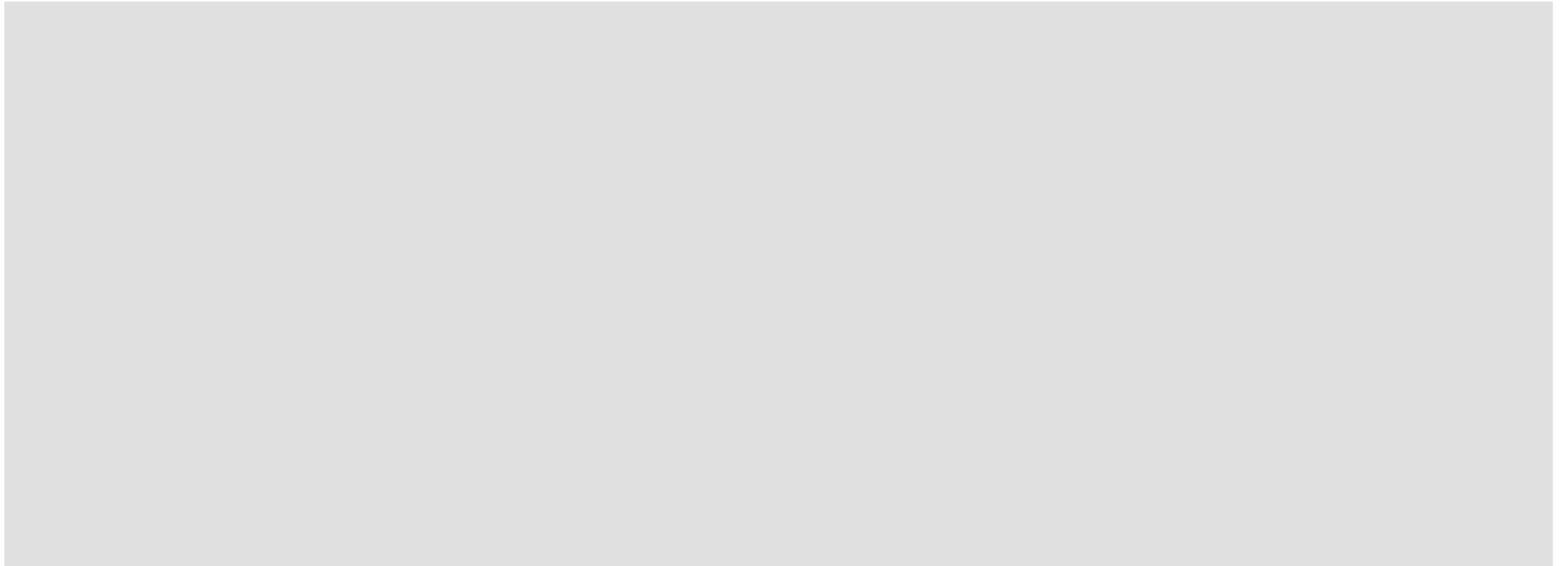
Parameter	Absolute Cut		Absolute Symmetry		Relative Cut		Relative Symmetry	
	[FR]	[GD]	[VG]	[EX]	[EX]	[VG]	[GD]	[FR]
GirdleRatio	1,28	1,3	1,36	1,37	1,5	1,55	1,6	1,65
Table	55	55,5	56	56,3	63	64	65	66
CrownHeight	11,5	11,5	11,5	11,5	15,85	16	16,5	17,9
GirdleBezel	2,8	2,9	3	3	4,9	5,2	5,9	6,6
PavilionHeight	41	41,2	41,6	41,9	46,95	47,2	47,5	48
TotalHeight	55	56	57	58	63,85	64,7	65,7	67,7
SweetLine	-9	-6	-3	-1,5	1,5	3	6	9

The 'Diamond Allocation' panel on the left shows the 'Algorithm' set to '18. Semipolished' and the 'Cutbook' set to 'Custom Cuts'. The 'Diamond grade' is set to 'EX'. The 'Start Allocation' button is visible at the bottom of the panel.

7. If necessary, set boundaries for the second profile as well.

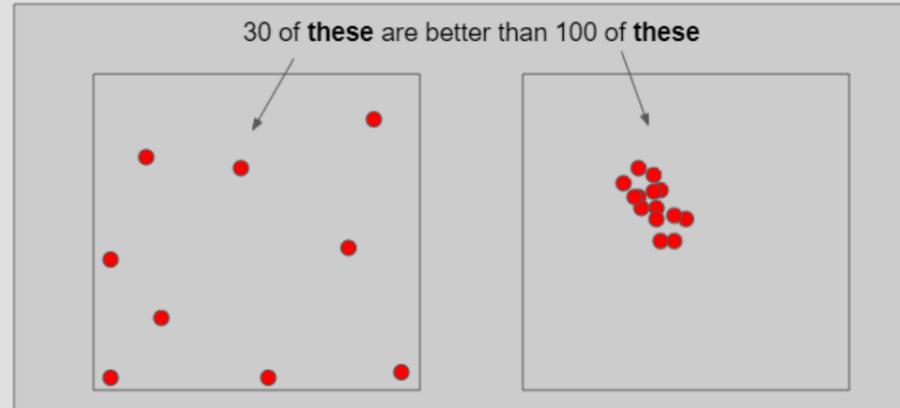
8. As a hybrid appraiser only works when the linked cut has a good set of **allocation forms**, do not forget to add these forms to the cut (see details at [In-house cut registration](#) > "Adding allocation forms" and some questions and answers on allocation forms below).

Some questions and answers on allocation forms:



1. How many and what forms should be added?

You need at least 20-30 forms. It is better to have more*. The quantity depends on the quality:



In a multidimensional array of diamond parameters**, the more these parameters differ, the better (array coverage). Also the greater the GirdleRatio of your cut is, the more allocation forms are recommended to achieve a better result.

NOTES

* But how much more? And may adding a form make hybrid appraiser worse? The answer is that the more forms it has, the slower the appraiser is, therefore it is not recommended to have more than 100. Also if the relative part allows getting A from B or vice versa during allocation (click Show Picture... below) then one of them is redundant and again - only slows down the appraiser.

Calc	32	33	34	35	36	37	38	39	40
36.5	FR	FR	FR	FR	FR	FR	GD	GD	GD
37	FR	FR	FR	FR	GD	GD	VG	VG	VG
37.5	FR	FR	GD	GD	VG	B	EX	VG	VG
38	FR	GD	VG	VG	EX	EX	EX	VG	GD
38.5	GD	VG	EX	EX	EX	EX	VG	VG	GD
39	VG	EX	EX	EX	EX	VG	GD	GD	FR
39.5	VG	EX	EX	EX	VG	VG	GD	FR	FR
40	C	EX	EX	VG	VG	GD	FR	FR	FR
40.5	VG	VG	VG	GD	GD	FR	FR	FR	FR
41	VG	VG	VG	GD	FR	FR	FR	FR	FR
41.5	GD	GD	GD	FR	FR	FR	FR	FR	FR
42	FR								

A can be obtained from B during allocation (close, a deviation is allowed by the relative part).
 cannot be obtained from B during allocation (far, a deviation is not allowed by the relative part)

Thus:
 either A or B is redundant and only slows down the appraiser,
 it is good to have in addition to A or B.

** When we say "parameters" we mean not only the ones presented in the appraiser but also the **additional** (for example, azimuths of non-main facets of crown and pavilion). Precisely, changing the additional parameters in many cases provides the best form distribution over the array.

2. If no allocation forms, is it a hybrid appraiser?

A cut always has at least one form available immediately after cut registration (*base form*). That is why you need only 10 minutes to start using the new in-house cut (see "Ready for use" in [this](#) diagram). Does a linked hybrid appraiser stay hybrid in this situation? See next question.

3. If only one form was added, is it a hybrid appraiser?

If your cut has only one allocation form or few forms and the relative part of its hybrid appraiser is narrow enough, this creates a great risk of mass loss, as the solution will be searched not along all the array provided by the absolute part but only close to this form. On the other hand, if you significantly widen the relative part, it may become wider than the absolute which means the appraiser degenerates into a simple absolute.

4. How the SweetLine parameter should be specified in a hybrid appraiser?

The **SweetLine** slope is specified for an entire cut as described [here](#). As forms belong to the same cut, the slopes of the SweetLines they belong to will be similar. But as good forms are distributed over the array, the position of their SweetLines may be different:

Calc	32	33	34	35	36	37	38	39	40
36.5	FR	FR	FR	FR	FR	FR	GD	GD	GD
37	FR	FR	FR	FR	GD	GD	VG	VG	VG
37.5	FR	FR	GD	GD	VG	VG	EX	VG	VG
38	FR	GD	VG	VG	EX	EX	EX	VG	GD
38.5	GD	VG	EX	EX	EX	EX	VG	VG	GD
39	VG	EX	EX	EX	EX	VG	GD	GD	FR
39.5	VG	EX	EX	EX	VG	VG	GD	FR	FR
40	EX	EX	EX	VG	VG	GD	FR	FR	FR
40.5	VG	VG	VG	GD	GD	FR	FR	FR	FR
41	VG	VG	VG	GD	FR	FR	FR	FR	FR
41.5	GD	GD	GD	FR	FR	FR	FR	FR	FR
42	FR								

Therefore, for the absolute part of the hybrid appraiser, we should turn off the SweetLine (set all values to "100" which will remove the fixed green zone from the picture above) and only in the relative part set the possible deviation from the SweetLine of each particular allocation form.

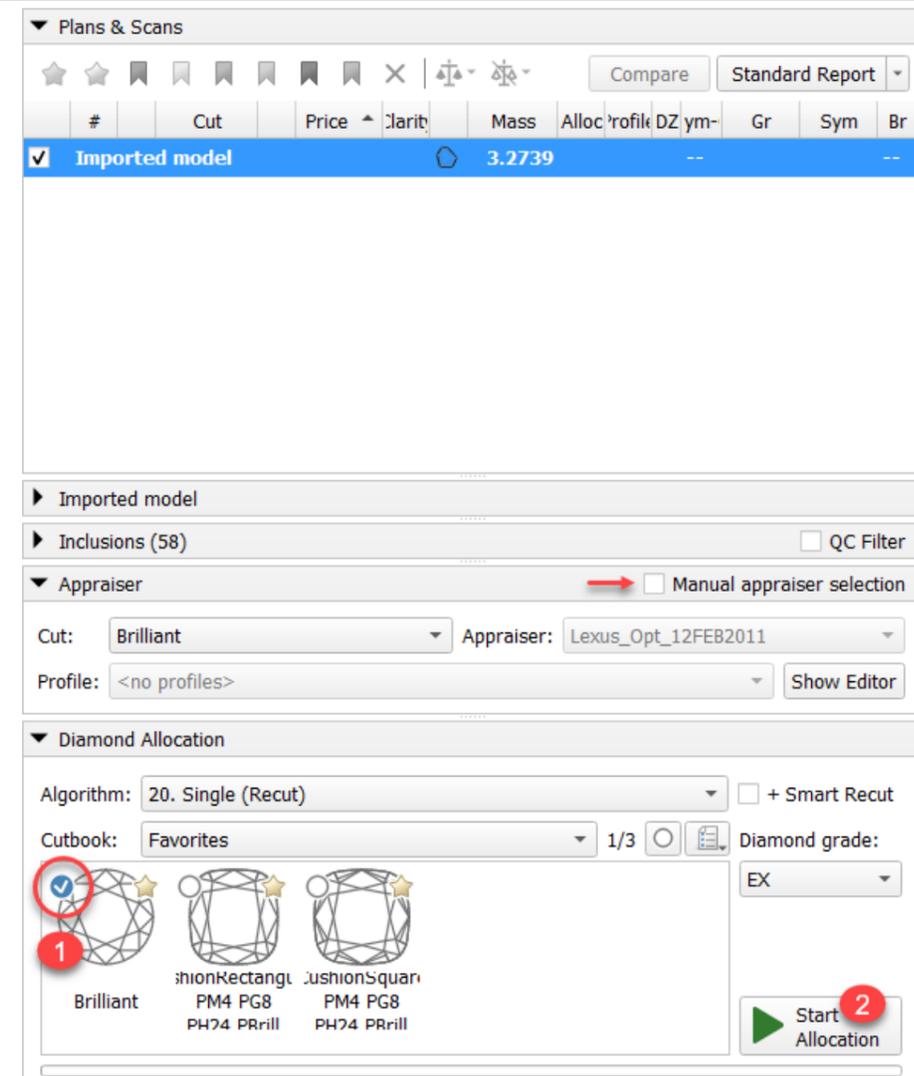
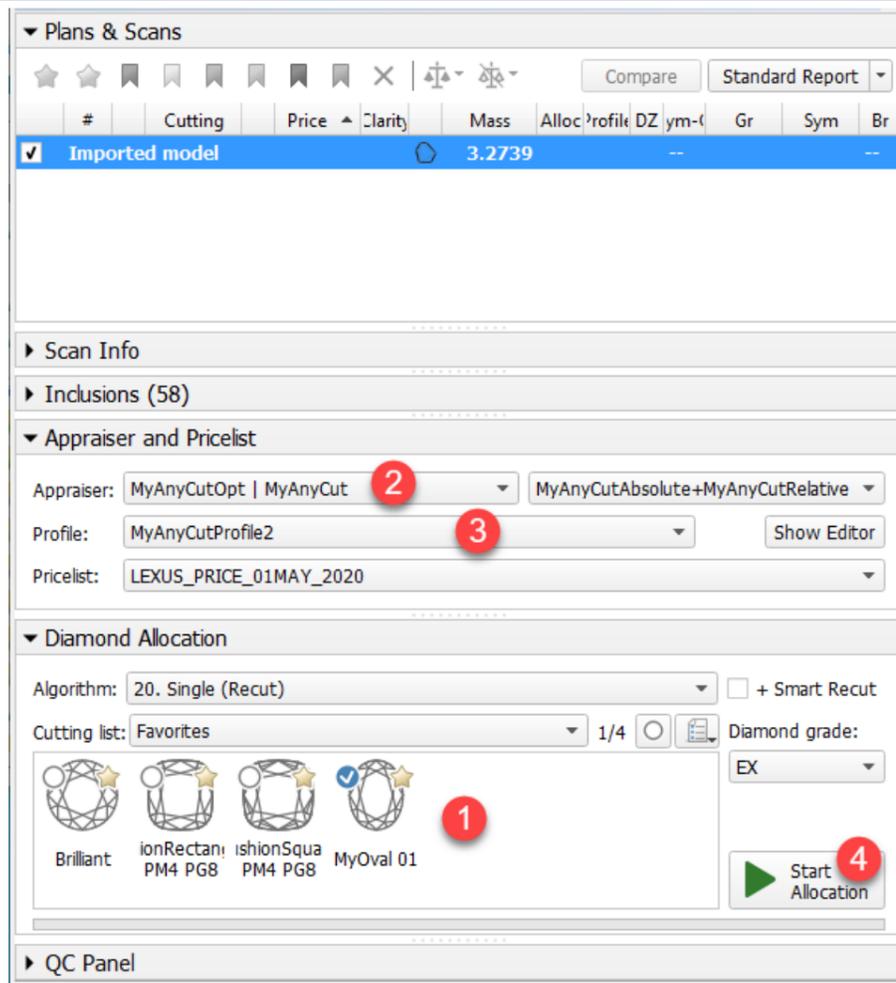
Automatic appraiser selection

There are two cases when you need to select an appraiser:

- For allocation (creating solutions)
- For appraisal (appraising of already existing solutions)

For appraiser selecting, the system behavior and thus what you need to do is changed now:

		Was	Now
System behavior	Allocation, 1 cut	<p>Process: In Recut mode, in the Diamond Allocation section, you select the cut, then, in the Appraiser section, from the Appraiser list, manually select the appropriate appraiser and Profile, then click Start Allocation.</p> <p>Result: If you selected the wrong appraiser, there may be no results or they can be bad.</p>	<p>Process: you select the cut, then click Start Allocation.</p> <p>Result: The <i>linked appraiser*</i> will be used automatically (and the last selected Profile of it)</p>
	Allocation, more than 1 cut	<p>Process: In Recut mode, in the Diamond Allocation section, you select your cuts, then manually select the "Lexus_Opt..." (must include selected cuts) appraiser and start allocation.</p> <p>The "Lexus_Opt..." should be pre-configured by an expert (no modifications via UI - only editing as file).</p> <p>Result: If your cut was not described in the "Lexus_Opt...", there may be no results or they can be bad.</p>	<p>Process: you select the cuts, then click Start Allocation.</p> <p>Result: The <i>linked appraiser*</i> will be used automatically (and the last selected Profile of it) for each included cut.</p>
	Appraisal of already existing solutions	<p>In the Plans & Scans section, you click the solution, then, in the Appraiser section, from the Appraiser list, manually select the appropriate appraiser and Profile, then click Show Editor.</p>	<p>In the Plans & Scans section, you click the solution, in the Appraiser section, the system automatically displays the linked appraiser. When you switch between the solutions of different cuts, the appraiser changes correspondingly.</p>



* In the system, cuts and appraisers are *linked* like this:

Cut	Appraiser***
In-house cut that has its** appraiser	Its appraiser
In-house cut without its appraiser	MyAnyCut
Brilliant	"GIA Facetware + MyRound"
CushionSquare_PM4_PG8_PH24_PBrill_C32	CushionSquare
CushionRectangular_PM4_PG8_PH24_PBrill_C32	CushionRectangular
Some oval cuts	MyOval
Other cuts	Lexus_Opt...****

** **Its** appraiser means created specifically for this particular cut

*** For each appraiser, its **active profile** will be used - the one that was last selected in the user interface **Profile** field.

