

2015.06.03 - Helium Polish version 5.6.73.1, report.dll version 2.6.6.1, BriRecon.dll 1.1.10.1, new templates dd 02.06.2015

Release contains:

File	Version
HeliimPolish.exe	5.6.73.1
report.dll	2.6.6.1
BriRecon.dll	1.1.10.1
Reports templates	2015-06-02

In this version we made the following changes:

1. Error with "Width-wise culet shift ratio" and "Length-wise culet shift ratio" calculation is fixed. Shift is calculated for RBC in MAX and MIN diameters directions from now:

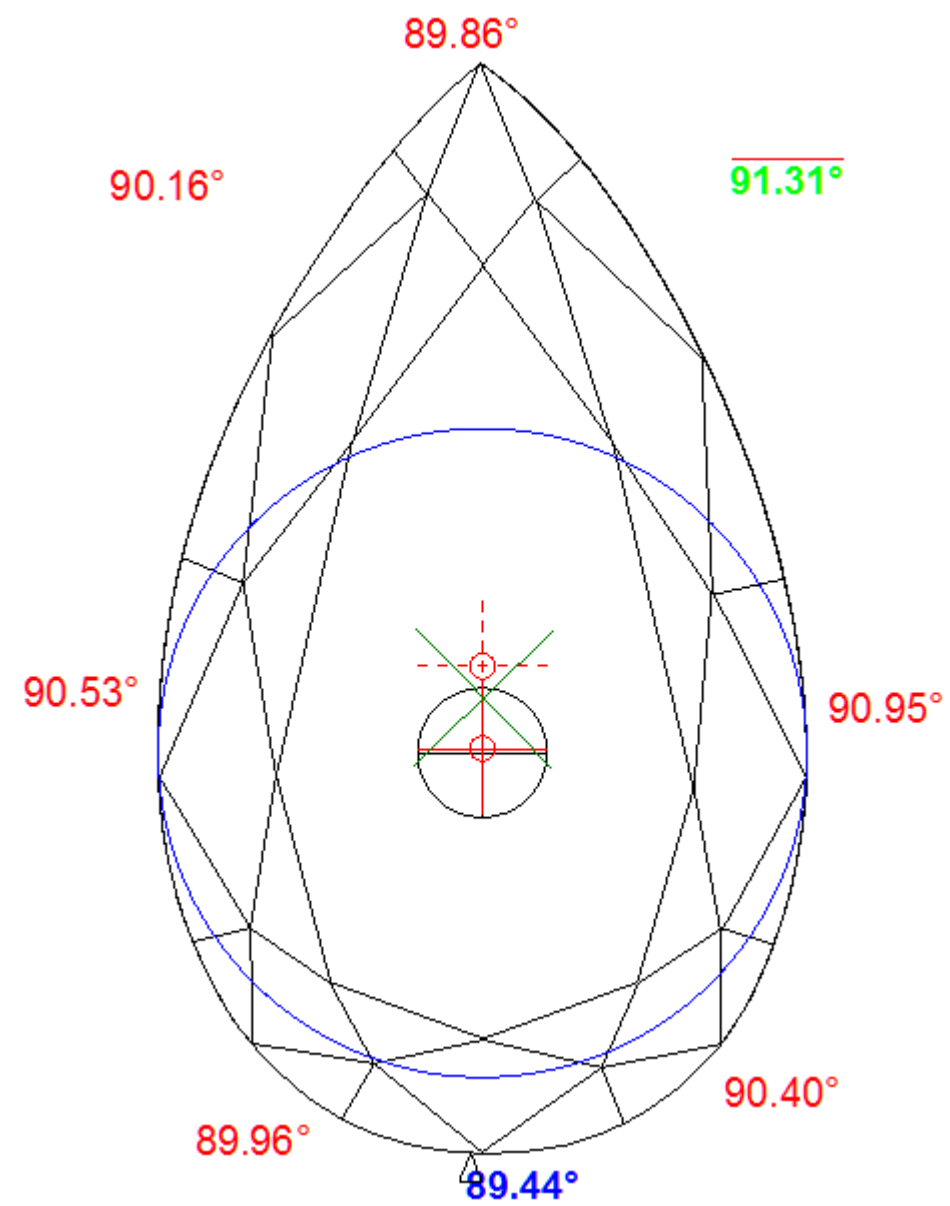
Culet shift ratio by main diameter		
Main diameter (avg)	5.195 mm, 100%	
Width culet shift ratio	2.546 mm, 49.01 %	2.620 mm, 50.42 %
Length culet shift ratio	2.557 mm, 49.22 %	2.667 mm, 51.34 %

