2017-07-05 - HPOxygen Server 3.22.41

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- Interface Scanning
- Recut
- Bugfixes

Reports

1. Table Edge Junctions are now calculated for all cutting types. Corresponding bookmarks were implemented and added to report templates:



- TABLE_EDGE_JUNCTION_PC_DEV
- TABLE_EDGE_JUNCTION_PC_1..8
- TABLE_EDGE_MM_MIN
- TABLE EDGE MM MAX
- TABLE_EDGE_MM_AVG
- TABLE_EDGE_MM_DEV
- TABLE_EDGE_MM_1..8
- TABLE_EDGE_PC_MIN
 TABLE_EDGE_PC_MAX
- TABLE_EDGE_PC_AVG

- TABLE_EDGE_PC_DEV
- TABLE_EDGE_PC_1..8
- MODEL_TABLE_EDGE_MM_MIN
 MODEL_TABLE_EDGE_MM_MAX
- MODEL_TABLE_EDGE_MM_AVG
- MODEL_TABLE_EDGE_MM_DEV
 MODEL_TABLE_EDGE_MM_1..8
- MODEL_TABLE_EDGE_PC_MIN
- MODEL_TABLE_EDGE_PC_MAX
 MODEL_TABLE_EDGE_PC_AVG
- MODEL_TABLE_EDGE_PC_DEV
- MODEL_TABLE_EDGE_PC_1.8
 2. Fixed an outstanding issue that caused randomly missing images in RTF Polish reports, most notably in Full reports. All images should now be successfully generated every time, given a correct and valid template.
- 3. Completely re-worked the Comparative report model matching algorithms for better all-round results on all cuttings.
- 4. Improved matching of Culet, Cavity, Knife, Girdle facets in Comparative report for non-trivial cases.
- 5. GIA Rounded parameter values are added to the Standard Report for RBC. Available with GIA Facetware appraiser.

Cutting type		Brilliant		Model		1			
Spread		-0.21 ct, -5.4	4 %	Scale weigh	it, ct				
Extra Facet Girdle / Nat		No		Corrected n	nass, ct 4.09, 4.0966				
Cut appraiser	G	A Facetwar	e.Mfg	Cut grade			EX		
Symmetry appraiser	G	IA Facetwar	e.Mfg	Sym grade			EX		
Model building info				Final grade			EX		
Parameter	A	/g	GIA Rounded	Min	Max	Dev	Cut	Sym	
Diameter, mm	10.1	170	-	10.148	10.191	0.43 %	-	EX	
Table, %	5.809 mm	57.12 %	57	57.03	57.21	0.18	EX	EX	
Crown angle, °	35.	69	35.5	35.65	35.74	0.08	EX	EX	
Pavilion angle, °	40.	84	40.8	40.66	41.06	0.40	EX	EX	
Star length, %	54.	91	55	54.91	54.91	0.00	EX	EX	
Lower girdle length, %	76.	99	75	76.98	77.00	0.02	EX	EX	
Girdle bezel, %	0.402 mm	3.95 %	4.0	3.95	3.96	0.01	EX	EX	
Girdle bone, %	0.419 mm	4.12 %	-	4.12	4.13	0.01			
Girdle valley, %	0.234 mm	2.30 %	-	2.27	2.33	0.06			
Girdle valley minimum, %	2.2	27	STK	-			EX		
Girdle valley maximum, %	2.3	33	STK	-			EX		
Culet, %	0.000 mm	0.00 %	NON	0.00	0.00	0.00	EX		
Crown painting, °	0.2	23	0.2		0.45	0.45	EX		
Pavilion painting, °	0.2	23	0.2		0.45	0.45	EX		
Sum painting, °	0.4	45	0.4	-			EX		
Crown height, %	1.569 mm	15.43 %	15.5	15.42	15.43	0.00		EX	
Pavilion height, %	4.399 mm	43.25 %	43.5	43.25	43.26	0.00		EX	
Total height, %	6.369 mm	62.63 %	62.6	-					
Table offset, %	0.000 mm	0.00 %	-					EX	
Culet offset, %	0.031 mm	0.30 %						EX	
Table-culet offset, %	0.031 mm	0.30 %		-				EX	
Star angle, °	23.	37	23.4	23.37	23.37	0.00		EX	
Linner girdle angle °	42	99	42.9	42.93	43.04	0.12		FX	

