Algorithms, Appraisers and Profiles

On this page:

General Workflow

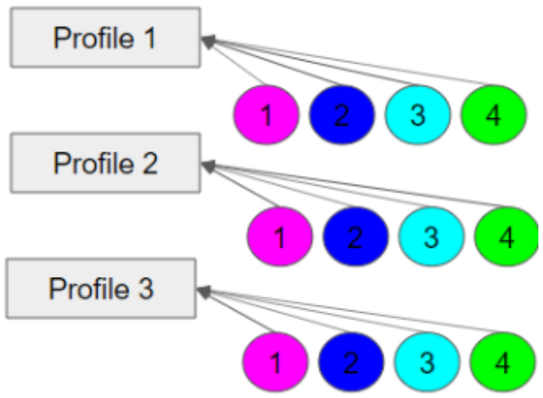
In the system, the algorithms produce solutions of the selected shape (cutting). In most cases, the selected algorithm interacts with some appraiser to produce the solutions in correspondence with the grades boundaries set by the appraiser. Each appraiser has its specific list of cutting parameters. Also, each appraiser has a set of profiles. Each profile consists of cutting parameter intervals and presets values. Cutting parameter intervals define where an algorithm should aim the solution, and presets allow producing a spectrum of solutions within profile intervals - all within one run of an algorithm with this profile.

Configuring Profiles

Each profile now consists of:

1. **cutting parameter intervals** - define where an algorithm should aim the solution ("numbers" for grades: EX, VG, GD, FR)
2. **presets values** - allow producing a spectrum of solutions within profile intervals - all within one run of an algorithm with this profile

Each profile contains its own set of presets. Thus, if you change some preset, the new value affects only the profile it belongs to - this allows precise configuration of profiles without interference with the other profiles.



There are two types of profiles:

- **read-only** - built-in profiles finely tuned to produce specific resulting solutions with this appraiser; you cannot change these profiles' cutting parameter intervals or presets values.
- **editable** - pre-defined number (usually 5) of profiles that you can edit (change both cutting parameter intervals and presets values). **Note**: you cannot add, delete or rename editable profiles.

The system allows copying both cutting parameter intervals (**Cut** and **Symmetry** tabs) and presets values into your own editable profile. There you can further tune them. More explanations about how profiles and presets are used now and examples are presented in the video below:

Video | Customizing Profiles - Copying and Modifying Cut Parameter Intervals and Presets				
Published:	2019, September 13	**Last Updated:**	2019, October 22	**v.2.0**
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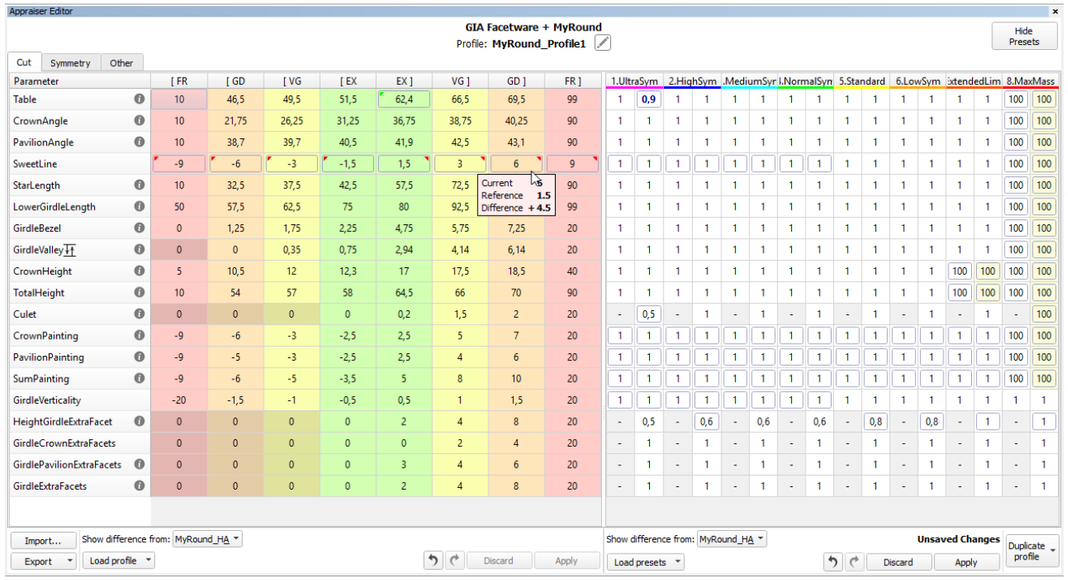
Video summary: • In HP Carbon, each profile consists of the cut parameter intervals and presets values. • The system allows copying both cut parameter intervals and presets values into your own editable profile. • There you can further tune them.				
Video keywords: profile, cut parameter intervals, presets, presets values				
Published in:	**Release Notes**	2019-09-13 - HPOxygen Server 5.2.22		
	Documentation	Algorithms, Appraisers and Profiles		
	Playlists	All Videos | YouTube: HP Carbon		