**** Cuts linked to the "Lexus_Opt..." appraiser have limitations:

- The cut will not give the appropriate result if its description is not presented in the "Lexus_Opt..." appraiser.
- The + **Smart Recut** option will not work for them

See details in the sections below.

When automatic appraiser selection is useful

The *automatic appraiser selection* eases your work with multiple cuts:

- Allocation cases:
 - You want to try getting solutions of different cuts for your scanned model.
 - You want to try getting diamonds of different cuts within your solutions for multi-diamonds algorithms.
- Other cases:
 - In your solution list, you have solutions of different cuts and you want the *appropriate appraiser to be selected automatically* when you switch to this solution.
 - You want to know which appraiser is linked to some cut and/or switch the *active profile* for it. The active profile is the last selected in the user interface **Profile** field for this appraiser. It is saved by the system automatically.

For single cut allocation

- Select cut and run allocation. No need to worry about the appraiser.

For multiple cut allocation

How to use:

1. From the **Cutbook**, select several cuts.
2. Run allocation.

The screenshot shows the software interface for diamond allocation. It is organized into several sections:

- Plans & Scans:** A table with columns for #, Cut, Price, Clarity, Mass, Alloc, Profile, DZ, Sym, and Br. The first row is 'Imported model' with a mass of 3.2739.
- Imported model:** A table with columns for Diam #, Cut, Price, Discount, PPC, Mass, Clarity, C, and Grade. It shows a 'Scan' with a mass of 3.2739ct.
- Inclusions (58):** A section with a 'QC Filter' checkbox.
- Appraiser:** A section with a 'Manual appraiser selection' checkbox. It includes dropdowns for 'Cut' (MyOval_01), 'Appraiser' (MyOval_01), 'Profile' (Profile1), and 'Absolute+Relative'. There is a 'Show Editor' button.
- Diamond Allocation:** A section with an 'Algorithm' dropdown set to '20. Single (Recut)', a '+ Smart Recut' checkbox, a 'Cutbook' dropdown set to 'Favorites', and a 'Diamond grade' dropdown set to 'EX'. Below these are four diamond cut icons: Brilliant, CushionRectangl, CushionSquar, and MyOval 01. The 'MyOval 01' icon has a red circle with the number '1' next to it. At the bottom right of this section is a 'Start Allocation' button with a red circle and the number '2' next to it.

Note that you do not need to do anything but selecting wished cuts and running allocation.

Optionally: to view the linked appraiser and its current active profile in the **Appraiser** section, select **Cut** from the list. Change active **Profile** if needed.

Note that the **Profile** field will be empty if the appraiser does not have any profiles.

For multi-diamond algorithms

The *automatic appraiser selection* greatly eases getting excellent diamonds of different cuts within one solution (via the multi-diamond algorithms, such as [13. Cascade-2M](#) and **+ Smart Recut** option).

✓ New: now you can get a combination of your in-house cut and one of standard (for example, Brilliant linked to "GIA Facetware + MyRound") cuts within one solution.

Running multi-diamond allocation with Smart Recut

(*Prerequisites*: gold stars will be used - see instruction on how to configure them in the section below)

1. Use the **Recut** mode.
2. Select several cuts.
3. Set **Algorithm** to "13. Cascade-2M".
4. Select the **+ Smart Recut** option.
5. Click **Start Allocation**. The multi-diamond solutions are displayed in the list.

To get "Smart Recut + Smart Recut" solutions with the different Smart Recut presets:

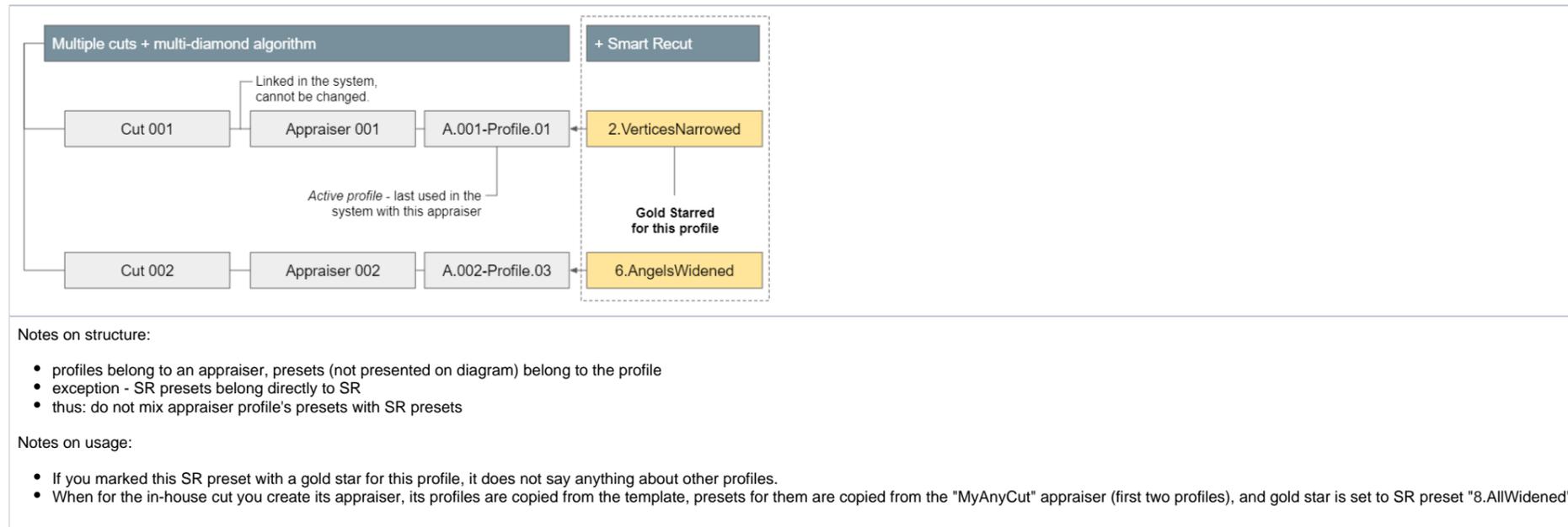
1. In the **Diamond Allocation** section set **Algorithm** to smart recut one.
2. In the solution list, select the "Recut + Recut" solution.
3. In the diamonds section, select one of the solution diamonds. In the **Appraiser** section, the appraiser linked to the cut of the selected diamond is displayed automatically. Its active **Profile** is displayed as well.
4. From the **Presets** list, select the preset you want to be used.

The screenshot shows the 'Allocation solutions' window. The 'Diamond Allocation' section is expanded, showing the 'Algorithm' dropdown set to '19. SmartRecut (Brilliant, Oval, AnyCut)'. A dropdown menu is open, listing various presets with gold stars next to them. The '6. AnglesWidened' preset is highlighted. Red circles with numbers 1, 2, 3, and 4 are overlaid on the interface to indicate the steps: 1 points to the Algorithm dropdown, 2 points to a solution in the 'Imported model' list, 3 points to a diamond in the 'Plan 1' table, and 4 points to the '6. AnglesWidened' preset in the dropdown menu.

5. Run allocation for the selected diamond. The new "Smart Recut + Recut" solution is added to the list, where Smart Recut is built with the selected preset.
6. Repeat configuration for the diamond remaining Recut.
7. Run allocation for the second diamond. Now you have a new "Smart Recut + Smart Recut" solution with each SR produced by the new preset.

"Gold stars" configuring

The "gold star" shows which Smart Recut preset will be used for the *active profile* of the linked appraiser when running allocation for multiple cuts with a multi-diamond algorithm with **+ Smart Recut** option. There is a default gold star for each profile of each appraiser working with Smart Recut. Thus, you can skip configuring gold stars - in this case, the default will be used (for MyRound profiles - preset 4, for MyOval and MyOvalPerformanceWare - 6, for MyAnyCut and alike - 8).



The gold stars can be configured before running allocation as described below.

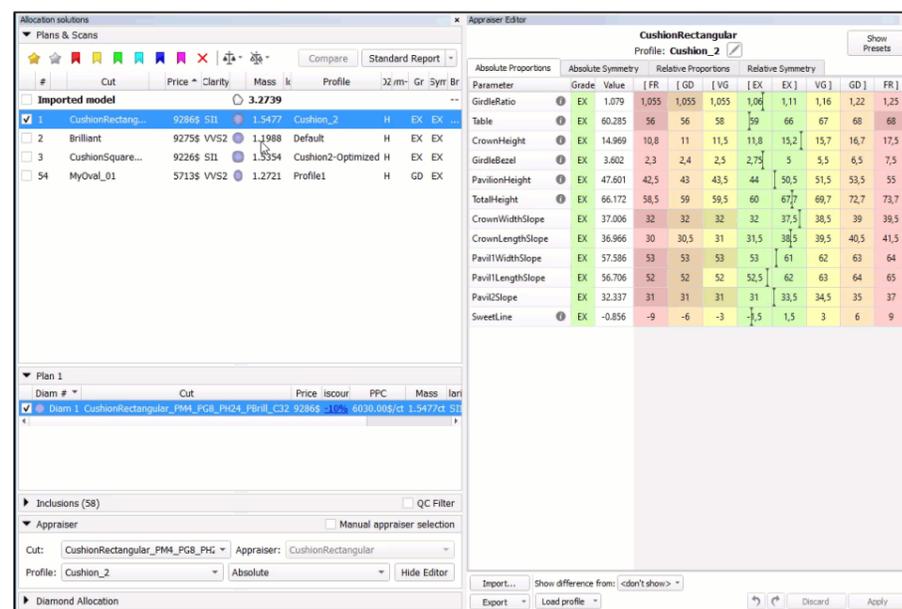
To configure gold stars:

1. Use the **Recut** mode.
2. in the **Appraiser** section, select **Manual appraiser selection**.
3. Select **Appraiser**.
4. Set active **Profile**.
5. In the **Diamond Allocation** section set **Algorithm** to smart recut one.
6. Expand the **Presets** list, then in the list, set the gold star to the right of the preset you want to be used during allocation for multiple cuts with a multi-diamond algorithm.

For viewing grades in Appraiser Editor

If, in your solution list, you have solutions of different cuts and you want the *appropriate appraiser to be selected automatically* when you switch to this solution:

1. Click **Show Editor**. The **Appraiser Editor** window is displayed.
2. In the **Plans & Scans** section, switch to the required solution. The **Appraiser Editor** window will automatically switch to the appraiser linked with the cut/*active profile*.



For switching active profile

To know which appraiser is linked to some cut and/or switch the *active profile*:

1. Do one of the following:

- a. If you have a solution of the appropriate cut in the list, click it. Its cut is displayed in the **Appraiser** section, **Cut** field.
- b. If you do not have a solution, select directly from the **Appraiser** section, **Cut** list.

For the selected cut, it's linked **Appraiser** and its active **Profile** is displayed. Note that the **Profile** field will be empty if the appraiser does not have any profiles.

2. If necessary, change the **Profile**. Selected new active profile for this appraiser is saved in the system automatically.

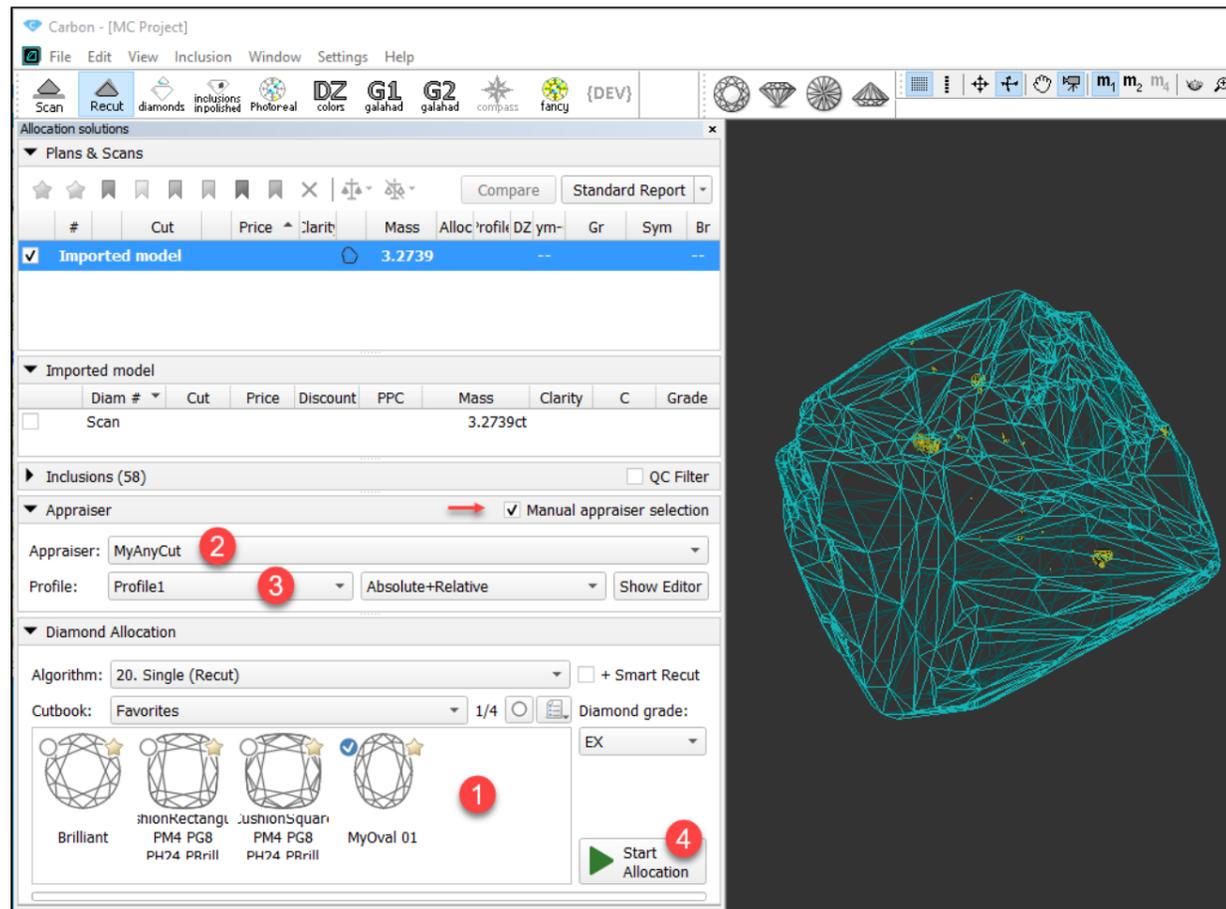
Option A: Solution of appropriate cut in the list

Option B: Not in the list

Old mode - Manual appraiser selection

Sometimes it may be necessary to try appraisal or running allocation with the appraiser, different from the linked one.

You can switch to the old mode of working with the system where the manual selection was possible (and required). To do that, in the **Appraiser** section, select the **Manual appraiser selection** checkbox.



To switch back to the automatic appraiser selection, deselect the checkbox.

Cushion cuts of Goodwin type - check of allocation forms

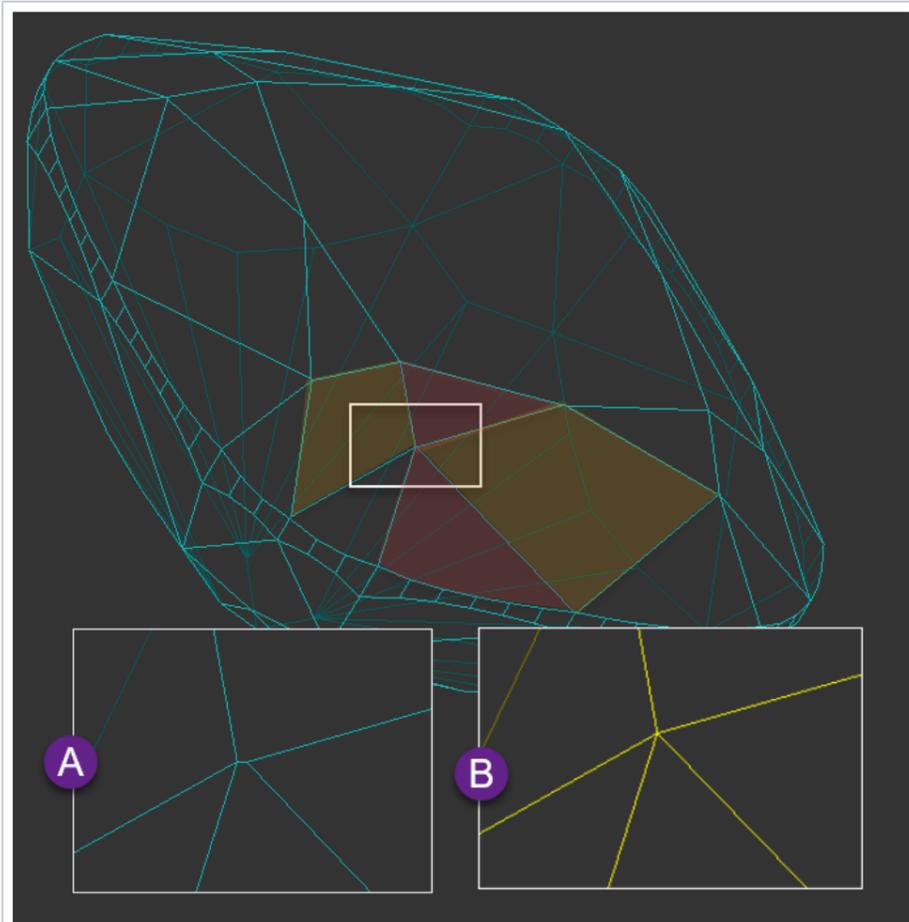
For some cuts, the [Goodwin](#) cut engine is applied. At the moment they are the [cushion appraisers](#):

- "CushionRectangular_PM4_PG8_PH24_PBrill_C32"
- "CushionSquare_PM4_PG8_PH24_PBrill_C32"

There are some limitations to allocation forms of such cuts:

- "4+ facets" limitation:
 - "4+" facet is a facet with 4 or more vertexes (junctions are the most common reason for the triangle facets to become "4+").
 - Goodwin checks every vertex of the model.
 - At each vertex, only 3 or fewer "4+" facets should converge.