6. Added mm values of most important parameters to Standard Report. % values are still available in the same column.

andard Report									
🗮 Settings 🛛 🚔 Print 📎	Quick Print								
Cutting type		Brilliant		Model			1		
Spread		-0.21 ct, -5.44 %			t, ct				
Extra Facet Girdle / Nat		No		Corrected n	nass, ct	4.09, 4.0966			
Cut appraiser	(GIA Facetwa	re.Mfg	Cut grade			EX		
Symmetry appraiser	(GIA Facetwa	re.Mfg	Sym grade			EX		
Model building info				Final grade			EX		
Parameter	A	vg	GIA Rounded	Min	Max	Dev	Cut	Sym	
Diameter, mm	10.	170		10.148	10.191	0.43 %		EX	
Table, %	5.809 mm	57.12 %	57	57.03	57.21	0.18	EX	EX	
Crown angle, °	35	.69	35.5	35.65	35.74	0.08	EX	EX	
Pavilion angle, °	40	.84	40.8	40.66	41.06	0.40	EX	EX	
Star length, %	54	.91	55	54.91	54.91	0.00	EX	EX	
Lower girdle length, %	76	.99	75	76.98	77.00	0.02	EX	EX	
Girdle bezel, %	0.402 mm	3.95 %	4.0	3.95	3.96	0.01	EX	EX	
Girdle bone, %	0.419 mm	4.12 %	_	4.12	4.13	0.01	-	-	
Girdle valley, %	0.234 mm	2.30 %	_	2.27	2.33	0.06	-	-	
Girdle valley minimum, %	2.	27	STK	-	-	-	EX	-	
Girdle valley maximum, %	2.	33	STK	-	-	-	EX	-	
Culet, %	0.000 mm	0.00 %	NON	0.00	0.00	0.00	EX	-	
Crown painting, °	0.	23	0.2		0.45	0.45	EX		
Pavilion painting, °	0.	23	0.2		0.45	0.45	EX		
Sum painting, °	0.	45	0.4				EX		
Crown height, %	1.569 mm	15.43 %	15.5	15.42	15.43	0.00		EX	
Pavilion height, %	4.399 mm	43.25 %	43.5	43.25	43.26	0.00		EX	
Total height, %	6.369 mm	62.63 %	62.6						
Table offset, %	0.000 mm	0.00 %						EX	
Culet offset, %	0.031 mm	0.30 %						EX	
Table-culet offset, %	0.031 mm	0.30 %						EX	
Star angle, °	23	.37	23.4	23.37	23.37	0.00		EX	
Linner girdle angle °	42	99	42.9	42.93	43.04	0.12		FX	

7. Crown Height and Pavilion Height interactive values are now available in Standard Report for RBC and AnyCut:



When the parameter is selected, you will see a dot located on the upper or lower girdle line at the point where the corresponding measurement was made.

You can then align the selected stone element to the scanner door by pressing the "Rotate to door: Selected Facet" button.

Clicking on a selected parameter once more will deselect it.

- 8. Precision setting in Standard Report now affects all relevant parameters.
- 9. Improved Star facets detection on rounded fancies.
- 10. Improved facet type detection on RBC.

Smart Recut

1. It is now possible to run SmartRecut algorithm on Copy cuttings.

2. Oval Sweetline parameter is added to the SmartRecut Oval presets.

Presently the optimal line is defined as the line with negative slope 1:3 passing through the point with CrownAngle = 36.5 and PavilionAngle = 38.5.



SweetLine is currently not revealed in MyAppraiser and can be managed only via presets. There default value of Oval SweetLine in presets is 3.5°. This value determines zone/stripe by PavilionAngle, upper and lower edges of this zone/stripe pass in 3.5° by PavilionAngle from sweetline as shown on graphics above. i.e. zone is stripe with "width" of 7 degrees by PavilionAngle. Green frame "EX" shows current intervals of MyOval appraiser of EX group for Crown Angle (from 31° to 40°) and Pavilion angle (from 37.5° to 40.5°) which are set by operator in AppraiserEditor panel.