	Also	As Separate Page | On YouTube | Specification

Available Operations

When configuring profiles, you can:

- Duplicate existing profile into yours in one click (all tabs, all parameters, both intervals, and preset values)
- Quickly compare your profile with any other - both intervals and preset values
- Load intervals for all parameters (all tabs!) - in one click
- Load intervals only, presets only, or both intervals and presets - in one click
- Load presets values - for all presets or only for one preset



Available operations:

- You can only modify editable profiles, so first go to one of them under your appraiser.
- Click **Show Presets**, if necessary.
- To compare your profile to another one, in **Intervals** and/or **Presets** sections, select value in **Show difference from**. Mouse over the highlighted differences to see details.
- To select parameter click it. Use the context menu to select all.
- To deselect parameter, click it again. Use the context menu to deselect all.
- For selected parameters, use the context menu to load **Intervals from**, **Presets from** or **Intervals and Presets from**.
- Unsaved changed values are highlighted with bold. **Unsaved changes** notification is displayed.
- To save changes, click **Apply**. Applying saves on all tabs. Applying intervals also saves presets, but not vise versa.
- To load intervals for all parameters (all tabs), in the **Intervals** section, use **Load Profile**.
- To load preset values for all parameters (all tabs), in the **Presets** section, use **Load Presets**. Use **All presets** or select the preset to load.
- To load an entire profile (all parameters and preset values on all tabs), use **Duplicate Profile**. Changes are automatically applied immediately.
- You can **Discard** unsaved changes. Discarding erases changes on all tabs, for intervals and presets separately.
- You can at any moment step-by-step **Undo** or **Redo** your changes. Works both for saved and unsaved.
- You can copy and paste values, using CTRL-C, CTRL-V or the context menu.
- You can rename your editable profiles.

Specific Presets Cases

Commonly, the preset is the additional limitation on top of the cutting parameter interval. Thus:

- if you specify a preset value less than "1" (like "0.5", "0,25",) you narrow the boundaries set by cutting parameter intervals
- if you specify a preset value less than "1" (like "1.5", "1,25",) you widen the boundaries;
- if you specify "1", boundaries are not changed and taken from interval without modification

Cases:

1. When the parameter has no intervals specified, but has values in the presets. Then presets contain direct value for this parameter.
2. Parameter does not have the left boundaries (means the left boundary is "0"). Then cutting parameter interval is multiplied by preset value.
3. Parameter has both left and right boundaries. Then the following formula is used

   b_mid = b_min * 0.5 + b_max * 0.5;
   real_border_min = b_mid - (b_mid - b_min) * presets_min;
   real_border_max = b_mid + (b_max - b_mid) * presets_max.

Where:

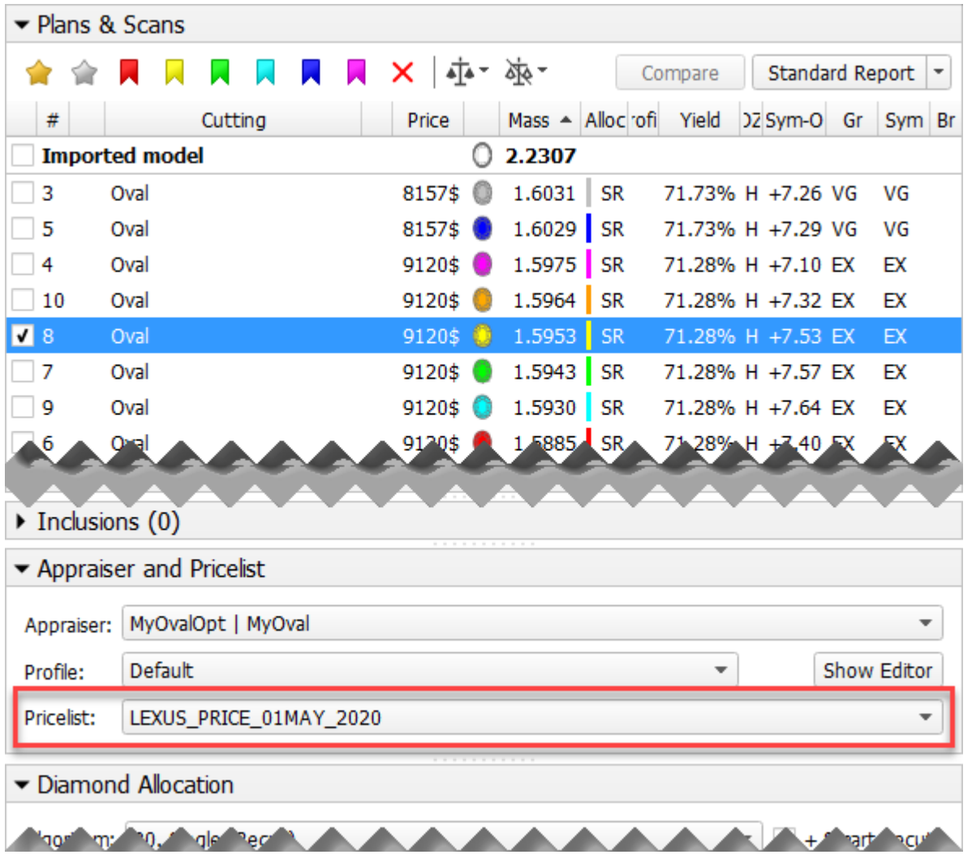
- b_min - the left boundary of the interval for a Grade;
- b_max - the right boundary of the interval for a Grade;
- presets_min = left value of a preset;
- presets_max = right value of a preset.

There are also specific cases of preset usage:

- SmartNormalize - this algorithm does not use any appraiser but has its own set of presets that are used directly;
- SmartRecut - presets of this algorithm are especially actively used and important for the final result

Pricelist

The **Pricelist** is used during allocation to calculate the **Price** of each solution. The current pricelist name is "LEXUS_PRICE_01MAY_2020".



Presets Rename and Color Legend Change in 5.2.22

As different system versions may be in use, it is useful to know that starting from version 5.2.22 the color legend and names of some presets have been changed.

Here are the changes spread between profiles of most appraisers:

New version

1.UltraSym		2.HighSym		3.MediumSym		4.NormalSym		5.Standard		6.LowSym		'.ExtendedLimit		8.MaxMass	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	100	100	100	100
1	1	1	1	1	1	1	1	1	1	1	1	100	100	100	100
-	0,5	-	1	-	1	-	1	-	1	-	1	-	1	-	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-	0,5	-	0,6	-	0,6	-	0,6	-	0,8	-	0,8	-	1	-	1
-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1

Previous versions

1. UltraSymmetry		2. HighOpticalSymmetry		3. MediumOpticalSymmetry		4. NormalOpticalSymmetry		5. Standard		6. ExtendedLimits		7. LowOpticalSymmetry		8. MaxMass	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	100	100	100	100
1	1	1	1	1	1	1	1	1	1	1	1	100	100	100	100
-	0,5	-	1	-	1	-	1	-	1	-	1	-	1	-	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-	0,5	-	0,6	-	0,6	-	0,6	-	0,8	-	0,8	-	1	-	1
-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1

Here are the changes related to the presets used by the SmartNormalize algorithm:

New version

Cut | Symmetry | Other

Parameter	1.HighSym	2.MediumSym	3.LowSym	4.NoSym
TimeLimit	2	2	2	2
SquareLimit	5	5	5	5
DistanceLimit1	50	50	50	50
DistanceLimit2	100	100	100	100
SymmetryCoeff	100	10	1	0
EquableGirdle	20	20	20	20

Previous versions

Cut | Symmetry | Other

Parameter	1. Small	2. Medium	3. Large	4. ExtraLarge
TimeLimit	2	2	2	2
SquareLimit	5	5	5	5
DistanceLimit1	50	50	50	50
DistanceLimit2	100	100	100	100
SymmetryCoeff	0	1	10	100
EquableRundist	20	20	20	20
2nd	1	1	1	1
KeepData	0	0	0	0

Related Pages

- Smart Recut, search page for the "preset" information.
- My Appraiser, see the "Profiles" section