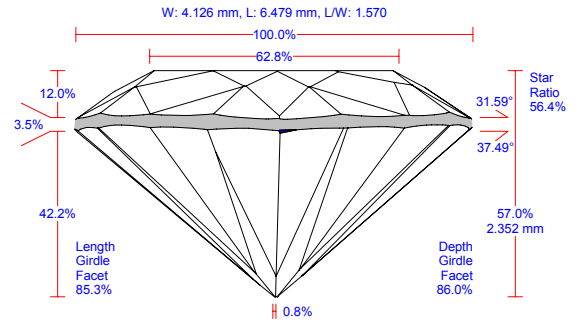


HELIUM FULL REPORT

Polished Pear

General information

Model Simple
 Expert name Makoed A.G.
 Report date 28.11.2006
 Real weight, ct
 Calculated weight, ct 0.35, 0.3556
 Appraiser title AGA
 Overall cut quality 3A
 Symmetry appraiser title Internal
 Overall symmetry quality PR
 Spread 0.10 ct, 22.11 %
 EF / Nat Yes (1)



Main parameters

Parameter		Avg	Min	Max	Dev	Cut	Sym
Diameter (width & length)	mm		4.126	6.479	Ratio: 1.570	2A	
Crown mains angle	°	31.59	31.49	31.69	0.19	2B	EX
Crown nock angle	°	24.96	19.52	30.39	10.87		
Crown other angle	°	31.32	30.88	32.00	1.12		
Crown height	%	11.95	10.94	13.10	2.16	2B	GD
Crown height	mm	0.493	0.451	0.541	0.089		
Crown height at girdle minima	%	12.32	11.31	13.74	2.43	N/A	
Crown height at girdle minima	mm	0.508	0.467	0.567	0.100		
Pavilion mains angle	°	N/A	N/A	N/A	N/A	N/A	PR
Pavilion nock angle	°	N/A	N/A	N/A	N/A		
Pavilion other angle	°	37.49	34.04	40.39	6.36		
Pavilion depth	%	42.19	41.23	43.20	1.96	N/A	GD
Pavilion depth	mm	1.741	1.701	1.782	0.081		
Pavilion depth at girdle minima	%	42.60	41.93	43.37	1.44	N/A	
Pavilion depth at girdle minima	mm	1.758	1.730	1.790	0.060		
Upper girdle facets angle	°	36.41	32.87	40.17	7.30		PR
Upper girdle facets height	%	8.30	6.95	10.10	3.15		
Upper girdle facets height	mm	0.342	0.287	0.417	0.130		
Point upper girdle facets angle	°	N/A	N/A	N/A	N/A		
Wing upper girdle facets angle	°	N/A	N/A	N/A	N/A		
Star facets angle	°	17.05	13.94	20.77	6.83		PR
Star point facets angle	°	N/A	N/A	N/A	N/A		
Star wing facets angle	°	N/A	N/A	N/A	N/A		
Star : Upper ratio	%	56.41 : 43.59	51.93 : 48.07	59.10 : 40.90	7.17		FR
Lower girdle facets angle	°	37.82	33.08	41.28	8.21		PR
Lower girdle facets height	%	36.96	35.47	39.42	3.95		GD
Lower girdle facets height	mm	1.525	1.463	1.626	0.163		
Point lower girdle facets angle	°	N/A	N/A	N/A	N/A		
Wing lower girdle facets angle	°	N/A	N/A	N/A	N/A		
Depth Girdle Facet	%	85.97	82.38	92.72	10.34	N/A	
Length Girdle Facet	%	85.32	81.46	92.46	10.99		
Total height	%	57.01				3A	
Total height	mm	2.352					
Table	%	62.81	60.03	65.59	5.56	2B	PR
Table	mm	3.363	2.477	4.249	1.773		
Culet	%	0.77	0.68	0.87	0.19	N/A	EX
Culet	mm	0.032	0.028	0.036	0.008		
Twist	°	7.67	6.26	10.13	3.88		FR
Girdle thickness: Bezel	%	3.48	2.92	4.14	1.22	2A	GD
Girdle thickness: Bezel	mm	0.144	0.120	0.171	0.050		
Girdle thickness: Bone	%	3.73	3.35	4.01	0.65		EX
Girdle thickness: Bone	mm	0.154	0.138	0.165	0.027		
Girdle thickness: Valley	%	2.30	1.39	2.98	1.59	N/A	GD
Girdle thickness: Valley	mm	0.095	0.057	0.123	0.066		