P																												
Appraiser E	Editor																											,
MyOval Profile: Default (read only) Presets													H Pre	iide esets														
Cut	Symmetry	Ot	her																									
Paramet	ter		Grade	a Value	[FR	[GD	[VG	[EX	EX]	VG]	GD]	FR]	UltraS	ymmet	hOpti	icalSym	JmOp	ticalSy	nalOpt	ticalSyr	5. Sta	ndard	Extend	ledLim	vOptic	alSym	8. Ma	xMass
GirdleRa	atio	0	EX	1.339	1,2	1,2	1,2	25	1,75	1,8	1,8	1,8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SquareD	eviation	0	EX	0	-10	-5	-3	-1,5	3	6	9	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1,5	1,5
Table		0	EX	62.772	50	50	52	54	63,5	65	66	66	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CrownA	ngle	0	EX	35.736	29	29,5	30	31	40	46	50	51	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CrownH	leight	0	ΕX	13.436	10	- 11	11,5	12	16	16,5	17	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pavilion	Angle	0	EX	40.023	34	34,5	35	37,5	40,5	42	42,5	43	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pavilion	Height	0	EX	43.332	35	36	36,5	39	44 5	46,5	47,5	48,5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
GirdleBe	zel	0	EX	4.281	1,5	2	2,2	2,5	5,5	6,5	8	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LowerGi	irdleLength	0	EX	78.352	70	72	76	78	82	84	86	90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TotalHei	ight	0	EX	61.05	51,5	52,5	56,5	58	64,5	65	65,5	66,5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Culet		0	EX	0.361	0	0	0	0	d 5	1,5	2,5	3,5	-	0,5	-	1	-	1	-	1	-	1	-	1	-	1	+	1,35
StarHeig	ghtRatio												25	35	25	35	25	35	25	35	25	35	25	35	25	35	25	35
SweetLin	ne												-	3,5	-	3,5	-	3,5	-	3,5	-	3,5	-	3,5	-	3,5	-	3,5

Sweetline value can be decreased to smaller value to get final solutions with CrownAngle/PavilionAngle more close to Optimal Line. For example, if operator decrease sweetline value to 1.75° (zone is shown on picture below) then final solutions will contain CrownAngle and PavilionAngle values in the limits of zone Sweetline 1.75°, more close to optimal line than default value 3.5°. This "tightening" results in better optical performance but could results in worse weight of plan diamond also. Operator can adjust sweetline value to reach optimal ratio "optical performance/weight of plan diamond.



- 3. MyOval appraiser and presets are improved to achieve resulting solutions with better optical performance and symmetry.
- MyRound appraiser and presets were improved to better suite GIA Facetware limits. Two SmartRecut presets still retain relaxed intervals to showcase possible maximum mass gains while exceeding some of the MyAppraiser target group limits.
- 5. SmartRecut algorithm is improved to achieve higher EX target group result rate.

Interface

1. Corrected mass can now be shown in the model list, if the corresponding option is enabled.

To enable Corrected mass display, right-click anywhere in the model list area and select "Corrected Mass" option in the "Show Scan Mass" group:

Allocation solations			x
✓ Plans & Scans			
		Compare Sta	ndard Report 👻
# Price utti	n Mass 🔻 /ield lan	rit Col Sym-O	Gr Cut Sym
Sample	0.9997	+7.99	
✓ Shadow scan	0.7557	+6.36	
	Main Scan		
	✓ Set as Main Sc	an	
	Show Scan Mass		
	Model Mass		
	 Corrected Mas 	S	
	Diamond Color		
	Estimate color Shadow scan,	grade for 0.7557 ct	
	Optical Symmetry		
	✓ Calculate Option	cal Symmetry	
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Allocation solutions Plans & Scans # Price utti Sample Shadow scan	r Mass / ielc la 0.9997 Corrected 0.7543	Compare Sta rit Col Sym-O Mass +7.99 +6.36	andard Report Gr Cut Sym

If you hover the mouse pointer over the "Mass" column header, a tooltip will display current mass setting.