 Table, culet, and facets of the girdle are not taken into account.



- A - before [Smart Normalize](#)
- B - after Smart Normalize
- Yellow facets have 4 vertexes
- Red facets have: 4 vertexes before SN, 3 vertexes after SN

Thus:

- before SN, at the center vertex, 4 facets with 4 vertexes converge - not good for Goodwin
 - after SN, at the center vertex, 2 facets with 4 vertexes converge - good for Goodwin
- [Facet types](#) should not have serious errors (like some of the facets on the pavilion marked as the crown facets).

If these conditions are not met, the **Show allocation forms in solution list** command does not display the "wrong" forms in the list and *such forms do not produce any solutions*.

What's new?

Now the additional checks are added to the system when trying to add forms to Goodwin cuts. If these checks are not passed, the form is not added, the notification window is displayed:

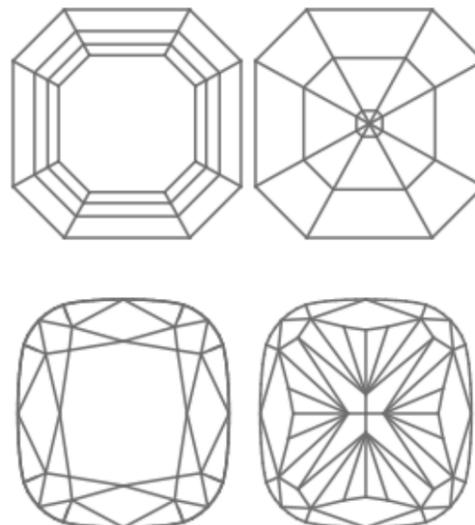
Form name:

Selected model has own Facet Types!
[Open Facet Types to adjust](#)
[Mark automatically from cut CushionRectangular_PM4_PG8_PH24_PBrill_C32](#)

 To add this form please run [Smart Normalize](#) algorithm to prepare it for [Goodwin](#) cut engine. See details [here](#).

Cut:

Cut is [Goodwin](#) type.



Or (for already normalized forms):

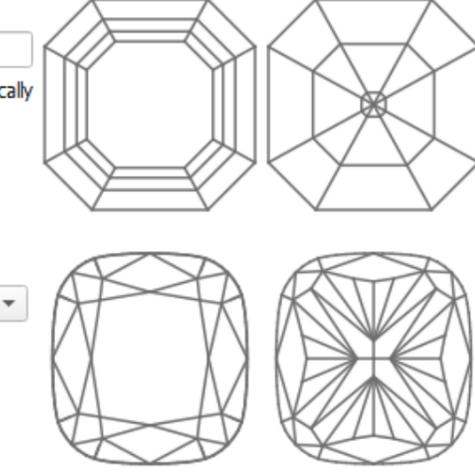
Form name:

Facet Types from CushionRectangular_PM4_PG8_PH24_PBrill_C32 applied automatically
[Open Facet Types to adjust](#)

 This form is not compatible with [Goodwin](#) cut engine. See details [here](#).

Cut:

Cut is [Goodwin](#) type.



New report - Semipolish

A new report is added to the system - the *Semipolish Report*. It allows controlling (both visually and via parameter values) a table polishing process.

To access the report:

1. Select the solution.
2. On the right panel, click **Semipolish Report**. The report is displayed in the Scene.
3. If you select another solution, the report is updated to display information related to it.

The report includes:

1. Main parameters of a solution.
2. [Table processing parameters](#).
3. [Safe line parameters](#).
4. Image with the angles of the main facets on the pavilion.
5. Image with the angles of the main facets on the crown.
6. Image reflecting the process of polishing a table (angle 1).
7. Image reflecting the process of polishing a table (angle 2).

The screenshot displays the Carbon software interface for a diamond model. On the left, a table lists various facets and their properties. The main area shows a 3D model of the diamond with processing parameters and a legend. The legend includes:

- Point of touch by polishing disc
- Initial facet with adjacent bones
- Different processing depths
- Final processed facet

Key parameters shown include:

- Stone ID: Oval_blocked_001_ver3
- Parameters: Avg, Min, Max, Dev, Cut, Sym
- Table Processing parameters: Table allowance before, Table allowance parallel, Grind depth
- Reference Line parameters: Marking for Crown, Marking for Pavé

Diagrams 6 and 7 illustrate the polishing process on the table facet, showing the 'Table Start' and 'Grind depth 0.260 mm'.

The images (6-7) reflecting the process of polishing a table includes information about:

- Point of touch by polishing disc
- Positions of different planes related to polishing
- Door azimuth
- The azimuth of the table polishing start point.
- The **Grind depth** table processing parameter (see description [here](#)).

This section provides a detailed view of the polishing process legend and diagrams. The legend includes:

- Point of touch by polishing disc
- Initial facet with adjacent bones
- Different processing depths
- Final processed facet

Diagram 6 shows the 'Table Start' at 137.02° and the 'Door 332°'. Diagram 7 shows the 'Grind depth 0.260 mm'.

The report includes the **Rotate Table processing start azimuth to door** control (active if the hardware is connected).

This screenshot shows the report interface with the 'Rotate Table processing start azimuth to door' control. The control is active, indicated by a red arrow. The legend includes:

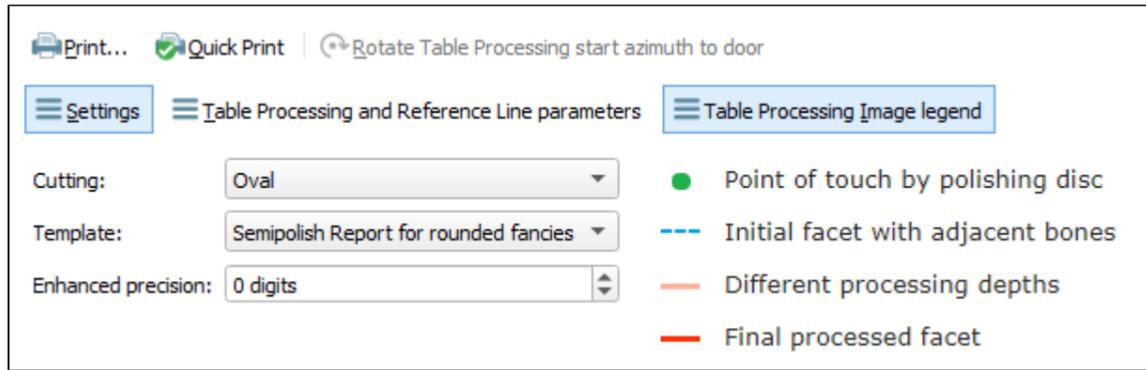
- Point of touch by polishing disc
- Initial facet with adjacent bones
- Different processing depths
- Final processed facet

Key parameters shown include:

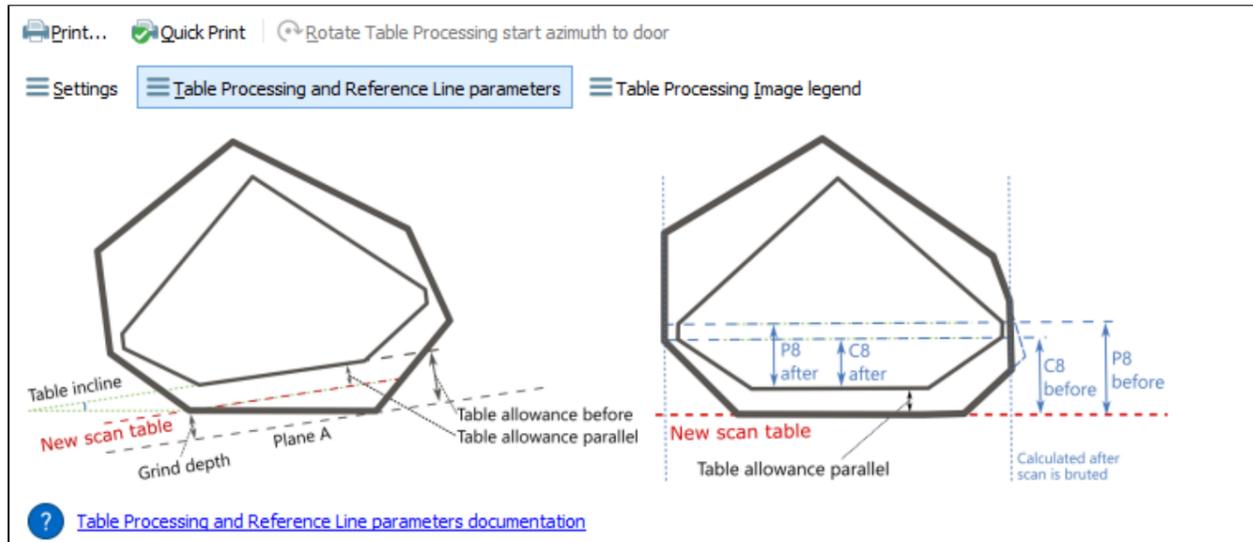
- Stone ID: Oval_blocked_001_ver3
- Parameters: Avg, Min, Max, Dev, Cut, Sym
- Table Processing parameters: Table allowance before, Table allowance parallel, Grind depth
- Reference Line parameters: Marking for Crown, Marking for Pavé

Diagrams 6 and 7 illustrate the polishing process on the table facet, showing the 'Table Start' and 'Grind depth 0.260 mm'.

To access report settings and reference information, at the top of the report, click **Settings**, **Table Processing and Reference Line Parameters**, **Table Processing Image Legend**. On click, the corresponding section is displayed



Also, click **Table Processing and Reference Line parameters** to view the brief description of parameters.



To hide the displayed information, click the corresponding button again.

Appraiser for Brilliant - Changes in Profiles and Presets

For the "GIA Facetware + MyRound" appraiser (linked to the Brilliant cut), some changes were made in profiles and presets.

Profiles General Description

The general idea of each profile is presented in the table:

	Profile	
1	Max	Profile with as wide boundaries as possible (for Cut and Symmetry). Provides maximum mass within GIA EX.
2	ModernCut	Recommended profile. Provides solutions reflecting the current market preferences not reflected in GIA. Narrower than Max.
3	Commercial	In correspondence with solutions of large Indian companies. Narrower than ModernCut.
4	H&A	Creating Hearts & Arrows solutions. Narrow Symmetry and SweetLine, somewhat narrowed by Cut. Narrower than Commercial.
5	H&A 5ct+	Hearts & Arrows solutions for large stones. Narrower than H&A.

Purposes

For profiles:

1. Each next profile should be **narrower than the previous** (see table above). Previously, this logic was not fully supported.
2. Scanned stones should not go outside the EX grade where possible. Previously this happened often.

For presets:

1. The widest preset of each next profile (see table above) should be approximately the same as the narrowest of the previous.



#2-3 (ModerCut and Commercial) have a specific place in this logic: **both of them** intersect with their ends with Max and H&A and in most aspects intersect with each other

2. ModernCut and Commercial should provide the maximum range: presets for presenting some from Max - presets for in-between - presets presenting some from H&A (see table below).

1. Max	1X.UltraSym	2X.HighSym	3X.MediumSym	4X.NormalSym	5X.Standard	6X.LowSym	7X.ExtendedLimits	8X.MaxMass
2. ModernCut	1M.H&A	2M.UltraSym	3M.HighSym	4M.MediumSym	5M.NormalSym	6M.Standard	7M.LowSym	8M.MaxMass
3. Commercial	1C.H&A	2C.H&A	3C.UltraSym	4C.HighSym	5C.MediumSym	6C.NormalSym	7C.LowSym	8C.MaxMass
4. H&A	1.H&A	2.H&A	3.H&A	4.H&A	5.H&A	6.H&A	7.H&A	8.H&A
5. H&A 5ct+	1.H&A5ct	2.H&A5ct	3.H&A5ct	4.H&A5ct	5.H&A5ct	6.H&A5ct	7.H&A5ct	8.H&A5ct

* General idea: presets with the same names give similar results.
* Where names repeat, highlighted shows correspondence.

Changes

For purposes "Profiles #1 - Each next profile should be narrower than the previous" and "Presets #1 - The widest profiles of each next profile (see table above) should be approximately the same as the narrowest of the previous":

1. In ModernCut, all that was narrower than Commercial was widened.
2. In H&A and H&A 5ct+, all that was wider than Commercial was narrowed.

For purpose "Profiles #2 - Scanned stones should not go outside the EX grade where possible:

1. For ModernCut and H&A, **Culet** is widened to 0.5 (as in Commercial). Done because the real culet of scanned stones is in this range. Later narrowed by presets.
2. For ModernCut and H&A, **HeightGirdleExtraFacet** is widened to 3 (as in Commercial). Done because the real girdle extra facets of scanned stone have heights in this range. Later narrowed by presets.
3. **GirdleBoneLocal**, **GirdleBezelLocal**, **GirdleValleyLocal** are widened for the same reason. Later narrowed by presets.
4. In the H&A, H&A 5ct+ for Symmetry the same values as for Commercial will be used.
5. In all profiles, except Max, Roundness parameters (22_5, 45, 90) were widened to 0,7, 0,8, 0,9 which keeps scanned stones in EX grade, but still meets GIA requirements.
6. Roundness 11_25 was added for large diamonds (see "New Parameter - Roundness at 11.25°" section of this documentation".

For purpose "Presets #2 - ModernCut and Commercial should provide the maximum range":

1. In ModernCut, a new preset is added - "1M.H&A" (corresponds to "6.H&A", see table above). It replaced the "7.ExtendedLimits".
2. In Commercial, 2 new presets are added - "1C.H&A" and "2C.H&A" (correspond to "6.H&A", "7.H&A", see table above). They replaced "5.Standard" and "7.ExtendedLimits".

Results

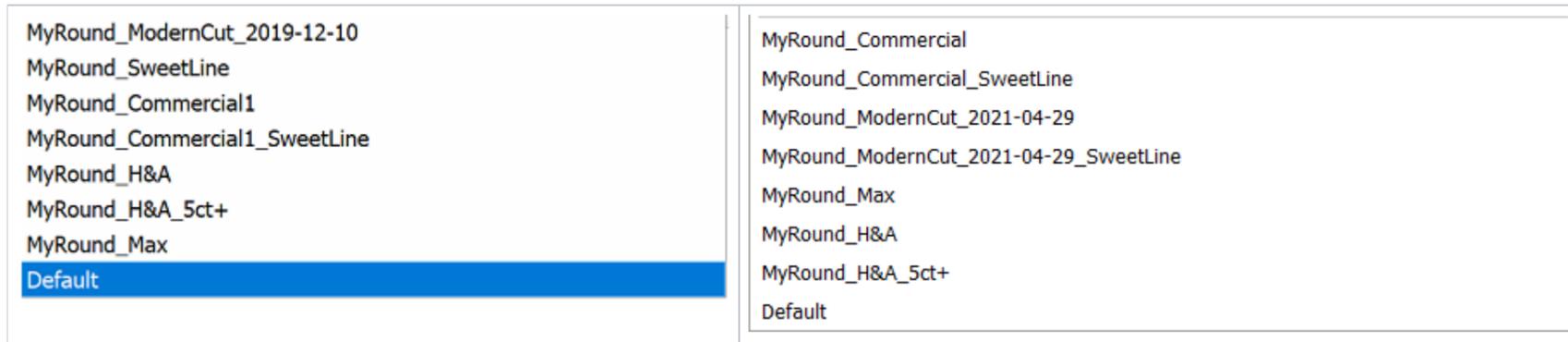
The table below describes changes and results.

	Profile	
1	Max	There is no significant difference.
2	Modern Cut	The range of masses provided by the profile is widened (the maximum mass increased due to parameters widening, the minimum mass decreased due to more symmetrical presets).
3	Commercial	The range of masses provided by the profile is widened (the maximum mass did not change, the minimum mass decreased due to more symmetrical presets).
4	H&A	The masses provided by the profile slightly decreased. The main input to the mass decrease is provided by the narrowing of Girdle Bezel and Valley parameters. Previously for Girdle Bezel, the boundaries were 2.25-4.75, Girdle Valley 0.75-2.94 (that is equal to Max profile). Now Girdle Bezel is 2.9-4.2, Girdle Valley is 1.35-2.4. These changes are considered reasonable as the profile is not going to be used to produce solutions too close to GIA boundaries.
5	H&A 5ct+	The same as for H&A.

Additional Minor Changes

Additionally, the order of profiles within the appraiser changed:

--	--

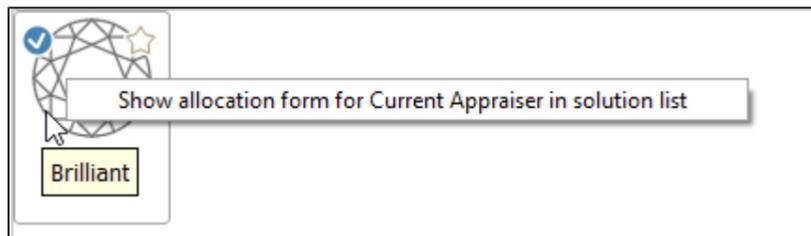


The new order is in accordance with the **frequency of use** in enterprises.