Detailed parameters

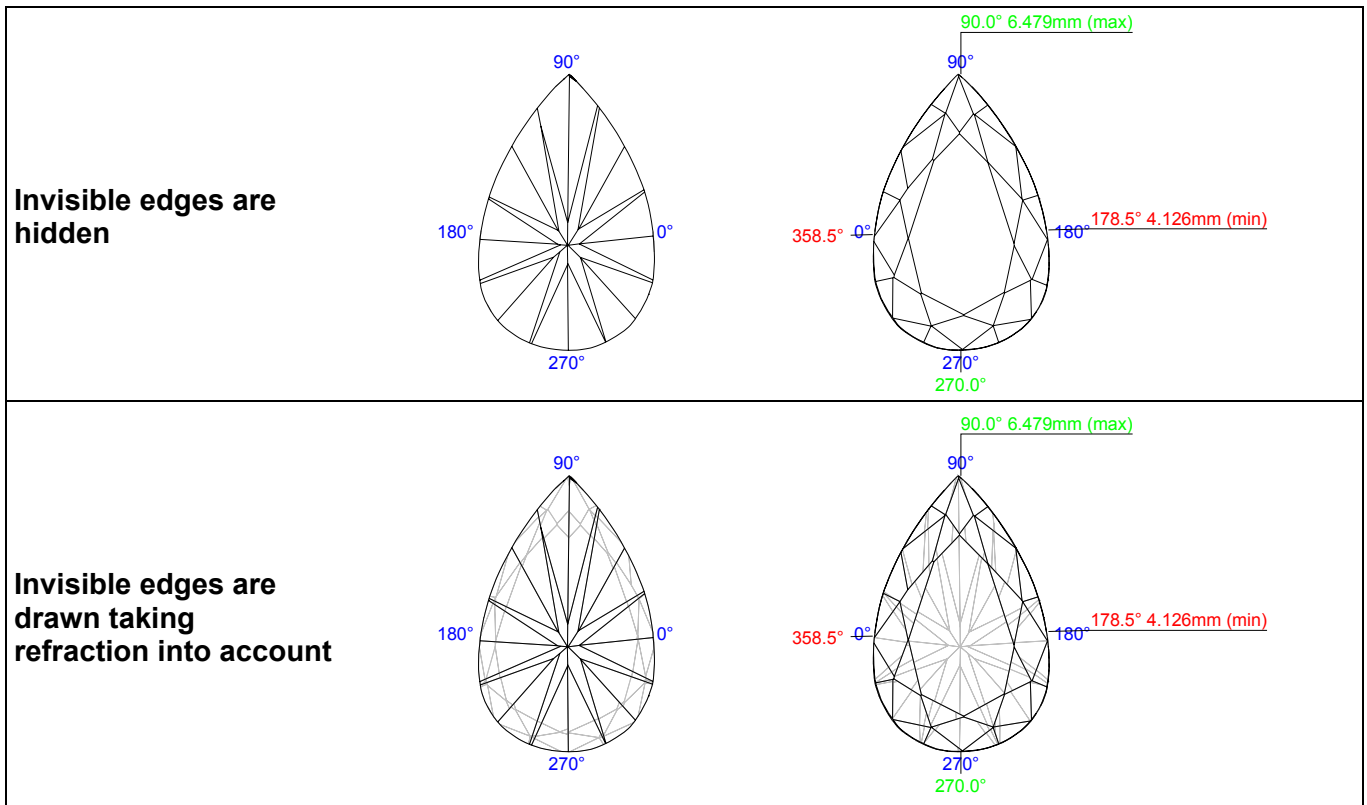
Parameter		1	2	3	4	5	6	7	8
Crown mains angle	°	31.69	31.49						
Crown nock angle	°	19.52	30.39						
Crown other angle	°	31.35	30.88	32.00	31.04	N/A	N/A	N/A	N/A
Crown mains azimuth	°	3.0	175.8						
Crown nock azimuth	°	89.3	269.7						
Crown other azimuth	°	28.8	150.9	215.4	324.8	N/A	N/A	N/A	N/A
Crown height	%	12.04	11.27	12.19	10.94	11.86	13.10	11.58	12.65
Crown height	mm	0.497	0.465	0.503	0.451	0.489	0.541	0.478	0.522
Crown height at girdle minima	%	11.93	11.35	11.58	12.27	12.17	11.31	11.43	11.97
		12.35	13.40	13.47	12.16	13.01	13.74	12.91	12.13
Crown height at girdle minima	mm	0.492	0.468	0.478	0.506	0.502	0.467	0.472	0.494
		0.509	0.553	0.556	0.502	0.537	0.567	0.533	0.501
Pavilion mains angle	°	N/A	N/A						
Pavilion nock angle	°	N/A	N/A						
Pavilion other angle	°	40.39	35.08	34.04	40.07	39.41	35.55	34.98	40.37
Pavilion mains azimuth	°	N/A	N/A						
Pavilion nock azimuth	°	N/A	N/A						
Pavilion other azimuth	°	17.8	36.3	140.7	162.2	182.6	247.6	291.5	356.7
Pavilion depth	%	41.91	43.20	42.56	42.20	42.54	41.48	42.37	41.23
Pavilion depth	mm	1.729	1.782	1.756	1.741	1.755	1.711	1.748	1.701
Pavilion depth at girdle minima	%	43.37	43.35	42.91	42.55	42.50	42.83	43.31	42.70
		42.26	41.97	42.40	42.57	42.15	41.93	42.14	42.69
Pavilion depth at girdle minima	mm	1.790	1.789	1.770	1.755	1.753	1.767	1.787	1.762
		1.744	1.732	1.750	1.757	1.739	1.730	1.739	1.761
Upper girdle facets angle	°	34.53	32.87	35.95	36.75	37.43	36.87	36.09	36.18
Upper girdle facets height	%	36.25	34.60	39.56	37.51	39.52	40.17	34.51	33.69
		8.29	8.42	7.52	8.16	8.32	7.34	7.36	7.84
Upper girdle facets height	mm	0.342	0.347	0.310	0.337	0.343	0.303	0.304	0.324
		0.287	0.348	0.409	0.351	0.393	0.417	0.337	0.327
Upper girdle facets azimuth	°	6.6	26.2	32.7	46.0	132.8	146.0	155.0	171.0
		180.2	211.4	228.1	260.0	281.5	310.9	329.8	0.1
Point upper girdle facets angle	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wing upper girdle facets angle	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Point upper girdle facets azimuth	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wing upper girdle facets azimuth	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Star facets angle	°	17.74	16.52	15.82	18.56	20.77	14.67	13.94	18.41