2. New report parameter is added - "Girdle center mass":

2.1 It is calculated as girdle center mass and indicated on pictures as doted blue cross:



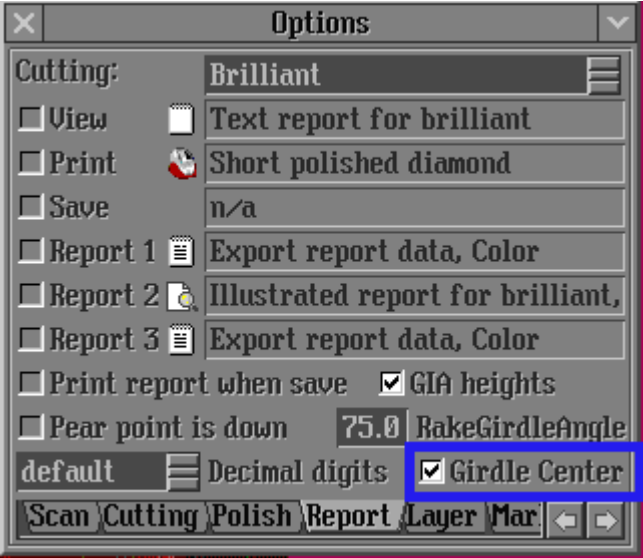
Girdle center mass



2.2 "Girdle center mass" is used as girdle center for all offset from now and by default:

Offset	Distance, %	Distance, mm
Girdle-Culet offset by table axis	0.87 ± 0.24	0.049 ± 0.014
Girdle-Table offset by table axis	0.83 ± 0.22	0.047 ± 0.012
Culet-Table offset by table axis	1.19 ± 0.26	0.067 ± 0.015
Girdle to table-culet line offset	0.66	0.037

2.3 To use old girdle center in offset calculation please check "Girdle center" check box in Report options panel:



2.4 Please pay attention that girdle center (blue cross on pictures same as before) calculation is changed:

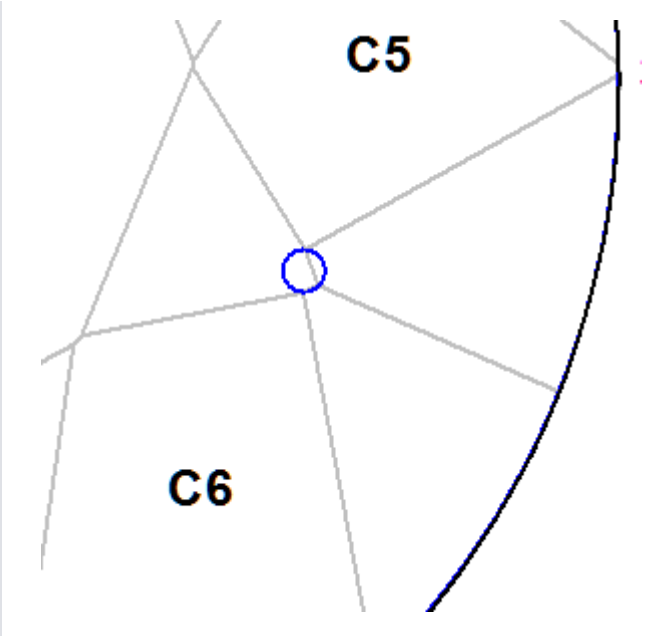
- 2.4.1 For Princess, StepCuts, Radiant, SquareRadiant SquareStepCut cuttings it calculates as cross of symmetry axes (was cross of diagonal axes before).
- 2.4.2 For Pear cutting it is cross of symmetry axis with width axis .

3. There are changes for AnyCut algorithm calculation. Goal is to improve girdle and crown building for Radiants and Step-Cuts.

