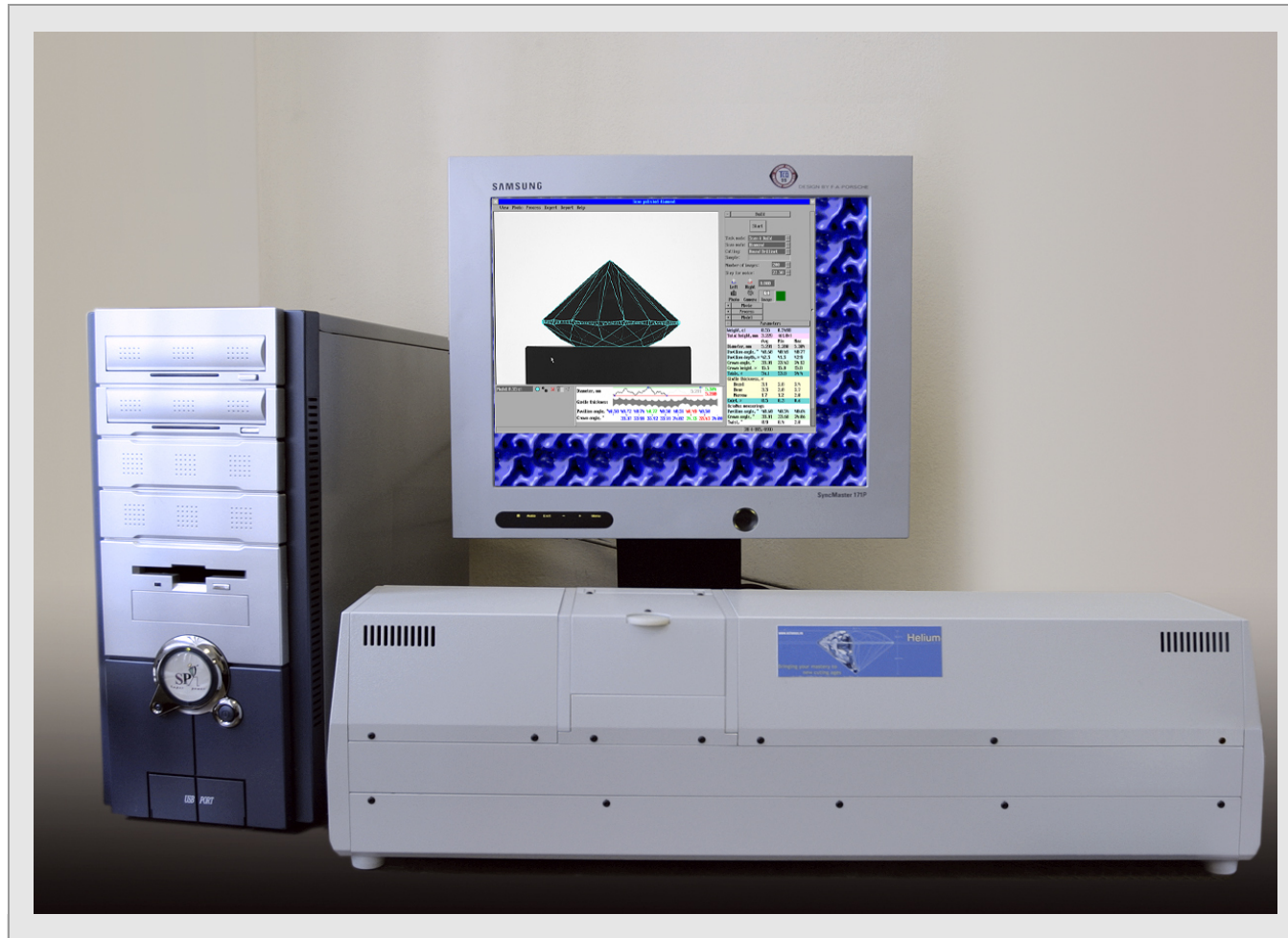
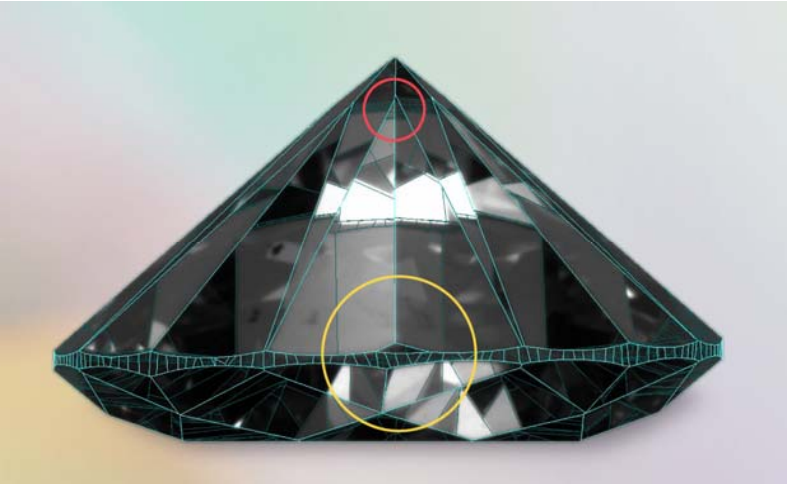
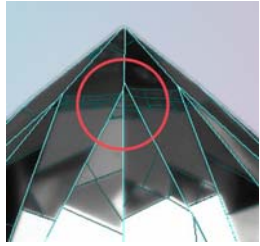
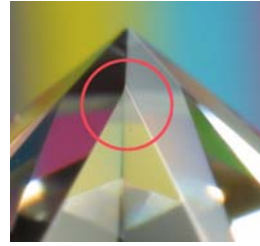
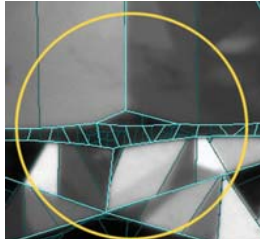
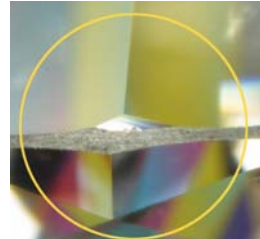