Star : Upper ratio	%	51.93 : 48.07	57.60 : 42.40	56.95 : 43.05	57.25 : 42.75	59.10 : 40.90	56.86 : 43.14	56.83 : 43.17	54.75 : 45.25
Star facets azimuth	°	18.0	43.9	135.4	162.0	192.0	241.1	297.2	346.6
Star point facets angle	°	N/A	N/A	N/A	N/A				
Star wing facets angle	°	N/A	N/A	N/A	N/A				
Star point facets azimuth	°	N/A	N/A	N/A	N/A				
Star wing facets azimuth	°	N/A	N/A	N/A	N/A				
Lower girdle facets angle	°	41.28	39.95	36.58	34.02	33.08	37.32	39.80	40.67
		40.23	38.15	35.72	35.91	35.56	36.46	39.27	41.18
Lower girdle facets height	%	37.91	36.11	36.14	37.37	37.28	37.14	37.11	38.32
		39.42	35.47	38.95	35.52	35.62	35.51	36.05	37.43
Lower girdle facets height	mm	1.564	1.490	1.491	1.542	1.538	1.532	1.531	1.581
		1.626	1.463	1.607	1.466	1.470	1.465	1.487	1.544
Lower girdle facets azimuth	°	13.5	22.6	33.2	39.2	137.6	147.8	155.6	166.1
		178.7	200.6	244.0	255.0	283.2	306.1	338.1	0.3
Point lower girdle facets angle	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wing lower girdle facets angle	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Point lower girdle facets azimuth	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wing lower girdle facets azimuth	°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Depth Girdle Facet	%	86.61	82.55	83.67	87.14	87.05	86.21	85.03	89.07
		92.72	83.24	90.85	82.38	83.64	83.76	84.57	87.10
Length Girdle Facet	%	85.89	82.79	83.83	86.83	86.74	85.65	84.62	88.80
		92.46	82.31	90.19	81.46	82.74	81.76	82.60	86.38
Table	%	60.03		65.59					
Table	mm	2.477		4.249					
Twist	°	6.26	7.51	10.13	6.79	N/A	N/A	N/A	N/A
Girdle Bezel	%	2.92	3.23	3.11	3.42	3.31	4.03	4.14	3.70
Girdle Bezel	mm	0.120	0.133	0.128	0.141	0.137	0.166	0.171	0.153
Girdle Bone	%	3.35	3.51	3.90	3.69	4.01	3.55	3.89	3.95
Girdle Bone	mm	0.138	0.145	0.161	0.152	0.165	0.146	0.161	0.163
Girdle Valley	%	2.19	2.46	2.52	2.76	2.58	2.98	2.27	2.65
		2.40	2.01	1.97	2.36	1.86	1.39	2.11	2.22
Girdle Valley	mm	0.091	0.101	0.104	0.114	0.106	0.123	0.093	0.109
		0.099	0.083	0.081	0.098	0.077	0.057	0.087	0.092