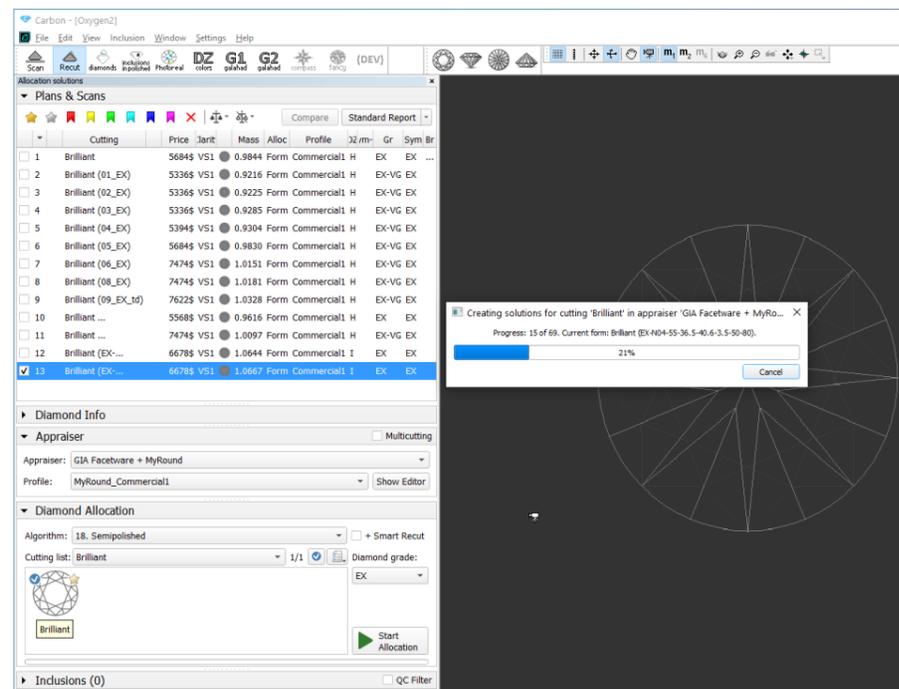
 Work on the panel improvement is in progress.

Brilliant Cut - Viewing Allocation Forms

Viewing of the **cut's allocation forms** previously available only for *in-house cuts* (see the **Show allocation forms in solution list** command description in [In-house cut registration](#)), now is also available for the default Brilliant cut.



- Right-click the Brilliant cut and then select **Show allocation form for Current Appraiser in solution list**. Allocation forms will be displayed in the solution list.



Note that for the Brilliant cut this command considers the *current appraiser* - before using the command, the appropriate appraiser should be selected. The reason is that several appraisers may be able to work with default cuts - each with its own set of allocation forms. Therefore the allocation forms for the default cuts (including Brilliant) are stored within the appraisers. If you do not select the correct appraiser (the one containing the allocation forms for this cut, the command will be unavailable:

Command unavailable - "greyed out" and not clickable

! The displayed forms are copies. If you make some changes to them, this will not affect the initial copies actually assigned to the cut.

Still, via the context menu you are able to:

- Add as allocation form to another cut...
- Register as new cut...

It is impossible to remove allocation forms from the Brilliant cut.

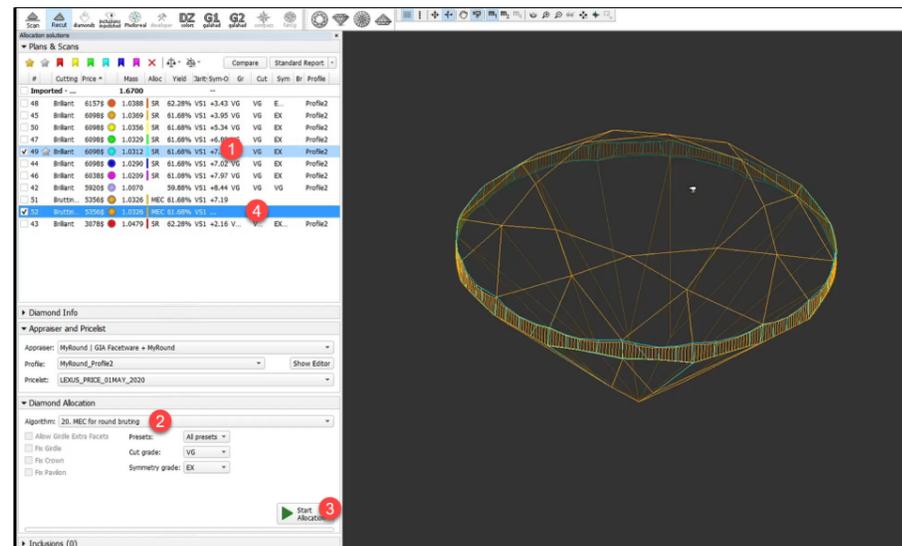
New Algorithm - MEC for Round Bruting

! This functionality is designed to work with the Brilliant cut.

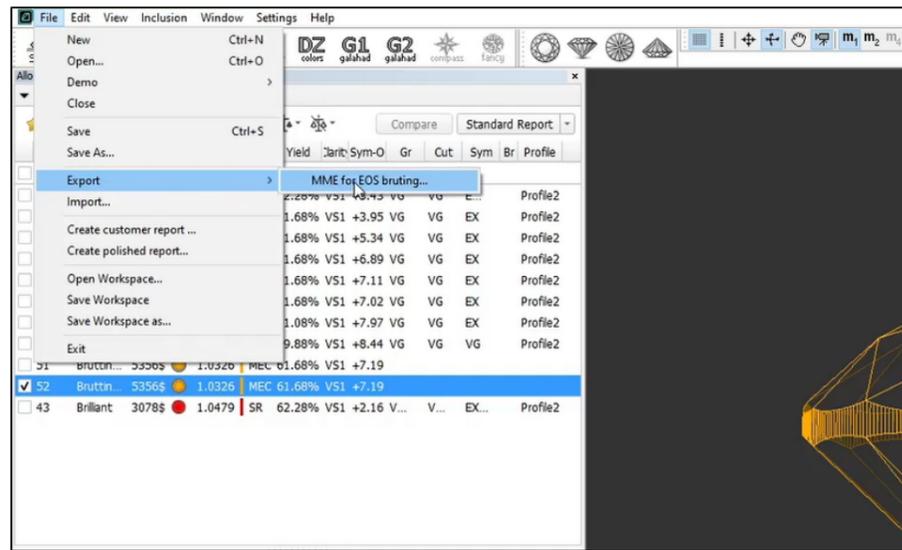
A diamond bruting machine used in a round Brilliant cutting process is only able to produce a vertical girdle of a round shape. For calculation of the correct position of a stone in a bruting machine and a bruting radius, HP Carbon needs to find a cylinder circumscribed around a selected solution. This is now can be done by a new algorithm - "20. MEC for round bruting".

To use the algorithm, first allocate your solutions via Recut > Smart Recut, then:

1. Select the solution.
2. Set **Algorithm** to "20. MEC for round bruting".
3. Run allocation. As allocation is finished, in the solution list, the new model representing a bruting radius is displayed.
4. In the solution list, select this solution.



5. From the main menu, select **File > Export > MME for EOS bruting...** Set name and location for your MME model file.



6. In your brutng software, use the created MME model.

User interface - changes in element names and behavior

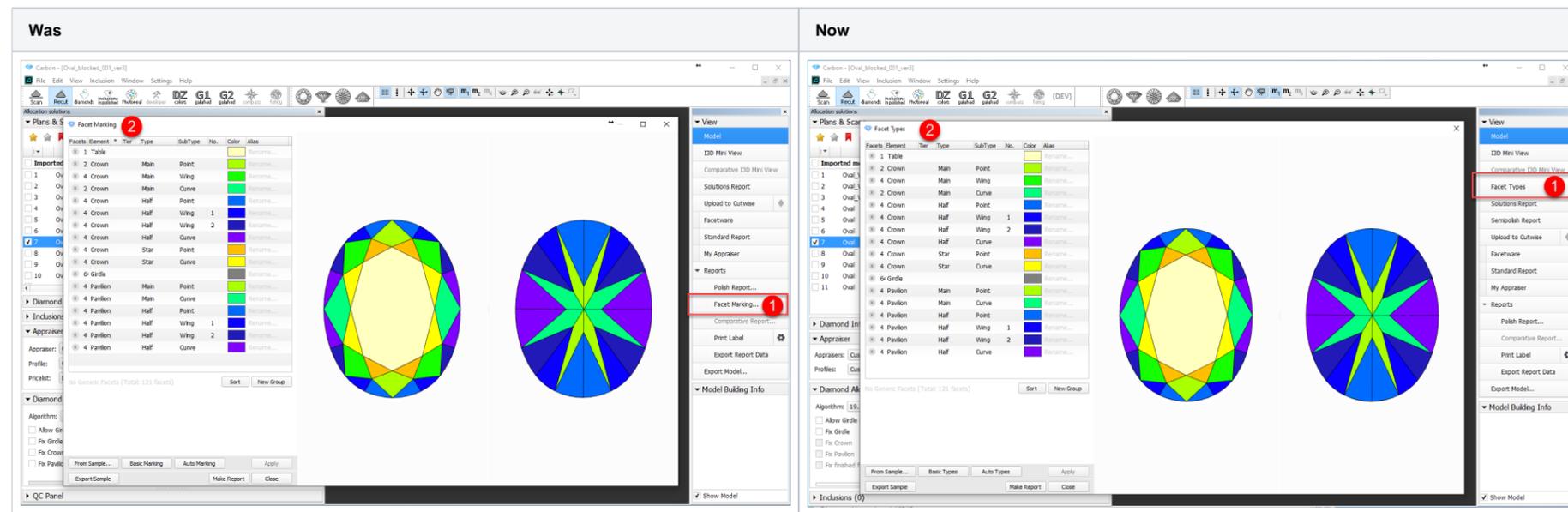
General name changes

To better match modern brilliant processing, some elements of the user interface were renamed:

Old Term	New Term	Old Name in User Interface	New Name in User Interface
Cutting	Cut	All elements containing "Cutting"	Now contain "Cut"
		Cutting list	Cutbook
		Scan mode > Cutting & Method	Scan mode > Cut & Method
Client cutting, user cutting	In-house cut	Cutting list = "Client Cuttings"	Cutbook = "In-house Cuts"
Facet marking	Facet types	Right panel > Facet Marking	Right panel > Facet Types

Facet Marking Rename to Facet Types

For more compliance with the system usage practices, the *Facet Marking* feature is renamed to *Facet Types*.



Allocation Solution Panel - Behavior and Order of Sections

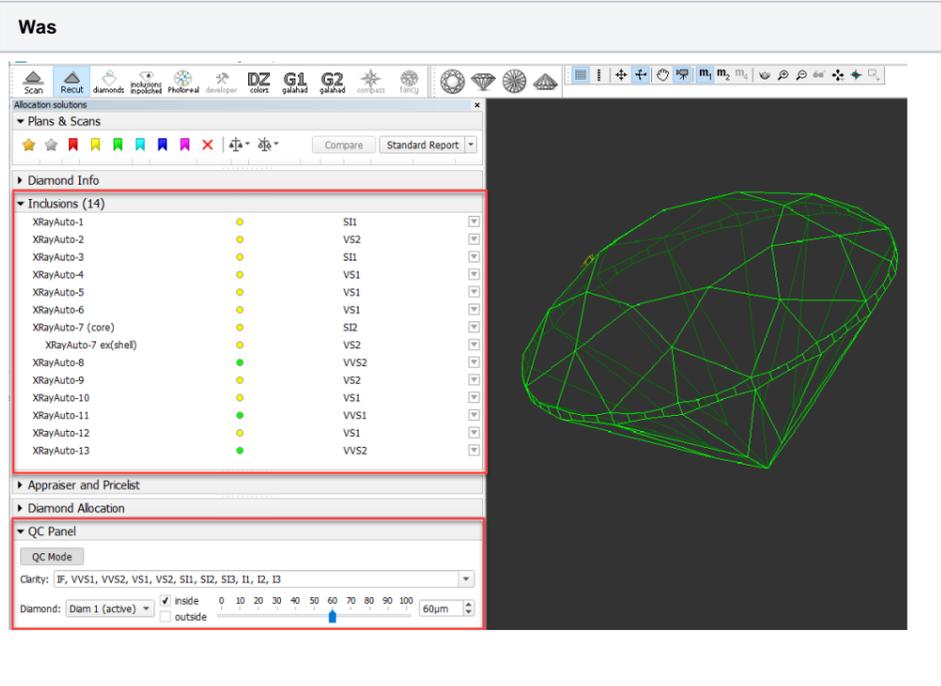
For the **Recut** mode, the order of sections on the left panel was changed:

Was	Now
<p>What was changed:</p> <ul style="list-style-type: none"> • order of sections (Inclusions moved up); • Inclusions panel unified with the QC Filter (for details, see the sub-section below); • default sizes for the sections (you do not need to resize panels as often as previously); • Diamond Info unification and automatic name change (for details, see the sub-section below) 	

Inclusions Panel with QC Filter

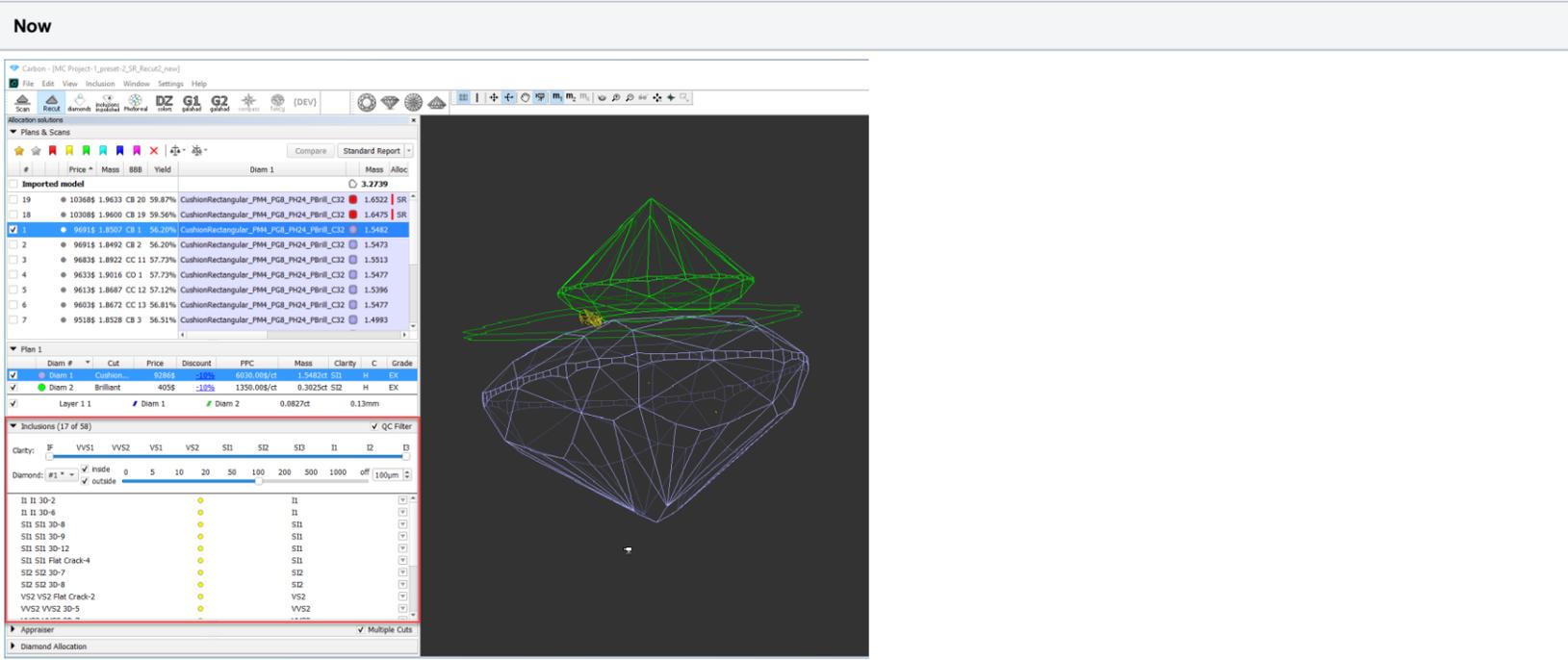
The **Inclusions** panel lists diamond inclusions and allows users to manage them. Previously, the system also included a separate **QC Panel** used for inclusions filtering. To provide a more comfortable way of working with inclusions, these two panels are combined - the QC filter is included in the **Inclusions** panel and, if activated, affects the list of displayed inclusions.

Was



Applying filter in the **QC Panel** affected what was displayed in the Scene, but did not affect the **Inclusions** panel.

Now



Panels are combined. When activating the QC filter, the inclusions are filtered both in the Scene and in the **Inclusions** panel itself which makes it easier to locate and select the required inclusions.