HELIUM POLISH

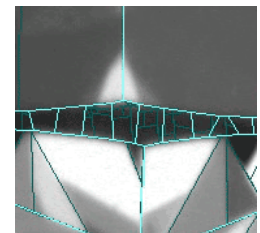
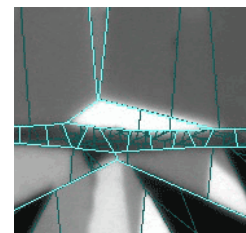
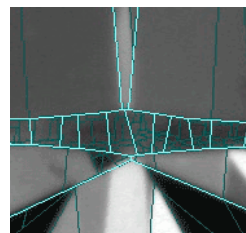
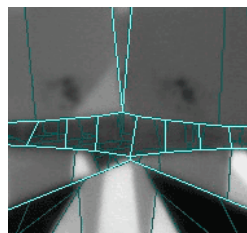
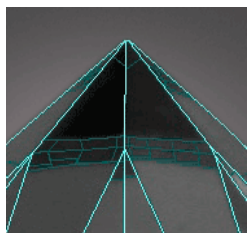
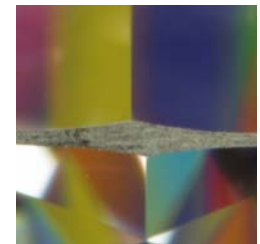
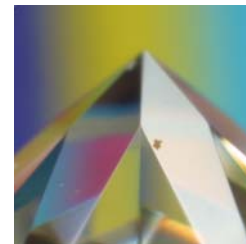
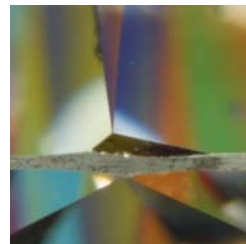
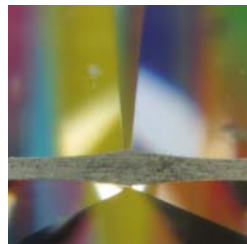
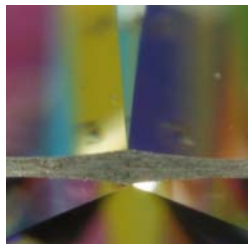
Helium Polish scanner is modern equipment for cutting factories, laboratories and trade businesses



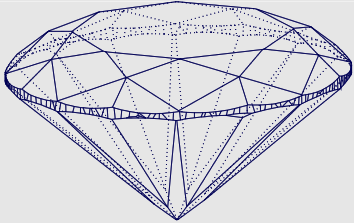
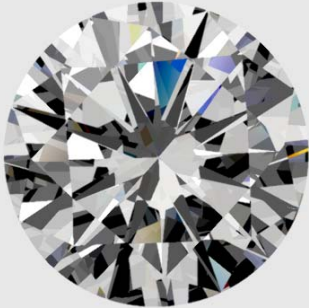