Offset		Distance	Width wise	Length wise
Culet-Table offset by table axis	%	7.53 ± 0.31	0.59	7.51
Culet-Table offset by table axis	mm	0.311 ± 0.013	0.024	0.310
Girdle-Culet offset by table axis	%	18.74 ± 0.29	0.59	18.73
Girdle-Culet offset by table axis	mm	0.773 ± 0.012	0.024	0.773
Girdle-Table offset by table axis	%	11.22 ± 0.27	0.00	11.22
Girdle-Table offset by table axis	mm	0.463 ± 0.011	0.000	0.463
Girdle to table-culet line offset	%	12.93		
Girdle to table-culet line offset	mm	0.533		

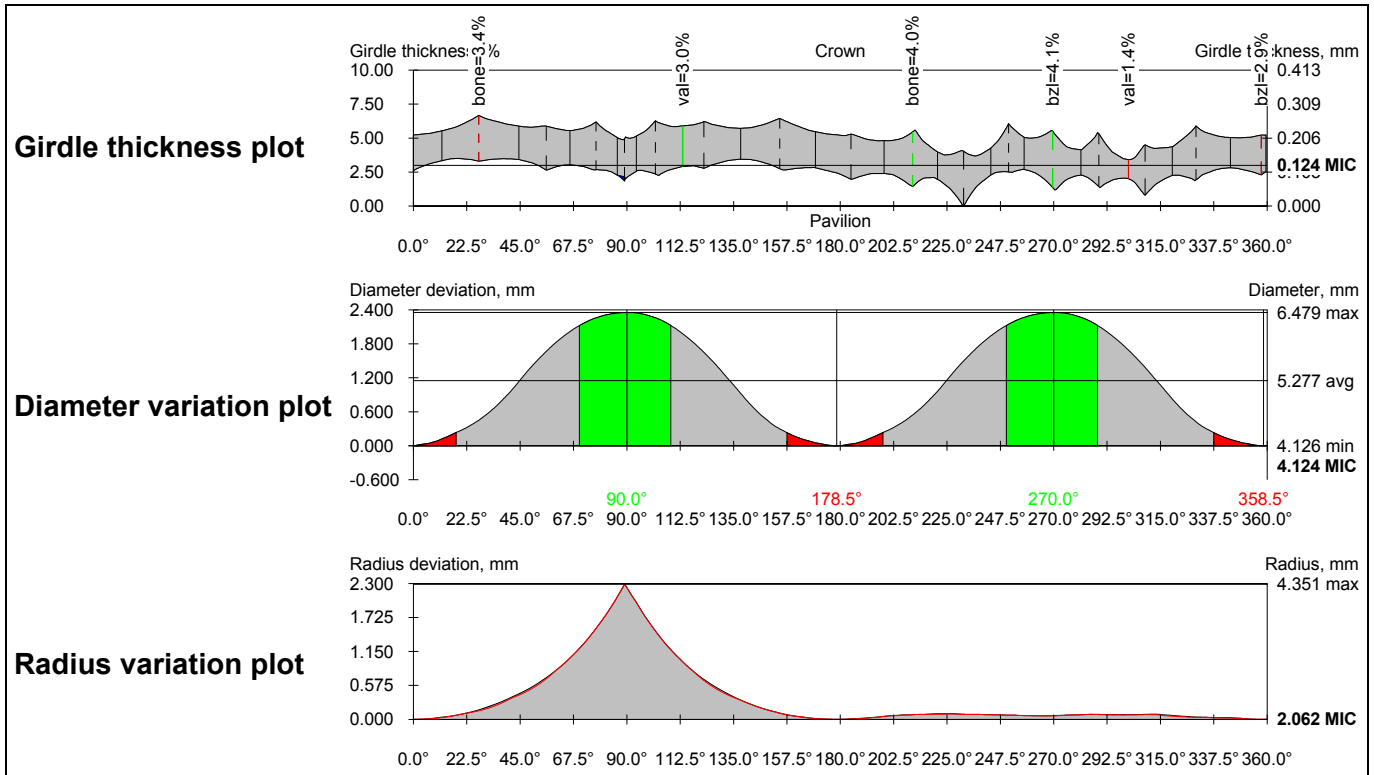
Culet shift ratio by width & length			
Width		4.126 mm, 100%	
Width-wise culet shift ratio		2.088 mm, 50.61 %	2.040 mm, 49.45 %
Length		6.479 mm, 100%	
Length-wise culet shift ratio		2.467 mm, 38.07 %	4.012 mm, 61.93 %