Diamond Info Panel Unification

To avoid duplication of information, the **Diamond Info** panel information was merged into the **Diamonds** panel:

Allocation solutions

Plans & Scans

#	Price	Mass	Diam 1	Mass	Alloc	Clarity	Sym-O	Gr	Cut	Sym	Profile	Diam 2	Mass	Clarity	Sym-O	Gr	Cut	Sym	Profile
Imported model 16.2210																			
28	18252\$	2.3423	Brilliant	2.3423	SR	VS1	+2.53	EX-FR	EX-FR	EX-FR	ModernCut_2019-12-10								
27	23805\$	2.3046	Brilliant	2.3046	VS2	+8.81	EX	EX	EX	EX	ModernCut_2019-12-10								
26	25155\$	2.1515	Brilliant	2.1515	VS1	+9.06	EX	EX	EX	EX	ModernCut_2019-12-10								
25	65127\$	4.8284	Brilliant	3.2514	SR	VS2	+6.93	EX	EX	EX	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.51	EX	EX	EX	ModernCut_2019-12-10
24	74995\$	4.8057	Brilliant	3.2287	SR	VS1	+7.84	EX	EX	EX	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.52	EX	EX	EX	ModernCut_2019-12-10
23	59874\$	4.8517	Brilliant	3.2748	SR	VS2	+5.46	EX-VG	EX	EX-VG	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.51	EX	EX	EX	ModernCut_2019-12-10
22	65280\$	4.8420	Brilliant	3.2651	SR	VS2	+6.71	EX	EX	EX	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.51	EX	EX	EX	ModernCut_2019-12-10
21	38046\$	4.9139	Brilliant	3.3370	SR	VS2	+1.70	EX-Poor	EX-VG	EX-Poor	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.52	EX	EX	EX	ModernCut_2019-12-10
20	65127\$	4.8341	Brilliant	3.2572	SR	VS2	+6.85	EX	EX	EX	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.52	EX	EX	EX	ModernCut_2019-12-10
19	65437\$	4.8460	Brilliant	3.2601	SR	VS2	+6.52	EX	EX	EX	ModernCut_2019-12-10	Brilliant	1.5770	IF	+8.51	EX	EX	EX	ModernCut_2019-12-10

Diamond Info

21

Cutting: Brilliant
Price: 22 644 \$
Discount: -60.00 %
PPC: 6800 \$/ct

Model Mass: 3.3370 ct
Clarity: VS2
DZ Color: H
Grade: EX-Poor

Diamonds

Diam #	Cut	Price	Discount	PPC	Mass	Clarity	C	Grade
1	Brilliant	22644\$	-60%	6800.00\$/ct	3.33ct	VS2	H	EX-Poor
2	Brilliant	15402\$	-10%	9810.00\$/ct	1.57ct	IF	H	EX
Layer 1 1					0.27ct		0.22mm	

Appraiser

Appraisers: GIA Facetware + MyRound
Profiles: MyRound_ModernCut_2019-12-10

Diamond Allocation

Algorithm: 19_SmartRecut (Brilliant, Oval, AnyCut)

Presets: 8_MaxMass
Cut grade: EX
Symmetry grade: EX

Inclusions (359)

Now all the detailed information about the selected scan/solution you can find in a unified detailed information section. The section name dynamically changes to **Scan Name/Solution Nuber** (like "Imported Model", "Plan 1", "Plan 2"):

Single-diamond Solution										Multi-diamond Solution									
	Cutting	Price	Mass	Alloc	Yield	Clarity	DZ	Gr		Price	Mass	BBB	Yield	Diam 1	Mass	Clarity	DZ	Gr	
Imported model 2.2307										Imported model 47.5649									
4	Oval	10249\$	1.5665	SR	69.93%	VS1	H			30	536797\$	15.2349	BB 11	32.02%	Brilliant	13.2353	VS1	H	
5	Oval	9110\$	1.5667	SR	69.93%	VS1	H			31	533853\$	15.1611	BB 12	31.87%	Brilliant	13.2692	VS1	H	
6	Oval	9110\$	1.5669	SR	69.93%	VS1	H			32	533780\$	15.6058	BP 4	32.80%	Brilliant	13.2692	VS1	H	
7	Oval	10249\$	1.5675	SR	69.93%	VS1	H			33	533265\$	15.5298	BP 5	32.65%	Brilliant	13.2692	VS1	H	
8	Oval	10249\$	1.5647	SR	69.93%	VS1	H			34	532163\$	15.3870	BP 6	32.33%	Brilliant	13.2692	VS1	H	
9	Oval	10249\$	1.5660	SR	69.93%	VS1	H			35	532089\$	15.3751	BP 7	32.31%	Brilliant	13.2692	VS1	H	
10	Oval	10249\$	1.5636	SR	69.93%	VS1	H			36	531795\$	15.3338	BP 8	32.23%	Brilliant	13.2692	VS1	H	
Plan 11										Plan 33									
Diam #	Cut	Price	Discount	PPC	Mass	Clarity	C	Gr		Diam #	Cut	Price	Discount	PPC	Mass	Clarity	C	Grade	
11	Oval	10184\$	-10%	6570.00\$/ct	1.5490ct	VS1	H	EX		1	Brilliant	516654\$	-30%	38934.00\$/ct	13.2692ct	VS1	H		
										2	Prinice	16611\$	-30%	7350.00\$/ct	2.2606ct	VVS1	H		
Layer 1 1										Diam 1		Diam 2		0.6765ct	0.30mm				

Applying Facet Types from Sample - Improved

The *apply facet types from sample* functionality introduced in the [previous release](#) have been improved. The major changes are:

- Facet Marking is renamed to Facet Types
- Grades are added to the solution list
- Grades are added to reports

The overview of how to work with the updated facet types apply from sample functionality is presented in the video below:

Video Facet Types - Applying from Sample			
Published:	2021, April 16	Last Updated:	2021, March 29
v.2.1			
Your browser does not support the HTML5 video element			
Video summary:			
<ul style="list-style-type: none"> • The same parameter of a stone can be graded differently depending on how the Facet Types of cutting for this stone are defined. • Therefore, if you control Facet Types, in some cases you control the cut grade. • You can control the Facet Types of the scanned or rebuilt model by using your own model as a sample. • Set the desired Facet Types for your sample, then use this sample during scanning or rebuild and the Facet Types will be automatically transferred from the sample to the created model. 			
Video keywords: cut grade, facet types, sample			
Published in:	Release Notes	2021-07-30 - HP Carbon 1.2.95	
	Documentation	NA	
	Playlists	NA	
	Also	As Separate Page Specification	

Angle between Neighboring Facets

Some changes were made for the [AdjacentFacetsAnglesEveryMin](#) parameter, allowing Smart Recut to set limitations for the angles between neighboring facets.

Adjusted Default Values

To provide better results by default, the initial values for the [AdjacentFacetsAnglesEveryMin](#) parameter were adjusted for the "MyAnyCut" appraiser.

	1.AllNarrow	2.VerticesNa	3.AnglesNar	4.GirdleNar	5.GirdleWide	6.AnglesWic	7.VerticesWi	8.AllWide								
Was	1	-	0,7	-	1	-	0,7	-	0,7	-	0,5	-	0,7	-	0,5	-
Now	3	-	2	-	3	-	2	-	2	-	1	-	2	-	1	-

Adding to MyOval Appraiser

The [AdjacentFacetsAnglesEveryMin](#) parameter previously was available only within the "MyAnyCut" appraiser - now it is also available in the presets of "MyOval" and "MyOvalPerformanceWare" appraisers.

Polish Report Templates

Cushion Reports - Tier Information

For the Cushion reports, the "Tier" information is added:

Was		Now																									
<p>ILLUSTRATED REPORT FOR SQUARE CUSHION</p> <p>Polished Square Cushion 22.12.2020</p> <p>Model: 91 Expert name: N/A Scale weight, ct: 4.84, 4.8438 Corrected mass, ct: 4.824, -26.55 % Sprawl: No Extra Facet Grade / Hat: No</p> <table border="1"> <thead> <tr> <th>Width</th> <th>Length</th> <th>Ratio (L/W)</th> <th>Corner Ratio</th> <th>Diameter Minimum</th> <th>Diameter Maximum</th> </tr> </thead> <tbody> <tr> <td>9.398 mm</td> <td>9.374 mm</td> <td>1.019</td> <td>1.000</td> <td>9.398 mm</td> <td>10.866 mm</td> </tr> </tbody> </table> <p>Total height: 6.343 mm Crown height: 1.489 mm Pavilion height: 4.255 mm Table side: 5.465 mm Culet: 0.000 mm Girdle: 0.648 mm</p> <p>Parameter table with columns: Parameter, Avg, Min, Max, Dev, 1, 2, 3, 4</p> <p>Facets' azimuths, Facets' heights (%), Facets' angles, Girdle facets' angles & MIC, Girdle facets' azimuths & MIC, Both axes symmetry correction</p> <p>Appraiser title: Overall cut quality: Symmetry appraiser title: Overall symmetry quality: Model building info</p> <p>CushionRectangular Poor CushionRectangular Poor</p>		Width	Length	Ratio (L/W)	Corner Ratio	Diameter Minimum	Diameter Maximum	9.398 mm	9.374 mm	1.019	1.000	9.398 mm	10.866 mm	<p>ILLUSTRATED REPORT FOR SQUARE CUSHION</p> <p>Polished Square Cushion 22.12.2020</p> <p>Model: 91 Expert name: N/A Scale weight, ct: 4.84, 4.8438 Corrected mass, ct: 4.824, -26.55 % Sprawl: No Extra Facet Grade / Hat: No</p> <table border="1"> <thead> <tr> <th>Width</th> <th>Length</th> <th>Ratio (L/W)</th> <th>Corner Ratio</th> <th>Diameter Minimum</th> <th>Diameter Maximum</th> </tr> </thead> <tbody> <tr> <td>9.398 mm</td> <td>9.374 mm</td> <td>1.019</td> <td>1.000</td> <td>9.398 mm</td> <td>10.866 mm</td> </tr> </tbody> </table> <p>Total height: 6.343 mm Crown height: 1.489 mm Pavilion height: 4.255 mm Table side: 5.465 mm Culet: 0.000 mm Girdle: 0.648 mm</p> <p>Parameter table with columns: Parameter, Avg, Min, Max, Dev, 1, 2, 3, 4, Cut Sym</p> <p>Facets' azimuths, Facets' heights (%), Facets' angles, Girdle facets' angles & MIC, Girdle facets' azimuths & MIC, Both axes symmetry correction</p> <p>Appraiser title: Overall cut quality: Symmetry appraiser title: Overall symmetry quality: Model building info</p> <p>CushionRectangular Relative Absolute Poor Poor CushionRectangular Relative Absolute Poor Poor</p> <p>Color: Girdle center, Culet center, Table center, MIC center, Girdle center mass</p>		Width	Length	Ratio (L/W)	Corner Ratio	Diameter Minimum	Diameter Maximum	9.398 mm	9.374 mm	1.019	1.000	9.398 mm	10.866 mm
Width	Length	Ratio (L/W)	Corner Ratio	Diameter Minimum	Diameter Maximum																						
9.398 mm	9.374 mm	1.019	1.000	9.398 mm	10.866 mm																						
Width	Length	Ratio (L/W)	Corner Ratio	Diameter Minimum	Diameter Maximum																						
9.398 mm	9.374 mm	1.019	1.000	9.398 mm	10.866 mm																						

The Polish Illustrated HTML, RTF, and Standard Report templates for Cushion and Square Cushion are affected.

Cushion Reports - Grade Information

For the Cushion reports, the grades information is added:

Was		Now	
<p>Placeholder for the 'Was' report content.</p>		<p>Placeholder for the 'Now' report content.</p>	

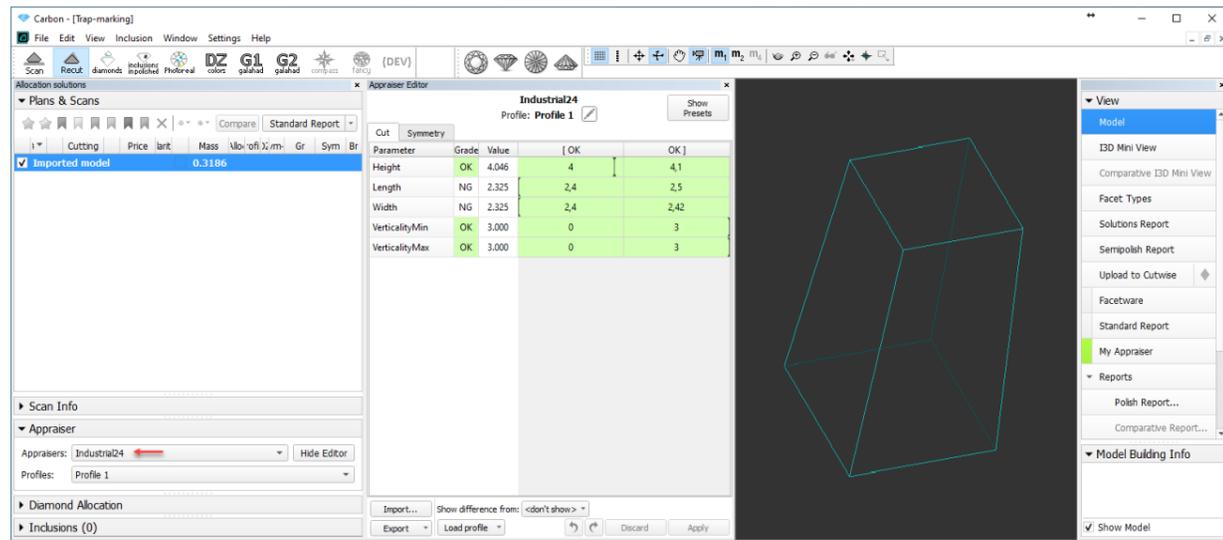
Parameter	Avg	Min	Max	Dev	1	2	3	4	
Crown height, %	14.89	14.89	14.89	0.00	14.89	14.89	N/A	N/A	
Crown Width height, %	14.89	14.89	14.89	0.00	14.89	14.89	--	--	
Crown Length height, %	15.10	15.10	15.10	0.00	15.10	15.10	--	--	
Crm Main Width height, %	14.89	14.89	14.89	0.00	14.89	14.89	--	--	
Crm Main Length height, %	15.10	15.10	15.10	0.00	15.10	15.10	--	--	
Crown Corner height, %	15.04	15.03	15.04	0.01	15.04	15.03	15.04	15.04	
Pavilion height, %	48.17	48.17	48.17	0.00	48.17	48.17	N/A	N/A	
Pavilion Width height, %	48.17	48.17	48.17	0.00	48.17	48.17	--	--	
Pavilion Length height, %	47.63	47.63	47.63	0.00	47.63	47.63	--	--	
Pav Main Width height, %	25.43	25.43	25.43	0.00	25.43	25.43	--	--	
Pav Main Length height, %	23.26	23.26	23.26	0.00	23.26	23.26	--	--	
Pavilion Corner height, %	47.49	47.48	47.49	0.00	47.49	47.48	47.49	47.49	
Pavilion 2 Main height, %	30.12	30.12	30.12	0.00	30.12	30.12	30.12	30.12	
Table: Side, %	62.61	61.18	64.05	2.87	61.18	64.05	--	--	
Table: Corner w.r.t. Corner, %	65.39	65.39	65.39	0.00	65.39	65.39	--	--	
Table: Corner w.r.t. Width, %	78.34	78.34	78.34	0.00	78.34	78.34	--	--	
Diameter: Corner, %	119.79	119.79	119.79	0.00	119.79	119.79	--	--	
Crown Star Length, %:	50.89	50.89	50.89	0.00	--	--	--	--	
Crown Star Width, %	51.13	51.13	51.13	0.00	--	--	--	--	
Girdle thickness, %	4.54	4.54	4.54	0.00	--	--	--	--	
Culet, %	0.00	0.00	0.00	0.00	--	--	--	--	
Crown angle, °	37.47	37.47	37.47	0.00	37.47	37.47	--	--	
Crown Main angle, °	37.47	37.47	37.47	0.00	37.47	37.47	N/A	N/A	
Crm Main Width angle, °	37.47	37.47	37.47	0.00	37.47	37.47	--	--	
Crm Main Length angle, °	38.39	38.39	38.39	0.00	38.39	38.39	--	--	
Crown Corner angle, °	35.91	35.91	35.91	0.00	35.91	35.91	35.91	35.91	
Crm Star Width angle, °	25.23	25.23	25.23	0.00	25.23	25.23	25.23	25.23	
Crm Star Length angle, °	25.64	25.64	25.64	0.00	25.64	25.64	25.64	25.64	
Pavilion angle, °	32.56	32.46	32.65	0.19	32.46	32.59	32.65	32.53	
Pav Main Width angle, °	57.90	57.69	58.11	0.42	57.69	58.11	--	--	
Pav Main Length angle, °	55.69	55.58	55.80	0.22	55.58	55.80	--	--	
Pavilion Corner angle, °	53.87	53.65	54.08	0.43	53.65	53.93	54.08	53.80	
Pavilion 2 Main angle, °	32.56	32.46	32.65	0.19	32.46	32.59	32.65	32.53	
Girdle thickness, %	Type	Avg	Min	Max	Dev	1	2	3	4
G. th. Width	red	4.54	4.54	4.54	0.00	4.54	4.54	--	--
G. th. Length	red	4.87	4.87	4.87	0.00	4.87	4.87	--	--
G. th. Width	red	5.08	5.07	5.08	0.01	5.07	5.08	5.08	5.07
G. th. Width	green	3.59	3.58	3.61	0.03	3.61	3.58	3.58	3.61
G. th. Length	red	3.94	3.94	3.95	0.01	3.95	3.95	3.94	3.94
G. th. Corner width	green	4.41	4.40	4.43	0.03	4.43	4.40	4.40	4.40
G. th. Corner length	green	4.40	4.39	4.41	0.02	4.41	4.40	4.39	4.40
G. th. Width	yellow	7.14	7.12	7.15	0.03	7.14	7.15	7.15	7.12
G. th. Length	yellow	7.51	7.49	7.53	0.04	7.50	7.53	7.52	7.49