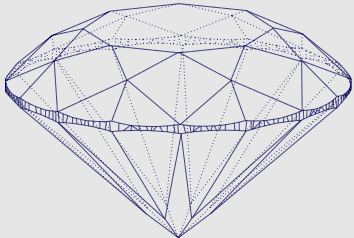

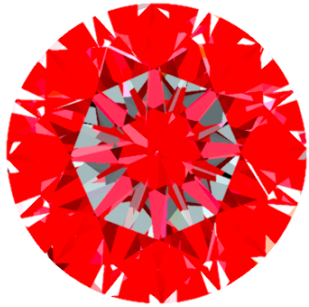
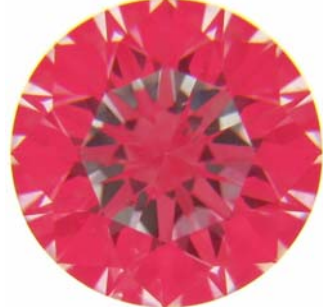
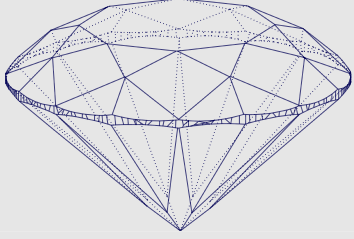

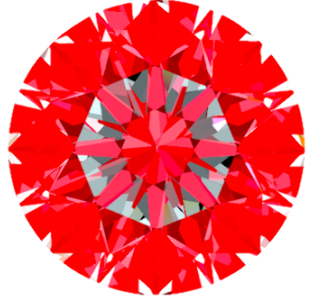
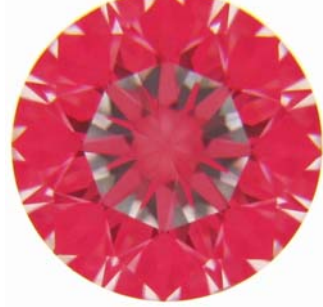
Helium Polish 3D model reveals major and minor symmetry features

Photo of the diamond with 3D-model obtained on Helium scanner. Major and minor symmetry features are shown by red and yellow circles	Symmetry feature	Helium model with the photo	Photo of the diamond
	<p>Not proper facet junction pointing:</p>		
	<p>Extra facet:</p>		

Major and minor symmetry features - more details



DiamCalc creates HDR photorealistic image of round brilliant scanned by Helium Polish and estimates optic and minor symmetry quality

The 3D-model of the diamond obtained on Helium Polish scanner	The HDR photorealistic image of the diamond generated by <u>DiamCalc</u> from 3D-model, HDR Office lighting	The HDR photorealistic image of the diamond generated by <u>DiamCalc</u> from 3D-model, HDR IdealScope Lighting	The real photo of the diamond made with Holloway IdealScope®	Download
				Diamcalc 3D-model GemAdviser 3D-model
				DiamCalc 3D-model GemAdviser 3D-model
				DiamCalc 3D-model GemAdviser 3D-model

Helium Polish and DiamCalc make very detailed reports

[Download MS Word Helium Polish report in PDF](#)

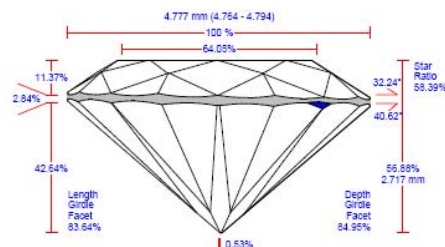
ILLUSTRATED REPORT FOR BRILLIANT

Polished Brilliant 03.08.2009

Model Simple
Expert name Makoed A.G.
Real weight, ct 0.37, 0.3756
Calculated weight, ct 4.777 (4.764 - 4.794) x 2.717 / 0.018 mm
Measurements 0.03 ct, 8.36 %
Spread 0.03 ct, 8.08 %
AGS Spread
Extra Facet Girdle / Nat Yes (2)

Width	Length	Ratio (L/W)	Diameter Minimum	Diameter Maximum	Diameter Average	Total height
4.764 mm	4.794 mm	1.006	4.764 mm	4.794 mm	4.777 mm	2.717 mm

Crown height	Pavilion depth	Table	Culet	Girdle		
				Bezel	Bone	Valley
0.543 mm	2.037 mm	3.060 mm	0.025 mm	0.136 mm	0.158 mm	0.073 mm



Appraiser title
Overall cut quality
Symmetry appraiser title
Overall symmetry quality