Culet shift ratio by main diameter			
Main diameter (width)		4.126 mm, (100%)	
Width-wise culet shift ratio		2.088 mm, 50.61 %	2.040 mm, 49.45 %
Length-wise culet shift ratio		2.467 mm, 59.78 %	4.012 mm, 97.23 %

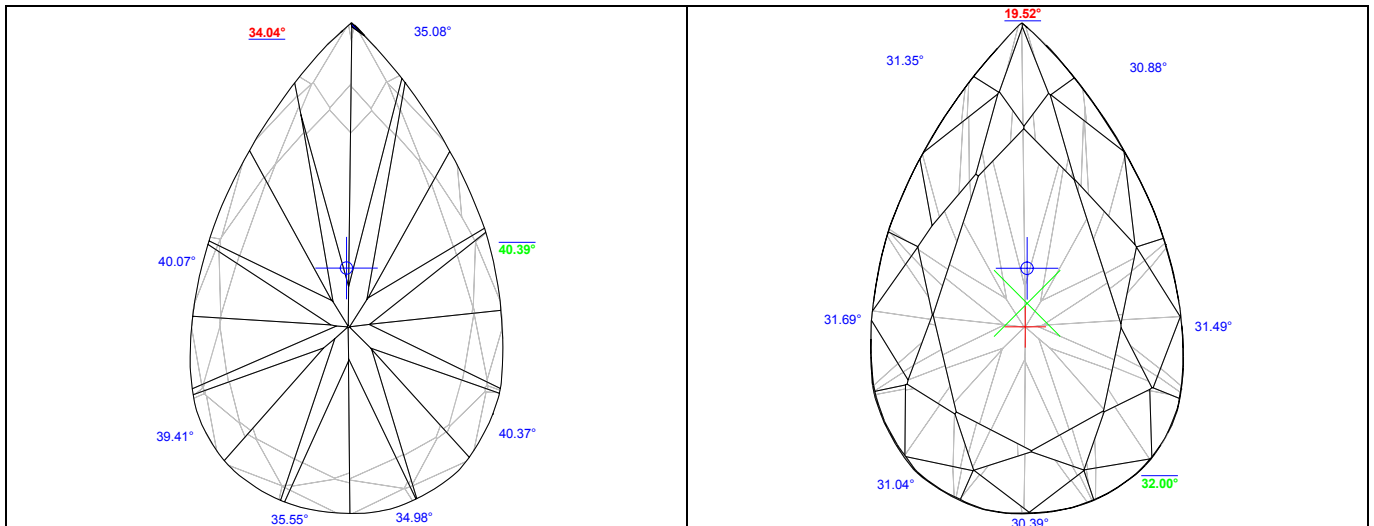
Crown and pavilion views of the diamond with indication of the diameter minimum and maximum