Parameter	Avg	Min	Max	Dev	1	2	3	4	Cut	Sym	
Girdle Ratio (L/W)	1.083	--	--	--	--	--	--	--	EX	--	
Total height, %	67.45	--	--	--	--	--	--	--	EX	--	
Crown height, %	13.73	13.73	13.73	0.00	13.73	13.73	N/A	N/A	EX	--	
Crown height Width, %	13.73	13.73	13.73	0.00	13.73	13.73	--	--	--	--	
Crown height Length, %	13.34	13.34	13.34	0.00	13.34	13.34	--	--	--	--	
Crown height Corner, %	13.59	13.58	13.59	0.00	13.59	13.59	13.59	13.58	--	--	
Crm Main Width height, %	13.73	13.73	13.73	0.00	13.73	13.73	--	--	--	--	
Crm Main Length height, %	13.34	13.34	13.34	0.00	13.34	13.34	--	--	--	--	
Pavilion height, %	49.96	49.96	49.96	0.00	49.96	49.96	N/A	N/A	EX	--	
Pavilion height Width, %	49.96	49.96	49.96	0.00	49.96	49.96	--	--	--	--	
Pavilion height Length, %	50.27	50.27	50.27	0.00	50.27	50.27	--	--	--	--	
Pavilion height Corner, %	49.59	49.59	49.59	0.00	49.59	49.59	49.59	49.59	--	--	
Pav 1 Main Width height, %	28.51	28.51	28.51	0.00	28.51	28.51	--	--	--	--	
Pav 1 Main Length height, %	25.61	25.61	25.62	0.00	25.61	25.62	--	--	--	--	
Pavilion 2 Main height, %	30.63	30.63	30.63	0.00	30.63	30.63	30.63	30.63	--	--	
Table: Side, %	65.12	63.00	67.24	4.24	63.00	67.24	--	--	EX	--	
Table: Corn. w.r.t. Corn., %	69.51	69.51	69.51	0.00	69.51	69.51	--	--	--	--	
Table: Corn. w.r.t. Width, %	83.88	83.88	83.88	0.00	83.88	83.88	--	--	--	--	
Diameter: Corner, %	120.68	120.68	120.68	0.00	120.68	120.68	--	--	--	--	
Crown Star Length, %:	50.75	50.75	50.76	0.01	--	--	--	--	--	--	
Crown Star Width, %	49.32	49.32	49.33	0.00	--	--	--	--	--	--	
Girdle thickness, %	3.76	3.76	3.76	0.00	--	--	--	--	EX	--	
Culet, %	0.00	0.00	0.00	0.00	--	--	--	--	--	--	
Crown angle, °	36.57	36.57	36.57	0.00	36.57	36.57	--	--	--	--	
Crown Main angle, °	36.57	36.57	36.57	0.00	36.57	36.57	N/A	N/A	--	--	
Crm Main Width angle, °	36.57	36.57	36.57	0.00	36.57	36.57	--	--	EX	EX	
Crm Main Length angle, °	36.96	36.96	36.96	0.00	36.96	36.96	--	--	EX	EX	
Crown Corner angle, °	36.54	36.54	36.54	0.00	36.54	36.54	36.54	36.54	--	--	
Crm Star Width angle, °	24.35	24.35	24.35	0.00	24.35	24.35	24.35	24.35	--	--	
Crm Star Length angle, °	23.96	23.96	23.96	0.00	23.96	23.96	23.96	23.96	--	--	
Pavilion angle, °	33.40	33.40	33.40	0.00	33.40	33.40	33.40	33.40	--	--	
Pav 1 Main Width angle, °	60.08	60.08	60.08	0.00	60.08	60.08	--	--	EX	EX	
Pav 1 Main Length angle, °	58.18	58.18	58.18	0.00	58.18	58.18	--	--	EX	EX	
Pavilion 1 Corner angle, °	54.05	54.05	54.05	0.00	54.05	54.05	54.05	54.05	--	--	
Pavilion 2 Main angle, °	33.40	33.40	33.40	0.00	33.40	33.40	33.40	33.40	EX	EX	
Girdle thickness, %	Type	Avg	Min	Max	Dev	1	2	3	4	Cut	Sym
G. th. Width	red	3.76	3.76	3.76	0.00	3.76	3.76	--	--	--	--
G. th. Length	red	3.84	3.84	3.84	0.00	3.84	3.84	--	--	--	--
G. th. Width	red	4.28	4.27	4.28	0.00	4.27	4.27	4.28	4.28	--	--
G. th. Width	green	2.67	2.67	2.67	0.00	2.67	2.67	2.67	2.67	--	--
G. th. Length	green	2.98	2.98	2.98	0.00	2.98	2.98	2.98	2.98	--	--
G. th. Corner width	green	2.63	2.63	2.63	0.00	2.63	2.63	2.63	2.63	--	--
G. th. Corner length	green	2.86	2.86	2.86	0.00	2.86	2.86	2.86	2.86	--	--
G. th. Width	yellow	6.08	6.08	6.08	0.00	6.08	6.08	6.08	6.08	--	--
G. th. Length	yellow	6.50	6.50	6.50	0.00	6.50	6.50	6.50	6.50	--	--

The Polish Illustrated HTML and Standard Report for Cushion and Square Cushion are affected.

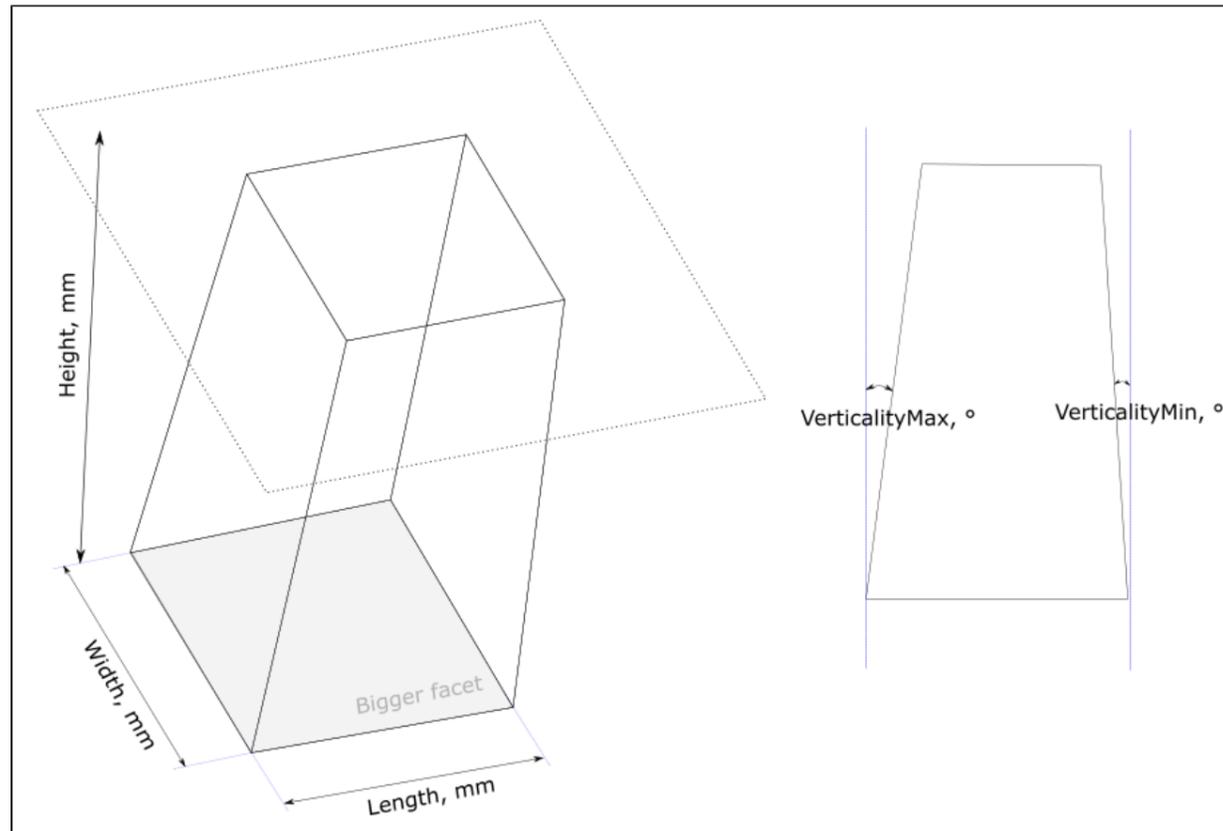
Appraiser for Trapezoid-Like Objects

You can now quickly estimate the trapezoid-like objects of the "Industrial24" standard. To do this, use the new "Industrial24" appraiser.



The "Industrial24" standard is aimed to produce:

- Width-Length of bigger facet close to 2.4 mm
- Height close to 4 mm
- Max and Min incline angles no more than 3°



Currently, the following grades are available for important parameters:

- OK - parameter is within boundaries
- NG ("NEGATIVE") - outside the boundaries

Smart Recut - Running for Both Diamonds in Multi-Diamond Solutions

Previously, when using the [13. Cascade-2M](#) algorithm with the + **Smart Recut** option, you obtained a *smart recut* solution only for the larger of two diamonds - the smaller diamond was a *recut solution*. Now you automatically obtain the smart recut solutions for both diamonds.





Smart Recut will be launched only for two best (by price) Recut solutions and only for "gold star" SR presets. Thus, there will be 2 solutions with SR. For details about gold stars, refer to the **"Gold Stars" Configuring** section of this release notes.

New Parameter - Roundness at 11.25°

On large diamonds, the difference in radius is especially noticeable within a small segment. To put this difference under the additional control, the new **Roundness** parameter is added - now it is additionally estimated at any selected 11.25° sector (previously the smallest segment was 15°).



Note

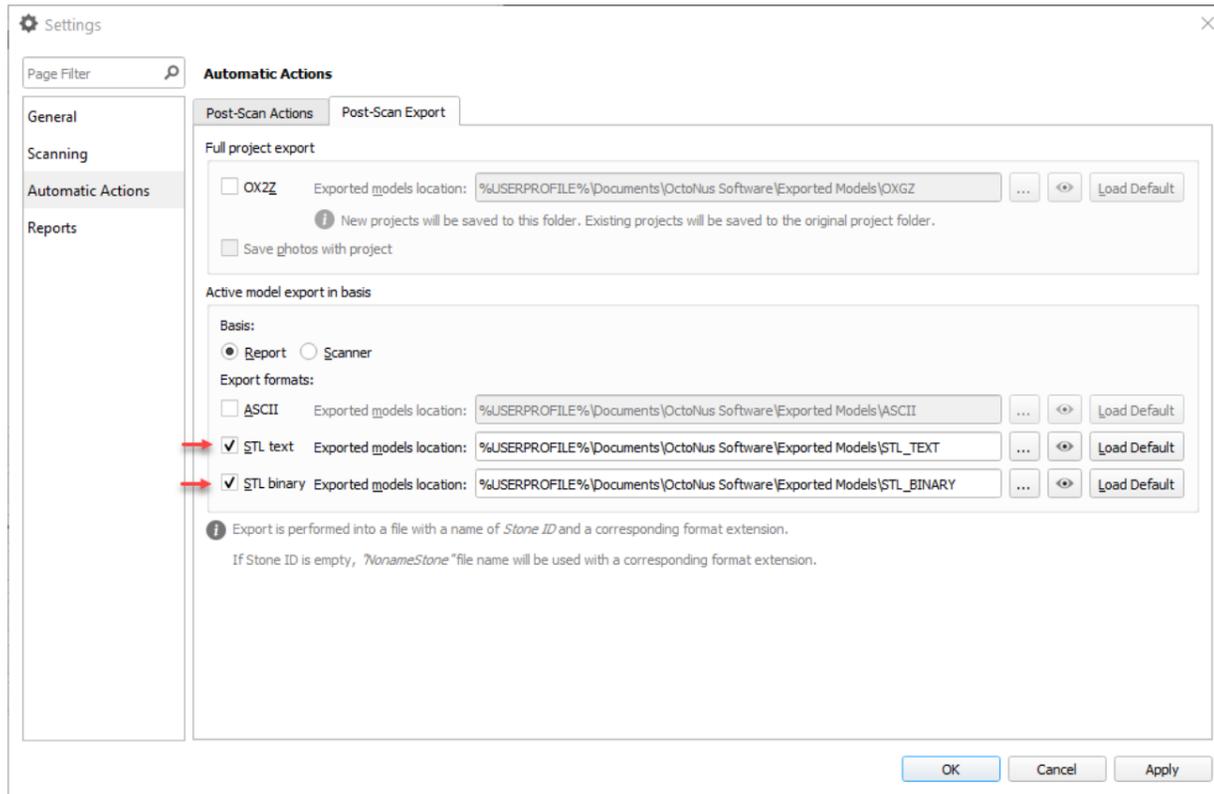
Unlike the other **Roundness** parameters measured in %(diameter), this parameter is measured in millimeters (mm).

Appraiser	GIA Facetware + MyRound
Tab	Symmetry
Parameter Name	2RRoundnessMM11_25
Units	mm

Automatic Actions - Post-Scan STL Export

Now you can configure the system so that after the stone scan the obtained model will be automatically exported to STL format:

1. Select **Settings > General Settings**.
2. In the **Automatic Actions** section, click the **Post-Scan Export** tab.
3. Enable **STL text**, **STL binary**, or both, and set save locations for them.
4. Click **OK**.



DZ Color Estimate

Solution Sorting

Previously, after running the **DZ Color Estimate** feature, in the estimation result window, the solutions were sorted in the same way as they were sorted in the solution list before running estimation. Because of that, this could be difficult to find solutions with *the best prices*: even if before color estimation your solutions were sorted by price, these prices changed after estimation, and keeping the previous ordering did not reflect this change.

Now after the color estimation, in the estimation result window, the solutions are re-sorted to put the best prices at the top of the list.