GIA_PCTG_StarCul
G
Internal
FR

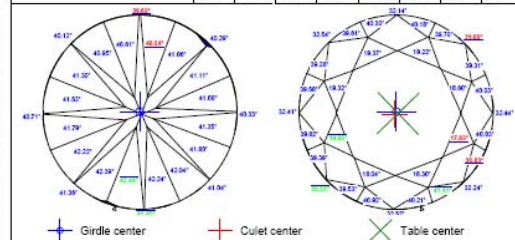
Color	
Clarity	
Polish	
Fluorescence	

Parameter	Avg	Min	Max	Dev	Cut	Sym
Diameter, mm	4.777	4.764	4.794	0.02%	E	VG
Radius, mm	2.388	2.373	2.407	0.02%		
Crown angle, °	32.24	31.05	32.55	1.50	Grading	VG
Pavilion angle, °	40.62	39.63	41.47	1.84	Grading	GD
Total height, %	58.88				V	
Crown height, %	11.37	10.64	12.34	1.71	V	GD
Crown height bone, %	11.00	9.39	12.20	2.81		
Pavilion depth, %	42.64	41.67	43.72	2.05	N/A	GD
Pavilion depth bone, %	42.58	41.70	43.69	2.00		
Table, %	64.05	63.84	64.15	0.31	Grading	EX
Culet, %	0.53	0.35	0.63	0.28	E	EX
Girdle Bezel, %	2.84	2.39	3.40	1.01	E	GD
Girdle Bone, %	3.30	2.94	3.80	0.86	E	VG
Girdle Valley, %	1.53	1.16	1.98	0.82	E	EX
Star, Upper ratio, %	58.39	54.01	63.15	9.14	E	FR
Star angle, °	41.61	45.99	36.85			
Upper girdle angle, °	18.79	17.63	19.85	2.21	VG	
Length girdle facet, %	83.64	81.71	85.34	3.63	E	VG
Lower girdle angle / Halves angle, °	41.53	40.54	42.44	1.91	VG	
Twist, °	1.38	0.03	3.61	3.58	FR	
Crown height, mm	0.543	0.508	0.590	0.082	V	GD
Pavilion depth, mm	2.037	1.990	2.088	0.098	N/A	GD
Table, mm	3.060	3.050	3.064	0.015	Grading	EX
Culet, mm	0.025	0.017	0.030	0.013	E	EX
Girdle Bezel, mm	0.136	0.114	0.162	0.048	E	GD

Measurement as per OctoNus theory:

Crown angle, °	32.24	31.80	32.42	0.62
Pavilion angle, °	40.62	40.52	40.82	0.31
Fish eye effect, °		3.36		N/A
Culet through Crown Bezel, °		25.30		N/A

Parameter, °	1	2	3	4	5	6	7	8
Pav. azimuths dev. from ideal	0.00	0.09	0.15	1.58	1.30	0.36	0.11	0.03
Crown azimuths dev. from ideal	0.04	0.81	-0.38	-0.42	-2.31	1.24	0.08	3.22
Crown painting	-1.37	-1.48	-2.05	-0.65	-1.03	-1.14	-0.84	-2.94
Pavilion painting	-1.42	-4.24	-0.80	-2.93	-0.33	-1.85	-1.72	-0.43
	-0.18	-2.07	-1.37	-0.75	0.98	-0.30	0.35	-0.41
	0.10	-1.29	0.07	-0.80	0.16	-0.35	-0.16	0.17

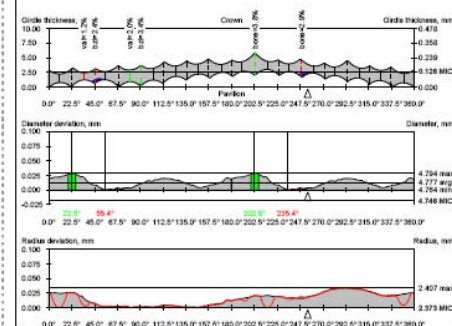


Girdle-Culet offset by table axis	1.52 ± 0.26, %	0.073 ± 0.012, mm
Girdle-Table offset by table axis	1.24 ± 0.23, %	0.059 ± 0.011, mm
Table-Culet offset by table axis	1.83 ± 0.27, %	0.087 ± 0.013, mm
Girdle to table-culet line offset		1.07, 0.051 mm