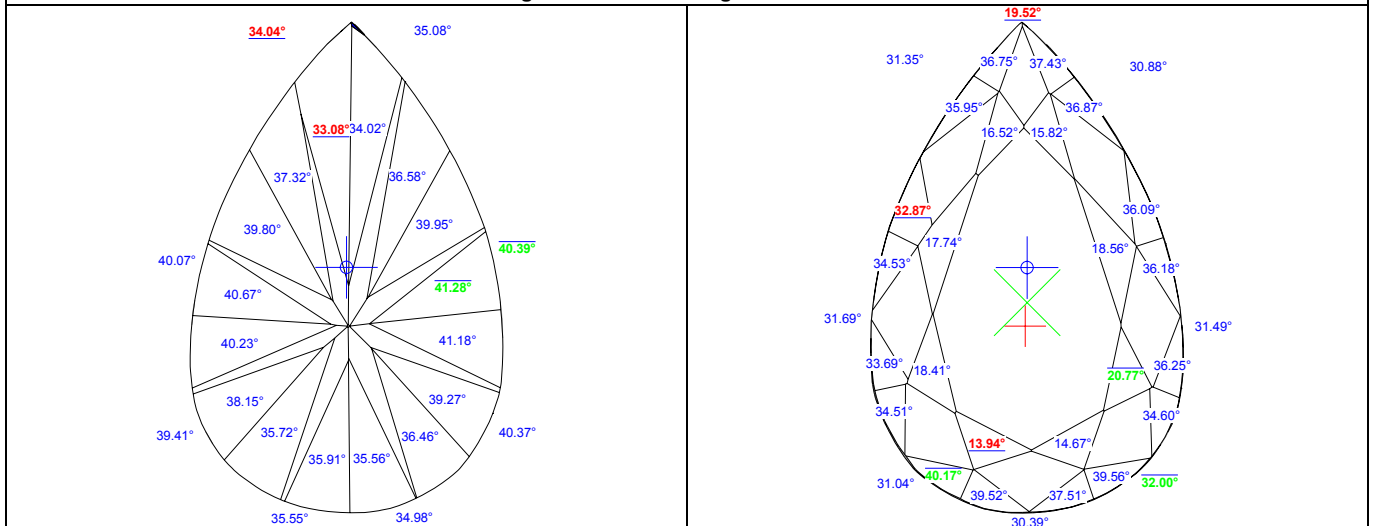
Plots



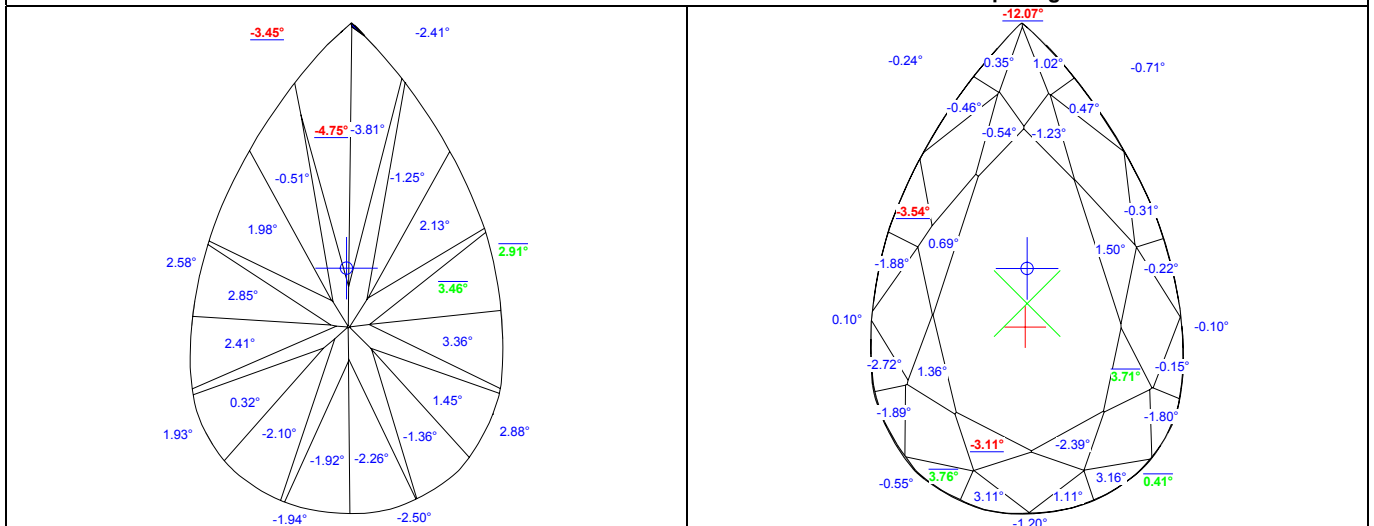
Facets' azimuth and slope angles



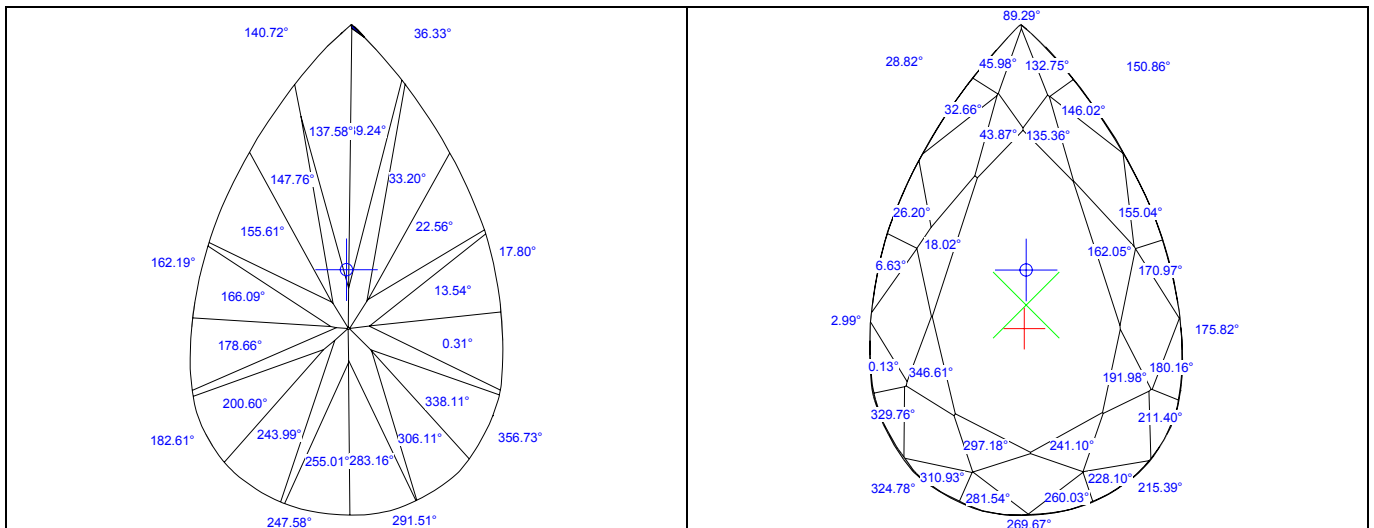
Pavilion and crown views of the diamond with indication of main facets' slope angles