2. In MyAppraiser editor a tooltip was added that shows details on parameter difference from the default profile:

ppraiser Editor											,
GIA Facetware + MyRound Show Profile: MyRound_Profile1											
Cut Symmetry											
Parameter		Grade	Value	[FR	[GD	[VG	[EX	EX]	VG]	GD]	FR]
Table	0	EX	59.746	10	46.5	49.5	51.5	62.5	66.5	69.5	99
CrownAngle	0	EX	35.052	10	21.75	26.25	31.75	359	38.75	40.25	90
PavilionAngle	0	EX	41.381	10	38.7	39.7	40.5	41.9	42.5	43.1	90
StarLength	0	Poor		10	32.5	37.4	42.5	67.5	72.6	77.5	90
LowerGirdleLength	0	EX	76.704	50	57.5	62.5	67.5	Curren	t value	72.6	99
GirdleBezel		EX	4.53	0	1.25	1.75	2.25	Default value 72.5 Difference + 0.1		20	
GirdleValley	0	VG	0.475	0	0	o	0.75	2.94	4.14	6.14	20
CrownHeight	0	EX	14.163	5	10.5	12	12.3	15.5	17.5	18.5	40
TotalHeight	0	VG	62.637	10	54	57	58	62.5	64	66	90
Culet	0	EX	0.269	0	0	0	þ	1.1	1.5	2	20
CrownPainting	0	EX	-0.0397	-9	-6	-3	-2.3	2.3	4.3	7	20
PavilionPainting	0	EX	0.0597	-9	-5	-3	-2.5	2.5	4	6	20
SumPainting	0	EX	0.02	-9	-6	-5	-3.5	5	8	10	20
GirdleAngleMax	0	GD	4.805	0	0	0	0	2	4	6	20
HeightGirdleExtraFacet	0	FR	13.432	0	0	0	0	5	6	7	20
GirdleCrownExtraFacets		VG	2	0	0	0	0	0	2	4	20
GirdlePavilionExtraFacets		GD	4	0	0	0	0	1	2	ł	20
GirdleExtraFacets	0	GD	8	0	0	0	0	2	4	8	20
Import 🗸 Hig	hlight di	fferenc	es from De	efault pro	ofile						5 [¢]
Export - Set T	o Defau	llts						Disc	ard	Ap	ply

To display difference between current profile and default profile, select the "Highlight differences from Default profile" checkbox. To see the tooltip with details, hover the mouse cursor over a changed value.

- 3. Shortcuts configuration window is enhanced with the following capabilities:
 - a. Pressing a shortcut which is already taken causes the name of the other command to appear in a tooltip.

Shortcuts Log	js		
File Save As:	Ctrl+Shift+S	×	
File Save:	Ctrl+S	×	
Start Scanning:	Ctrl+F5	×	Shortcut Ctrl+S is already assigned to File Save action
Switch Pump:	Ctrl+F9	×	
Switch Live View:	F12	×	

b. Pressing the (x) button removes an existing shortcut:

Shortcuts Lo	ogs
File Save As:	Ctrl+Shift+S ×
File Save:	Ctrl+S
Start Scanning:	Ctrl+F5 ×
Switch Pump:	Ctrl+F9 ×
Switch Live View	: F12 ×

4. I3D Report configuration settings are moved to the Settings dialog:

5			
age Filter 👂	Reports		
eneral	General Report Buttons		
anning	Interactive 3D Reports		
utomatic Actions	Viewers path:	%ProgramData%\OctoNus Software\I3D Report Viewer	 Load Default
ports	Data path:	%MyDocuments%\OctoNus Software\I3D Reports	 Load Default
	Browser executable path:	C:\Program Files (x86)\Google\Chrome\Application\chrome.exe	 Load Default
	✓ Use default system br	owser	
	Add photorealistic ima	ges to report	
	✓ <u>A</u> utomatically open rep	port in browser	
	Open Data Folder		

5. Logger settings are now available in the General settings dialog under General Logs

Settings		\times
Page Filter 👂	General	
General	Shortcuts Logs	
Scanning Automatic Actions Reports	✓ Write logs to file Log path: %ALLUSERSPROFILE%\OctoNus Software\Logs Log Open Log Folder Log files rotation policy Maximum log file size: 10 MB ▼ Maximum total log gtorage size: 500 MB ▼	ad Default
	Write the following log levels to file	

Scanning

1. Manual Acceleration setting GUI is now available:

Settings		Settings	
Page Filter 🔎	Scanning	Page Filter 👂	Scar
General	General	General	Gene
Scanning	Additional contours	Scanning	Addit
Automatic Actions	✓ Capture a <u>d</u> ditional contours	Automatic Actions	2
Reports	Acceleration	Reports	Ac A
	9		5
	The stone slips, select a lower acceleration. Stone properties		Sto s
	✓ <u>R</u> equest stone properties before scanning		9
	Automatically generate default Stone ID for new scans		
	✔ Stone ID auto increment		
	The first numerical term of Stone ID will be automatically incremented.		
	Stone ID <u>C</u> ounter: 0		
	Intercept new line in Stone ID		
	✓ Scale <u>W</u> eight is required		

You can choose acceleration setting from ten options with 1 being the slowest and 10 being the fastest. For this setting to be available you have to update the **HPODrivers.ini** file.

Recut

06-Semicut-Final_Sample.oxgz

1. 06. Semicut (final) algorithm now properly considers model orientation so that Recut solutions are always oriented correctly in relation to the semi-cut stone.

Previous versions	HPO 3.22.41

Bugfixes

- You can now run Recut after importing a model from an MME file.
 Multiple small bugs fixed.