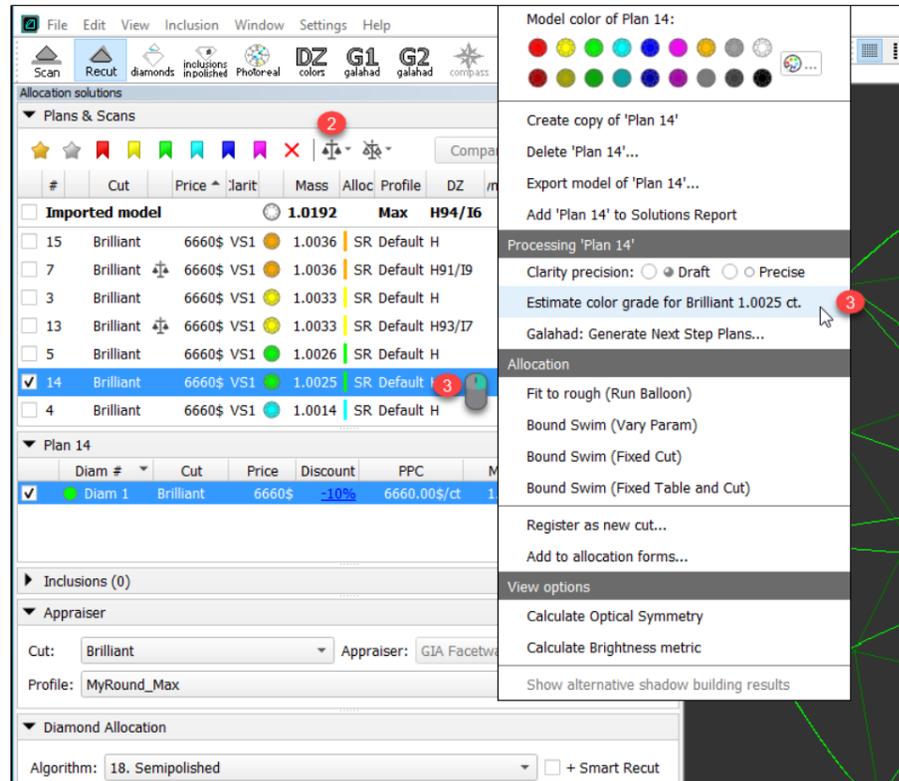
Before Estimation										After Estimation, WAS										After Estimation, NOW																					
<input checked="" type="checkbox"/>	40	16215\$	2.9089	KK 1	47.53%	Kp57	2	2.1402	VS1 H	Kp57	2	0.7687	VS1 H	D-Z Lite color estimation										Solution No.	Cutting	Weight	Clarity	Color	PPC	Value	Total	Color (GIA)									
<input type="checkbox"/>	41	16110\$	2.8515	KK 2	46.55%	Kp57	2	2.1402	VS1 H	Kp57	2	0.7113	VS1 H	Not licensed										51.1	Kp57 A2	2.60 ct	VS1	H53/I47	\$9500	\$24700	\$25276	D E F G H I J K L M N O-P Q-R S-T U-V W-X Y-Z									
<input type="checkbox"/>	42	16071\$	2.8074	KK 3	45.73%	Kp57	2	2.1402	VS1 H	Kp57	2	0.6672	VS1 H	Stop estimation										51.2	Kp57 A2	0.36 ct	VS1	F87/E13	\$1600	\$576		H 53% / I 47% (Fast)									
<input type="checkbox"/>	43	16071\$	2.7845	KK 4	45.40%	Kp57	2	2.1409	VS1 H	Kp57	2	0.6437	VS1 H	Fast										37.1	I65M	2.50 ct	VS1	H52/I48	\$9500	\$23750	\$23750	F 87% / E 13% (Fast)									
<input type="checkbox"/>	44	16067\$	2.8265	KK 5	46.06%	Kp57	2	2.1438	VS1 H	Kp57	2	0.6828	VS1 H	G 83% / H 17% (Fast)										40.1	Kp57 A2	2.14 ct	VS1	H93/I7	\$9500	\$20330	\$23256	H 52% / I 48% (Fast)									
<input type="checkbox"/>	45	16031\$	2.8025	KK 6	45.73%	Kp57	2	2.1402	VS1 H	Kp57	2	0.6622	VS1 H	G 83% / H 17% (Fast)										40.2	Kp57 A2	0.77 ct	VS1	G70/F30	\$3800	\$2926		H 93% / I 7% (Fast)									
<input type="checkbox"/>	46	15811\$	2.7837	KK 7	45.24%	Kp57	2	2.1062	VS1 H	Kp57	2	0.6774	VS1 H	G 72% / H 28% (Fast)										41.1	Kp57 A2	2.14 ct	VS1	H98/I2	\$9500	\$20330	\$23028	G 70% / F 30% (Fast)									
<input type="checkbox"/>	47	15555\$	2.8093	KK 8	45.73%	Kp57	2	2.0564	VS1 H	Kp57	2	0.7528	VS1 H	I 79% / J 21% (Fast)										41.2	Kp57 A2	0.71 ct	VS1	G59/F41	\$3800	\$2698		H 98% / I 2% (Fast)									
<input type="checkbox"/>	48	15409\$	2.6971	KK 9	43.93%	Kp57	2	2.0564	VS1 H	Kp57	2	0.6406	VS1 H	G 85% / H 15% (Fast)										41.2	Kp57 A2	0.71 ct	VS1	G59/F41	\$3800	\$2698		G 59% / F 41% (Fast)									
<input type="checkbox"/>	49	15387\$	2.6759	KK 10	43.61%	Kp57	2	2.0630	VS1 H	Kp57	2	0.6128	VS1 H	I 78% / J 22% (Fast)										54.1	Kp57 A2	1.52 ct	VS1	G79/H21	\$8500	\$12920	\$22511	G 79% / H 21% (Fast)									
<input type="checkbox"/>	50	15199\$	2.9678	KK 11	48.34%	Kp57	2	2.6018	VS1 H	Kp57	2	0.3661	VS1 H	G 81% / H 19% (Fast)										54.2	Kp57 A2	1.30 ct	VS1	G93/H7	\$7378	\$9591		G 93% / H 7% (Fast)									
<input type="checkbox"/>	51	15199\$	2.9653	KK 12	48.34%	Kp57	2	2.6012	VS1 H	Kp57	2	0.3641	VS1 H	I 97% / H 3% (Fast)										47.1	Kp57 A2	2.05 ct	VS1	H90/I10	\$9500	\$19475	\$22325	H 90% / I 10% (Fast)									
<input type="checkbox"/>	52	14162\$	2.8835	KK 13	47.04%	Kp57	2	1.3038	VS1 H	Kp57	2	1.5797	VS1 H	G 92% / H 8% (Fast)										47.2	Kp57 A2	0.75 ct	VS1	G94/F6	\$3800	\$2850		G 94% / F 6% (Fast)									
<input type="checkbox"/>	53	14086\$	2.8671	KK 14	46.71%	Kp57	2	1.5974	VS1 H	Kp57	2	1.2697	VS1 H	I 63% / H 37% (Fast)										42.1	Kp57 A2	2.14 ct	VS1	H98/I2	\$9500	\$20330	\$22046	H 98% / I 2% (Fast)									
<input type="checkbox"/>	54	13840\$	2.8269	KK 15	46.06%	Kp57	2	1.5196	VS1 H	Kp57	2	1.3073	VS1 H	G 84% / H 16% (Fast)																											
<input type="checkbox"/>	55	13757\$	2.9222	KK 16	47.69%	Kp57	2	1.6301	VS1 H	Kp57	2	1.2921	VS1 H	I 50% / H 41% (Fast)																											
<input type="checkbox"/>	56	13739\$	2.8633	KK 17	46.71%	Kp57	2	1.5430	VS1 H	Kp57	2	1.3203	VS1 H	G 90% / H 5% (Fast)																											
<input type="checkbox"/>	57	12618\$	2.7446	KK 18	44.75%	Kp57	2	1.2235	VS1 H	Kp57	2	1.5211	VS1 H	I 60% / H 34% (Fast)																											
Sorted by price.										The prices have changed, but this is not reflected.										The prices have changed, and this is reflected - solutions are sorted by the new price.																					

Running Estimation Only for Selected Solutions

Now you are able to obtain the DZ color estimation only for the selected solutions.

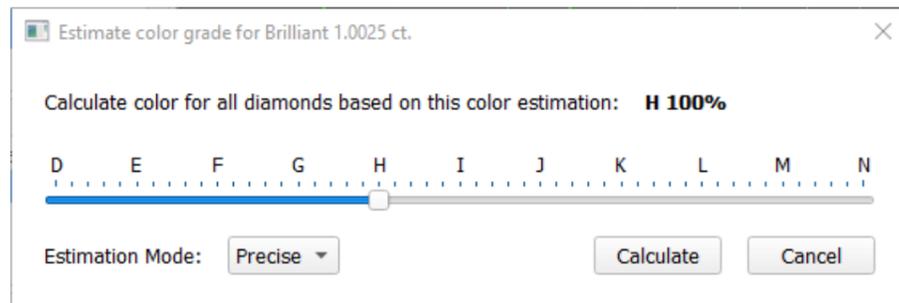
To do that:

1. In the solution list, select the checkboxes to the right of the solutions you want to get an estimation for.
2. On the toolbar of the **Plans & Scans** section, click the  **Add solution(s) to Solutions Report** button. The solutions are marked with .
3. In the solution list, right-click the solutions you want to start estimation from and then select **Estimate color grade for ...**

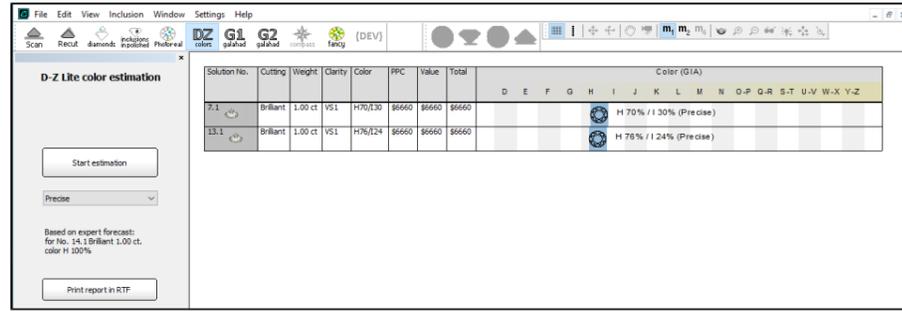


The estimate dialog is displayed.

4. In the estimate dialog, set color estimation for your starting solution and the **Estimation Mode**.



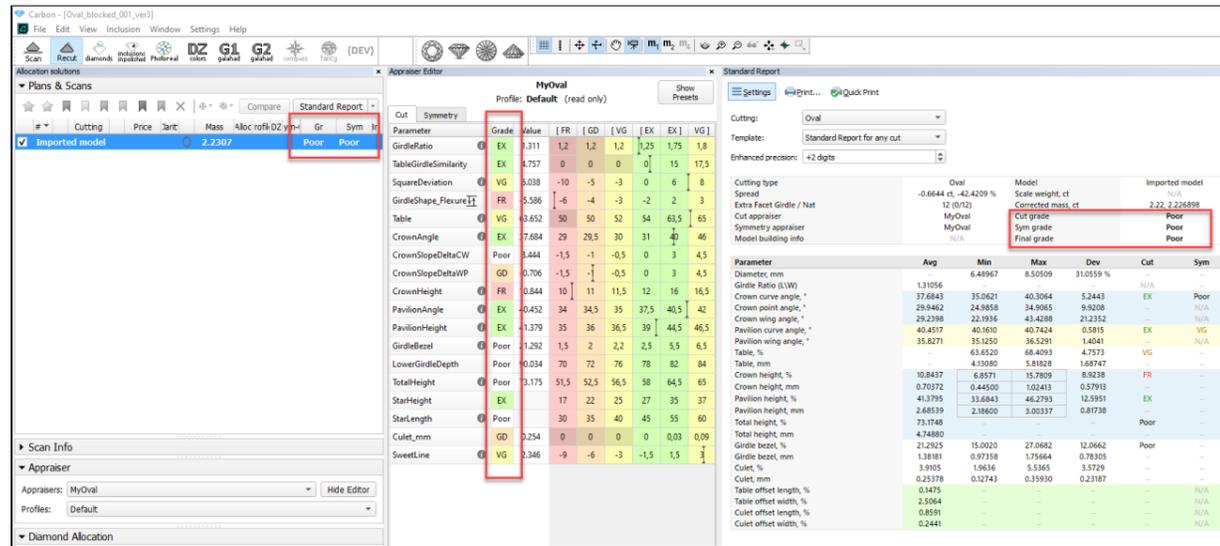
5. Click **Calculate**. The system switches to the **DZ colors** mode and displays the progress. As soon as the calculation for the selected solutions is finished, their results are displayed in the table.



Grades for Scans

In many cases, it is important to quickly *estimate scans*. To provide this possibility, the **grades** information is presented in:

- Solution list (was before)
- The **Appraiser editor**
- Reports (Standard and Polish)



Report Actualization

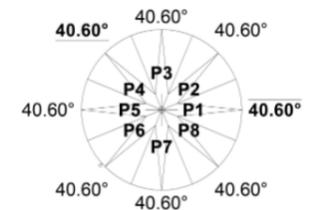
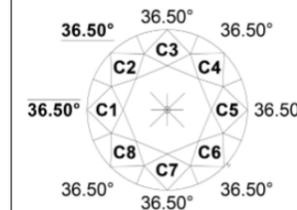
To be in correspondence with the modern diamond processing, some reports were updated.

Label Report

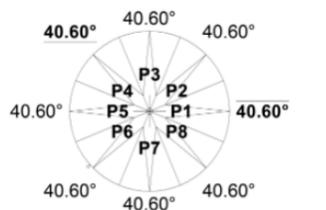
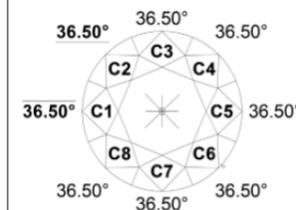
In **Label Report**, for a more informative representation of cuts (parameters and grades), the templates were changed. Some parameters were added, some were removed. Below are examples of Cushion, Brilliant and AnyCut Label Reports:

	Was	Now
Brilliant		

Stone ID: Demo1ct		Brilliant		07.05.2021 15:46		HPO11+		
Parameter	Avg	Min	Max	Dev	Cut	Sym		
Diameter, mm	6.301	6.296	6.304	0.12 %	-	EX		
Pav. angle, °	40.60	40.60	40.60	0.00	EX	EX		
Crown angle, °	36.50	36.50	36.50	0.00	EX	EX		
Girdle bezel, %	0.221 mm 3.50 %	3.50	3.50	0.00	EX	EX		
Table, %	3.467 mm 55.02 %	55.02	55.02	0.00	EX	EX		
Total height, %	3.972 mm 63.03 %	-	-	-	-	-		
Crown height, %	1.049 mm 16.66 %	16.66	16.66	0.00	-	EX		
Pav. height, %	2.701 mm 42.87 %	42.87	42.87	0.00	-	EX		
Star, %	50.00	-	-	-	-	EX		
Pav. half, %	79.00	79.00	79.00	0.00	EX	EX		
G-C off., %	0.00 ± 0.12	G-T off., %	0.00 ± 0.10	T-C off., %	0.00 ± 0.13			
Table Processing parameters								
Table allowance before	0.039 mm		incline		0.32 °			
Reference Line parameters								
Marking for Crown, mm	C8 before		1.095		C8 after		1.049	
Marking for Pav., mm	P8 before		1.281		P8 after		1.270	
Total weight, ct	0.97						EX	EX

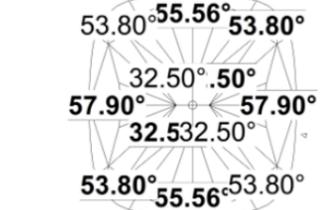
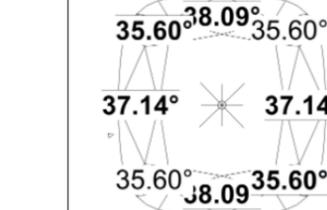



Stone ID: Demo1ct		Brilliant		07.05.2021 15:56		HPO11+	
Parameter	Avg	Min	Max	Dev	Cut	Sym	
Width	6.296 mm	Lenght 6.304 mm		Total weight	0.97 ct		
Diameter, mm	6.301 mm	6.296	6.304	0.12 %	-	EX	
Crown angle, °	36.50	36.50	36.50	0.00	EX	EX	
Pavilion angle, °	40.60	40.60	40.60	0.00	EX	EX	
Table, %	3.467 mm 55.02 %	55.02	55.02	0.00	EX	EX	
Crown height, %	1.049 mm 16.66 %	16.66	16.66	0.00	-	EX	
Pavilion height, %	2.701 mm 42.87 %	42.87	42.87	0.00	-	EX	
Girdle bezel, %	0.221 mm 3.50 %	3.50	3.50	0.00	EX	EX	
Total height, %	3.972 mm 63.03 %	-	-	-	-	-	
Star length, %	50.00	50.00	50.00	0.00	EX	EX	
Lower girdle length, %	79.00	79.00	79.00	0.00	EX	EX	
Table offset, %	0.000 mm 0.00 ± 0.10 %	-	-	-	-	EX	
Culet offset, %	0.000 mm 0.00 ± 0.12 %	-	-	-	-	EX	
Table-culet offset, %	0.000 mm 0.00 ± 0.13 %	-	-	-	-	EX	
Table Processing parameters							
Table allowance before	0.039 mm		incline		0.32 °		
Reference Line parameters							
Marking for Crown	C8 before		1.095 mm		C8 after		1.049 mm
Marking for Pavilion	P8 before		1.281 mm		P8 after		1.270 mm

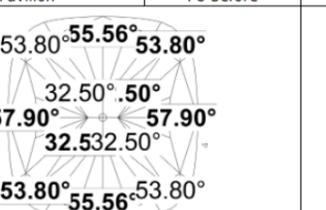
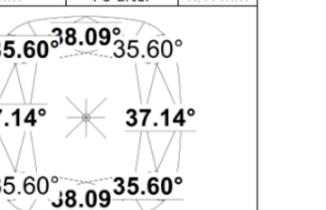



Cushion

Stone ID: cushion_diamond_60025 with Solutions		Cushion		07.05.2021 15:23		HPO11+		
Parameter	Avg	Min	Max	Dev	Cut	Sym		
Diameter, mm	7.685	6.790	8.156	20.11 %	-	N/A		
Pav. angle, °	32.50	32.50	32.50	0.00	N/A	N/A		
Crown angle, °	37.14	37.14	37.14	0.00	N/A	N/A		
Girdle bezel, %	0.245 mm 3.60 %	3.60	3.60	0.00	VG	N/A		
Table, %	4.370 mm 62.28 %	60.71	63.84	3.14	N/A	N/A		
Total height, %	4.527 mm 66.66 %	-	-	-	-	-		
Crown height, %	1.011 mm 14.89 %	14.89	14.89	0.00	-	N/A		
Pav. height, %	3.271 mm 48.17 %	48.17	48.17	0.00	-	N/A		
Star, %	50.95	-	-	-	-	N/A		
Pav. half, %	N/A	N/A	N/A	N/A	N/A	N/A		
G-C off., %	0.00 ± 0.12	G-T off., %	0.00 ± 0.09	T-C off., %	0.00 ± 0.13			
Table Processing parameters								
Table allowance before	0.053 mm		incline		0.46 °			
Reference Line parameters								
Marking for Crown, mm	C8 before		N/A		C8 after		N/A	
Marking for Pav., mm	P8 before		N/A		P8 after		N/A	
Total weight, ct	1.87						Poor	Poor

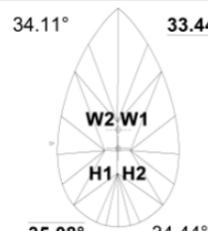
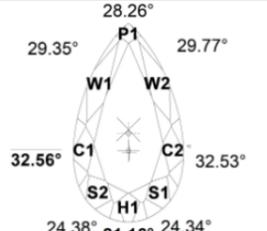