Invisible edges are drawn taking refraction into account



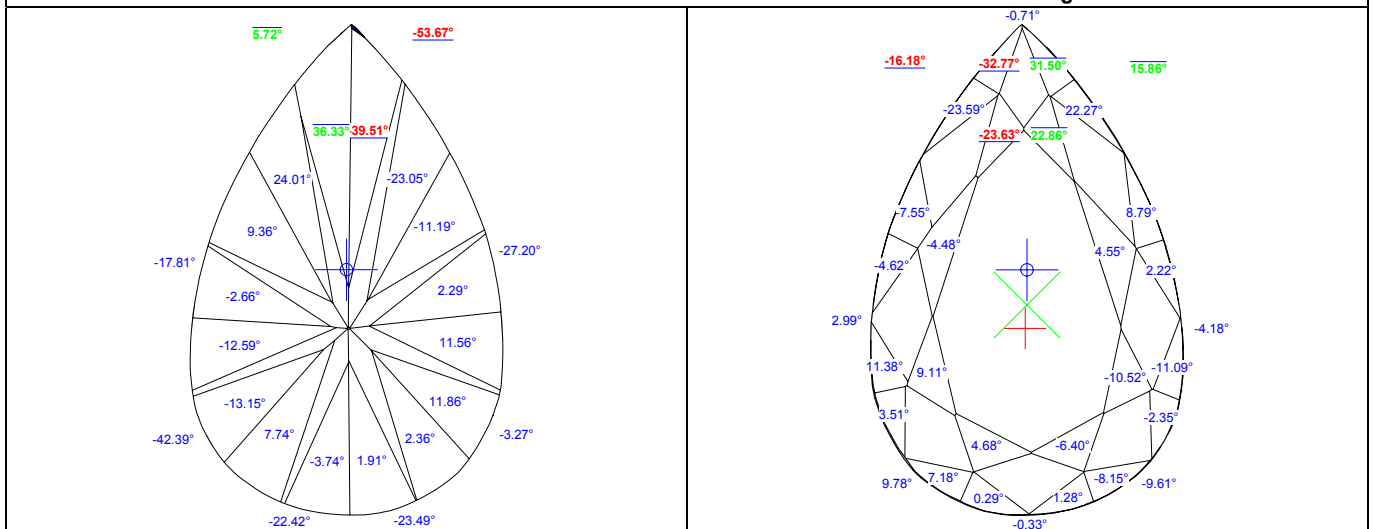
Pavilion and crown views of the diamond with indication of facets' slope angles



Pavilion and crown views of the diamond with indication of deviation of facets' slope angles from the average values