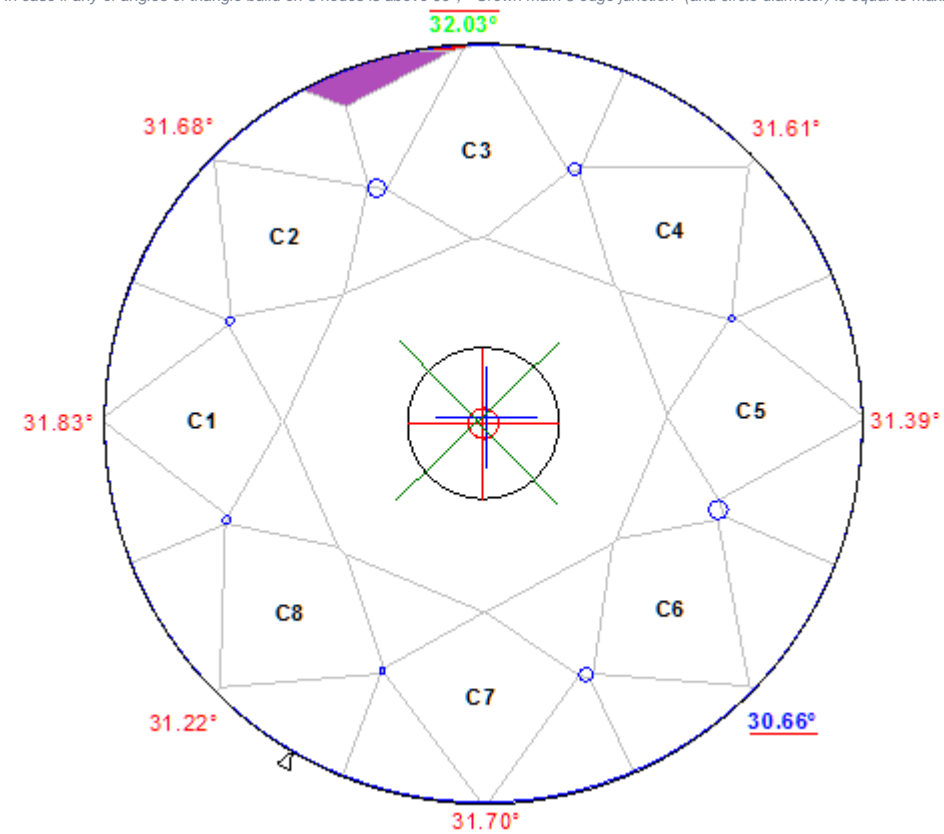
4. New report parameters were added - CRN_MAIN_5_EDGE_JUNCTION_:

Parameter		Avg	Min	Max	Dev
Crown main 5 edge junction	%	1.57	0.79	2.59	1.80
Crown main 5 edge junction	mm	0.089	0.045	0.147	0.102

4.1 "Crown main 5 edge junction" is equal to diameter of minimum circle which includes all 3 nodes at this junction, in case the triangle build on 3 nodes have angles below 90°:



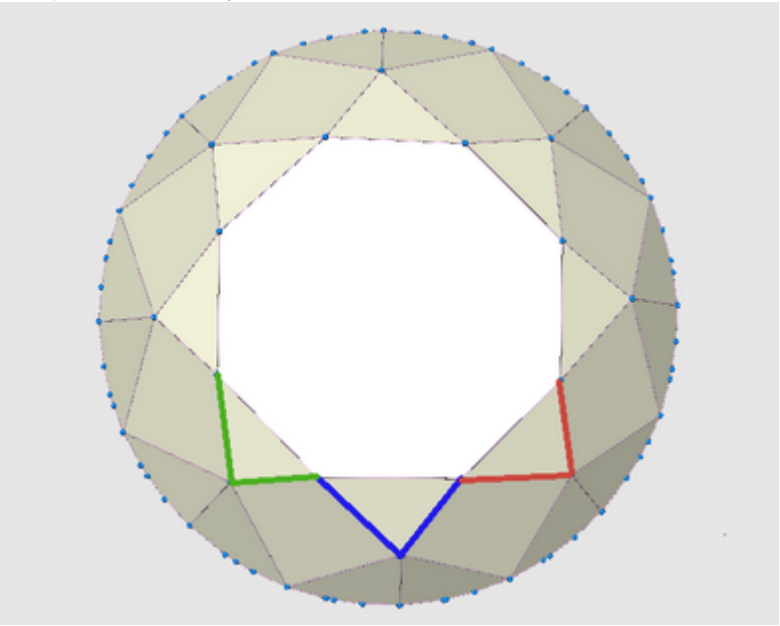
4.2 In case if any of angles of triangle build on 3 nodes is above 90°, "Crown main 5 edge junction" (and circle diameter) is equal to maximum distance between any of the 3 nodes at this junction. Circles are shown in red on pictures in report:



5. New report parameters were added - STAR_EDGE_:

Parameter		Avg	Min	Max	Dev
Star edge	%	15.50	13.70	18.22	4.52
Star edge	mm	0.879	0.777	1.033	0.256

5.1 On picture below six star edges are indicated:



5.2 Percentage value is measured as ratio to diameter.

6. New report parameter is added, roundness is calculated for 22.5° angle from now:

Roundness	°	15	22.5	30	45	90
Diameter roundness	%	0.14	0.17	0.21	0.28	0.35
		EX	EX	EX	EX	EX
2*radius roundness	%	0.18	0.25	0.32	0.39	0.52
		EX	EX	EX	EX	EX

7. All reports templates are updated.