Stone ID: cushion_diamond_60025 with Solutions		Cushion		07.05.2021 16:00		HPO11+	
Parameter	Avg	Min	Max	Dev	Cut	Sym	
Width	6.790 mm	Lenght 7.233 mm		Total weight	1.87 ct		
Girdle Ratio	1.065	-	-	-	-	EX	
Crown Main Width angle, °	37.14	37.14	37.14	0.00	EX	EX	
Crown Main Length angle, °	38.09	38.09	38.09	0.00	EX	EX	
Pavilion 1 Main Width angle, °	57.90	57.90	57.90	0.00	EX	EX	
Pavilion 1 Main Length angle, °	55.56	55.56	55.56	0.00	EX	EX	
Pavilion 2 Main angle, °	32.50	32.50	32.50	0.00	EX	EX	
Table Widthwise, %	4.122 mm 60.71 %	-	-	-	-	EX	
Table Lengthwise, %	4.618 mm 63.84 %	-	-	-	-	EX	
Crown height, %	1.011 mm 14.89 %	14.89	14.89	0.00	EX	EX	
Pavilion height, %	3.271 mm 48.17 %	48.17	48.17	0.00	EX	EX	
Girdle bezel, %	0.245 mm 3.60 %	3.60	3.60	0.00	EX	EX	
Total height, %	4.527 mm 66.66 %	-	-	-	-	EX	
Star, %	50.95	-	-	-	-	EX	
Pavilion half, %	N/A	N/A	N/A	N/A	N/A	EX	
Table offset Length, %	0.00	EX	Width, %	0.00	-	EX	
Culet offset Length, %	0.00	EX	Width, %	0.00	-	EX	
Table Processing parameters							
Table allowance before	0.053 mm		incline		0.46 °		
Reference Line parameters							
Marking for Crown	C8 before		N/A mm		C8 after		N/A mm
Marking for Pavilion	P8 before		N/A mm		P8 after		N/A mm

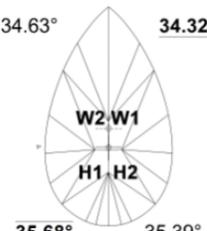
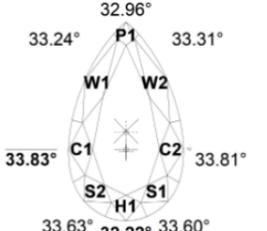



AnyCut

Stone ID: Pear-semipolish-a		Pear	07.05.2021 15:33	HPO11+		
Parameter	Avg	Min	Max	Dev	Cut	Sym
Diameter, mm	6.709	4.778	8.601	80.00 %	-	N/A
Pav. angle, °	34.76	34.44	35.08	0.64	N/A	N/A
Crown angle, °	32.55	32.53	32.56	0.03	N/A	N/A
Girdle bezel, %	0.304 mm 6.36 %	4.45	7.45	3.00	EX	N/A
Table, %	4.734 mm 68.89 %	62.34	75.44	13.10	N/A	N/A
Total height, %	2.556 mm 53.50 %	-	-	-	-	-
Crown height, %	0.523 mm 10.94 %	9.71	12.03	2.31	-	N/A
Pav. height, %	1.702 mm 36.22 %	35.15	37.02	1.87	-	N/A
Star, %	51.20	-	-	-	-	N/A
Pav. half, %	76.33	70.43	79.87	9.44	N/A	N/A
G-C off., %	17.52 ± 0.14	G-T off., %	3.66 ± 0.12	T-C off., %	21.17 ± 0.15	
Table Processing parameters						
Table allowance before	0.000 mm		incline		0.00 °	
Reference Line parameters						
Marking for Crown, mm	C8 before	0.575		C8 after	0.575	
Marking for Pav., mm	P8 before	0.799		P8 after	0.799	
Total weight, ct	0.65			Poor	GD	

Stone ID: Pear-semipolish-a		Pear	07.05.2021 16:32	HPO11+		
Parameter	Avg	Min	Max	Dev	Cut	Sym
Width	4.551 mm	Length		7.838 mm	Total weight 0.57 ct	
Girdle Ratio	1.722	-	-	-	EX	-
Crown angle, °	33.82	33.81	33.83	0.02	N/A	N/A
Pavilion angle, °	35.54	35.39	35.68	0.29	N/A	N/A
Table, %	4.284 mm 66.82 %	58.01	75.62	17.61	EX	-
Crown height, %	0.631 mm 13.86 %	12.88	15.06	2.18	EX	-
Pavilion height, %	1.657 mm 37.01 %	35.95	37.81	1.87	EX	-
Girdle bezel, %	0.249 mm 5.46 %	4.08	6.66	2.58	EX	-
Total height, %	2.570 mm 56.47 %	-	-	-	EX	-
Star, %	50.62	-	-	-	-	-
Pavilion half, %	76.32	70.43	79.86	9.43	-	-
Table offset Length, %	0.65	EX	Width, %	0.00	-	EX
Culet offset Length, %	9.72	EX	Width, %	0.30	-	EX
					EX	EX
Table Processing parameters						
Table allowance before	0.000 mm		incline		0.00 °	
Reference Line parameters						
Marking for Crown	C8 before	0.685 mm		C8 after	0.685 mm	
Marking for Pavilion	P8 before	0.859 mm		P8 after	0.859 mm	

Removed, Added

Standard Report for Rounded Fancies

The Standard Report was updated for rounded fancies:

1. **Ratio (L/W) - Cut grade** is added.
2. **Table offset length, Table offset width** parameters, and their **Sym** grades are added.
3. **Culet offset length, Culet offset width** parameters, and their **Sym** grades are added.

Allocation solutions

Plans & Scans

Shadow scan 0.9080 +5.86 Poor Poor Poor Default

1 Pear_F 1129\$ 0.5755 62.78% VS1 H +7.72 EX EX EX Pear_F

2 Pear_F 572\$ 0.6582 71.59% VS1 H +7.62 Poor Poor FR Pear_F

Standard Report

Settings Print... Quick Print

Cutting type	Pear	Model	1
Spread	0.123 ct, 17.607 %	Scale weight, ct	N/A
Extra Facet Girdle / Nat	No	Corrected mass, ct	0.57, 0.57548
Cut appraiser	MyAnyCut	Cut grade	Relative EX
Symmetry appraiser	MyAnyCut	Sym grade	Relative EX
Model building info	N/A	Final grade	Relative EX

Parameter	Avg	Min	Max	Dev	Cut	Sym
Ratio (L/W)	1.7222	-	-	-	EX	1
Diameter, mm	-	4.5510	7.8379	3.2869	N/A	-
Crown Curve angle, °	33.819	33.810	33.828	0.018	N/A	N/A
Crown Head angle, °	32.216	32.216	32.216	0.000	-	-
Crown Point angle, °	32.959	32.959	32.959	0.000	-	N/A
Crown Wing angle, °	33.276	33.243	33.310	0.068	-	N/A
Pavilion Head angle, °	35.536	35.393	35.680	0.287	-	-
Pavilion Wing angle, °	34.472	34.317	34.627	0.310	-	N/A
Table Widthwise, %	2.6400 mm 58.011 %	-	-	-	EX	-
Table Lengthwise, %	5.9270 mm 75.620 %	-	-	-	-	-
Culet, %	0.0000 mm 0.000 %	0.000	0.000	0.000	N/A	N/A
Girdle Bezel, %	0.2487 mm 5.464 %	4.084	6.664	2.580	EX	N/A
Girdle Bone, %	0.2563 mm 5.633 %	3.956	9.419	5.463	-	N/A
Girdle Valley, %	0.1814 mm 3.986 %	2.443	6.451	4.008	N/A	N/A
Girdle height Valley local, %	0.713	0.000	1.403	1.403	-	N/A
Facet twist, °	1.347	1.346	1.348	0.002	-	N/A
Star length, %	50.616	44.331	58.585	14.255	-	N/A
Star angle, °	24.183	24.163	24.203	0.040	-	N/A
Upper girdle angle, °	40.261	37.693	45.174	7.481	-	N/A
Lower girdle angle, °	36.348	30.949	38.785	7.836	-	N/A
Crown height, %	0.6309 mm 13.863 %	12.882	15.060	2.177	EX	N/A
Pavilion height, %	1.6845 mm 37.014 %	35.950	37.815	1.865	EX	N/A
Lower girdle length, %	76.315	70.428	79.855	9.428	N/A	N/A
Total height, %	2.5697 mm 56.466 %	-	-	-	EX	-
Table offset, %	0.0510 mm 1.120 %	-	-	-	-	N/A
Culet offset, %	0.7623 mm 16.751 %	-	-	-	-	N/A
Table-culet offset, %	0.8133 mm 17.871 %	-	-	-	-	N/A
Culet offset length-wise, %	15.229	-	-	-	-	N/A
Culet offset width-wise, %	0.293	-	-	-	-	N/A
Table offset length, %	0.650	-	-	-	-	EX
Table offset width, %	0.003	-	-	-	-	EX
Culet offset length, %	9.725	-	-	-	-	EX
Culet offset width, %	0.300	-	-	-	-	EX

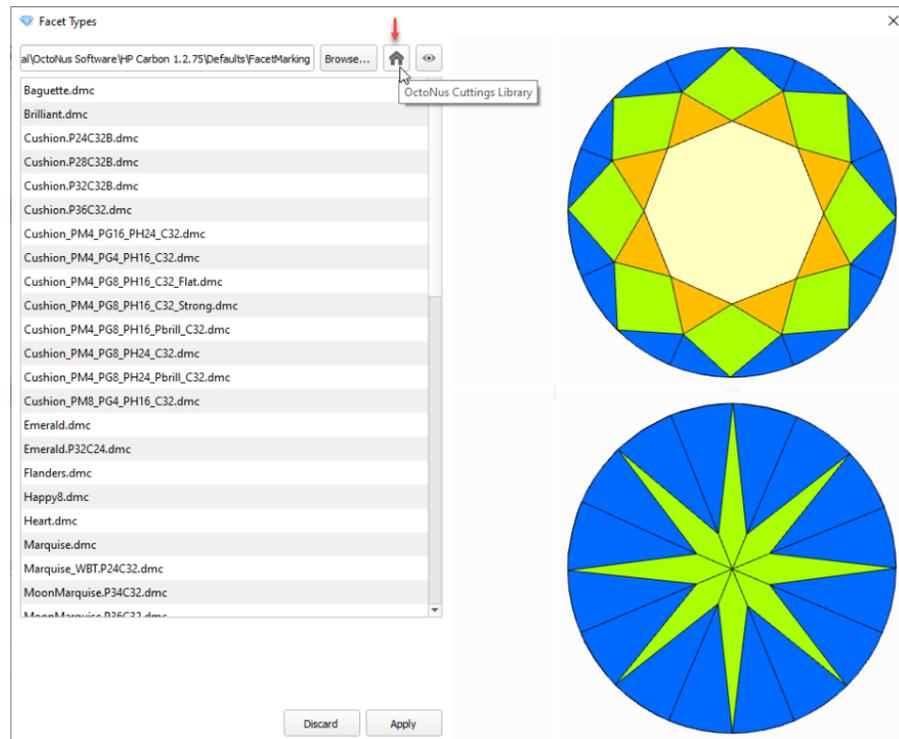
Facet Types - Octonus Cuts Library



Currently, the system includes over 50 cuts you can use as samples to get facet types from. Now the **OctoNus Cuts Library** button is added to quickly access them:

1. Click **Facet Types**. The **Facet Types** dialog is displayed.
2. In the **Facet Types** dialog, click **From Sample...**
3. In this was not done before, click  **OctoNus Cuts Library**

Samples from the library folder are added to the list.



4. If you want to access the library folder, click **Browse**.

G1 Galahad - Allowance Editing

For the **G1 Galahad** mode, it is now possible to edit the **Allowance** defined during stage generation. The **Allowance** can be edited both for stages and for separate steps.

To edit allowance for a step:

1. Right-click the step.
2. From the context menu select **Edit Step**. The edit panel is displayed.
3. In the edit panel, set the new **Depth**.
4. Click **Apply**. The new allowance depth is set for the step.

The screenshot shows the main interface of a diamond faceting software. At the top, there are various tool icons and a menu bar. Below that, a table lists different models and their properties:

#	Cutting	Price	Mass	Yield	Carat	Color	Clarity	Depth
Imported model			1.0192					
Compass/GPS Actual cut			1.0192					
7	Brilliant	6660\$	1.0036	98.11%	VS1	H		

Below the table, there are options like "Generate next faceting stage" and "Draw Faceting Sections". A tree view shows the stages: 1. Table, 2. Crown Main, and 3. Girdle. Step 4, #12, is highlighted with a red circle 1. A context menu is open over it, with "Edit Step" selected (red circle 2). To the right, a "Next Step Plans" window is open for "Edit Step '4. #12'", showing "Allowance" settings: Slope: 0.00° and Depth: 11.0µm (red circle 3). "Cancel" and "Apply" buttons are at the bottom (red circle 4). At the bottom of the main window, target values are shown:

Target slope 37.39 = 36.90 + 0.49°
 Target azimuth -178.51 = -179.35 + 0.85°
 Target depth remaining 37.0 µm
 Distance to reference line 75.1 µm

If you have a modified allowance for the step, you can **Discard** this difference and revert this step to the stage standard value.

This is a close-up of the "Edit Step '2. #12'" dialog box. It shows the "Allowance" section with "Slope" set to 0.00° and "Depth" set to 4.7µm. At the bottom, there are three buttons: "Discard", "Cancel", and "Apply". A red arrow points to the "Discard" button.

Allowance can also be edited for the stage. Note that if some steps of the stage have their own changed allowance, applying a new value for the stage will reset all steps, the corresponding warning is displayed:

Next Step Plans

Edit Stage "2. Crown Main"

Allowance

Slope: 0.00°

Depth: 10.0µm

Some Steps have own parameters. Apply will reset all Steps!

Cancel Apply

Target slope 37.39 = 36.90 + 0.49°

Target azimuth -178.51 = -179.35 + 0.85°

Target depth remaining 37.0 µm

Distance to reference line 75.1 µm

Ximea Firmware Automatic Update

Ximea MC023MG-SY-UB cameras firmware update is now included in the HP Carbon installation procedure - on the system installation, the firmware will be updated automatically.

⚠ After the firmware update, the camera will not work with the old software - to work with this old software, the camera firmware downgrade will be required. Refer to your HP Carbon distributor for help with this downgrade.

Fixed Problems and Improvements

The following fixes for the known problems and improvements are implemented:

- The periodic low scanning speed caused by the sync cable detection problem is fixed.
- Facet types transfer to Smart Normalize solutions was broken - now it is fixed.
- For Smart Recut, the [Fix Girdle option](#) is improved to work with non-convex models.
- For **Scan** mode, in the **Cut & Method** section, now the last used cut stays selected after the system restart (previously "Brilliant" was always selected after restart).
- Previously, in **Polish Report**, the cut type was based only on parameter values - now it additionally takes into account the *Facet Types* specified for the model.
- Standard and Polish Illustrated HTML reports when working with composite appraisers (CushionRectangular, CushionSquare, MyAnyCut) now show grades only for the selected component: "Absolute", "Relative" or both of them.

Absolute+Relative

Cutting type	Square Cushion	Model	20
Spread	-1.09 ct, -28.79 %	Scale weight, ct	N/A
Extra Facet Girdle / Nat	No	Corrected mass, ct	4.87, 4.8738
Cut appraiser	CushionSquare	Cut grade	VG Relative VG Absolute EX
Symmetry appraiser	CushionSquare	Sym grade	EX Relative EX Absolute EX
Model building info	N/A	Final grade	VG Relative VG Absolute EX

Parameter	Avg	Min	Max	Dev	1	2	3	4	Cut	Sym
Pavilion 2 Main height, %	2.681 mm	28.61 %	28.61	28.61	0.00	28.61	28.61	28.61	28.61	-
Table: Side, %	5.784 mm	61.10 %	60.72	61.48	0.76	60.72	61.48	-	VG	final
Table: Corner w.r.t. Corner, %	63.51	63.51	63.51	0.00	63.51	63.51	-	-	-	-

Absolute											
Cutting type	Square Cushion	Model		20							
Spread	-1.09 ct, -28.79 %	Scale weight, ct		N/A							
Extra Facet Girdle / Nat	No	Corrected mass, ct		4.87, 4.8738							
Cut appraiser	CushionSquare	Cut grade		Absolute	EX						
Symmetry appraiser	CushionSquare	Sym grade		Absolute	EX						
Model building info	N/A	Final grade		Absolute	EX						
Parameter	Avg	Min	Max	Dev	1	2	3	4	Cut	Sym	
Pavilion 2 Main height, %	2.681 mm	28.61 %	28.61	28.61	0.00	28.61	28.61	28.61	28.61	-	-
Table: Side, %	5.784 mm	61.10 %	60.72	61.48	0.76	60.72	61.48	-	-	EX	abs
Table: Corner w.r.t. Corner, %	63.51	63.51	63.51	0.00	63.51	63.51	-	-	-	-	-

Relative											
Cutting type	Square Cushion	Model		20							
Spread	-1.09 ct, -28.79 %	Scale weight, ct		N/A							
Extra Facet Girdle / Nat	No	Corrected mass, ct		4.87, 4.8738							
Cut appraiser	CushionSquare	Cut grade		Relative	VG						
Symmetry appraiser	CushionSquare	Sym grade		Relative	EX						
Model building info	N/A	Final grade		Relative	VG						
Parameter	Avg	Min	Max	Dev	1	2	3	4	Cut	Sym	
Pavilion 2 Main height, %	2.681 mm	28.61 %	28.61	28.61	0.00	28.61	28.61	28.61	28.61	-	-
Table: Side, %	5.784 mm	61.10 %	60.72	61.48	0.76	60.72	61.48	-	-	VG	rel
Table: Corner w.r.t. Corner, %	63.51	63.51	63.51	0.00	63.51	63.51	-	-	-	-	-

- Appraiser profiles "Show difference from" function did not work - now it is fixed.
- The Smart Normalize and Smart Normalize Lite algorithms are improved to work better with short edges in the culet area.
- For the "GIA Facetware + MyRound" appraiser, the StarLength EX boundaries were updated to [42,5 - 57,5] for the following profiles:
 - "MyRound_ModernCut_2021-04-29"
 - "MyRound_ModernCut_2021-04-29_SweetLine"
- Incorrect estimation for Pear cut caused by the **Culet offset length** parameter wrong grade is fixed.