1	2	3	4	5	6	7	8
4.783	4.772	4.775	4.775				
2.398	2.380	2.374	2.374	2.385	2.392	2.400	2.401
32.41	32.54	32.14	31.05	32.44	32.24	32.52	32.55
40.33	40.29	39.63	40.12	40.71	41.36	41.47	41.04
12.34	12.14	11.54	10.84	10.64	10.64	11.16	11.64
12.20	11.59	11.13	10.47	9.39	10.64	10.72	11.87
41.67	42.24	41.95	42.85	43.48	43.72	43.06	42.18
41.70	41.75	42.31	43.35	43.69	43.31	42.58	41.96
64.07	64.15	64.14	63.84				
2.87	2.39	3.40	3.19	2.72	2.47	2.60	3.06
2.99	3.54	3.44	3.07	3.80	2.94	3.59	3.05
1.43	1.16	1.38	1.98	1.96	1.78	1.68	1.35
1.63	1.34	1.27	1.17	1.44	1.70	1.73	1.54
54.65	57.84	60.63	58.79	63.15	60.26	57.78	54.01
45.35	42.16	39.37	41.21	36.85	39.74	42.22	45.99
19.32	19.37	19.22	18.60	17.63	18.30	18.04	19.85
39.58	39.28	39.61	40.30	40.18	39.70	39.31	40.03
40.83	38.83	41.11	40.21	40.92	39.53	39.39	39.82
84.20	83.27	82.67	81.94	82.31	81.71	82.81	82.65
83.09	83.59	84.35	85.34	85.25	84.74	85.21	85.13
41.08	41.11	41.06	40.54	40.61	40.95	41.30	41.52
41.79	42.22	42.39	42.44	42.24	42.04	41.80	41.35
0.04	0.73	0.54	2.00	3.61	0.88	0.03	3.19
0.590	0.580	0.551	0.518	0.508	0.508	0.533	0.558
1.990	2.018	2.004	2.047	2.077	2.088	2.057	2.015
3.061	3.064	3.064	3.050				
0.137	0.114	0.162	0.153	0.130	0.118	0.124	0.146

32.42	32.39	32.33	31.80				
40.52	40.62	40.55	40.58				
MIC, mm		4.746		Extra Facet Crown	No		
Girdle to MIC, mm		0.018		Extra Facet Pavilion	No		

Paint / Dug	Avg	Type	Sym	Dev	Sym
Crown, °	-1.58	Painting	EX	-4.24	EX
Crown, notch, °	0.4, Small			1.1	
Pavilion, °	-0.30		EX	-2.07	
Pavilion, notch, °	0.1, Negligible			0.6	EX



Helium specifications

Function specification

	HP 8.5 Digital	HP 17 Digital	HP 23 ProDigital	HP 34 Digital	HP 47 ProDigital
Field of view	6.6 mm x 8.7 mm	13.2 mm x 17.4 mm	17.7 mm x 23.6 mm	26.4 mm x 34.8 mm	35 mm x 47 mm
Polish size	2.3 mm - 8.5 mm	4.5 mm - 17 mm	5 mm - 23 mm	9 mm - 34 mm	10 mm - 47 mm
3D-model accuracy	6.5 microns	13 microns	15 microns	26 microns	30 microns
Projected RBC range	0.05 to 2.00 ct	0.35 to 18.00 ct	0.50 to 45.00 ct	3.00 to 140.00 ct	5.00 to 450 ct
Projected Marquise Range	0.09 to 0.60 ct	0.60 to 4.5 ct	0.90 to 11 ct	5.00 to 35 ct	9.00 to 110 ct
Diamond types	Any Cuts				
ReCut option	Available				
Print reports	Available, very detailed + user-defined				
Warranty	12 months				

Hardware specification

	HP 8.5 Digital	HP 17 Digital	HP 23 ProDigital	HP 34 Digital	HP 47 ProDigital
Lens	1 : 1	1 : 2		1 : 4	
Camera	Digital, 1360x1024 CCD 2/3"	Digital, 1360x1024 CCD 2/3"	Digital, 1600 x 1200 CCD 1"	Digital, 1360x1024 CCD 2/3"	Digital, 1600 x 1200 CCD 1"
Weight	19 kg	25 kg		25 kg	
Dimensions L x W x H	70 cm x 16 cm x 21 cm	90 cm x 16 cm x 21 cm		90 cm x 16 cm x 21 cm	
Operating Systems	Windows 2000 / XP / Vista				
Power consumption	220/110V 50/60Hz 300W				

Processing time for diamonds

Method (precision)	Quantity of contours	Time of scan mode, sec	Time of build mode, sec*	Total time, sec
Quick	100	5	3	8
Optimum	200	10	4	14
Accuracy	400	20	6	26
Hi accuracy	800	40	10	50

*Time of work is measured by the diamonds: symmetrical RBC 0.55 ct or asymmetrical RBC 0.37 ct. Time of build mode depends on quantity of dust on the stone surface and mass and cutting form of stones, it can change from time to time within the limits of 5 sec.

Time is measured on Helium Polish system HP 8.5 and computer AMD Dual Core 2.4GHz, 2Gb RAM or Intel(R) Core(TM)2 CPU 2.13Ghz, 4Gb RAM.