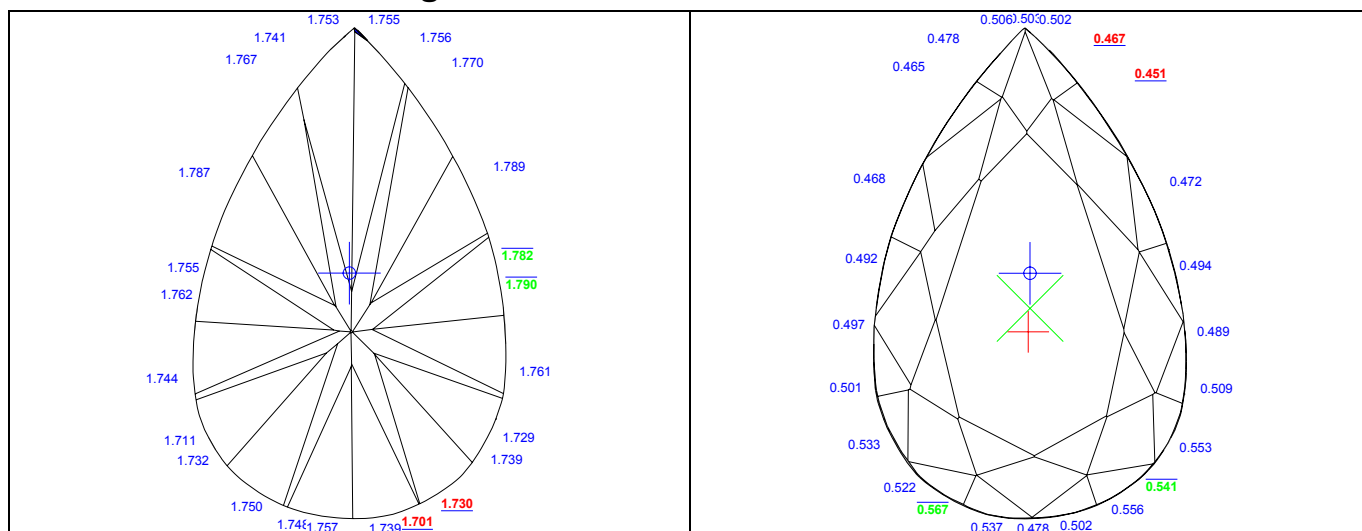


Pavilion and crown views of the diamond with indication of facets' azimuth angles

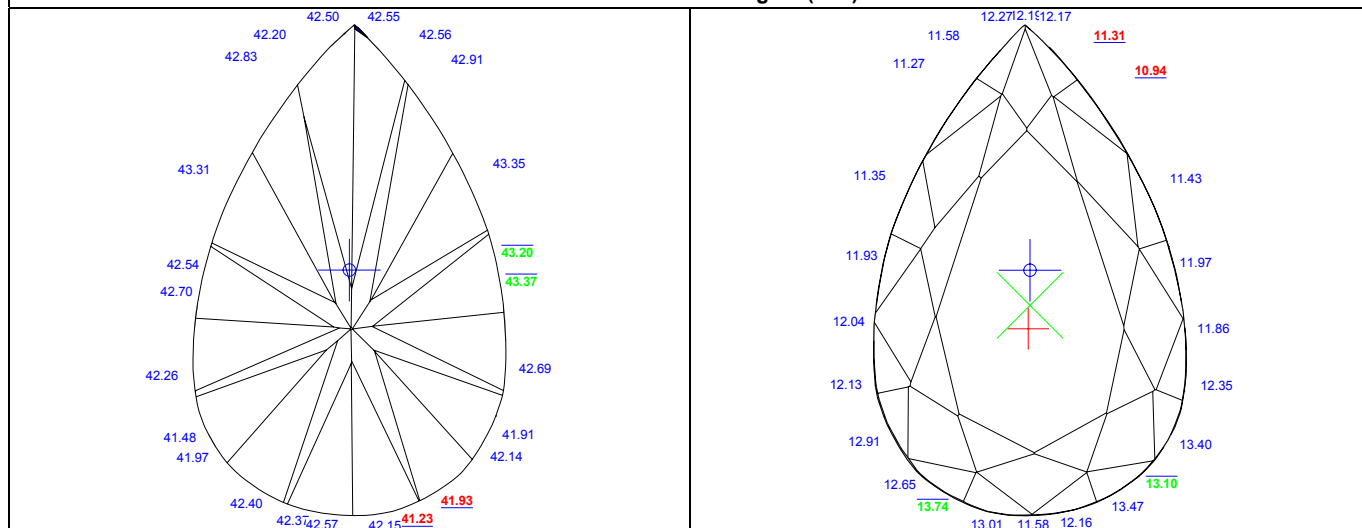


Pavilion and crown views of the diamond with indication of deviation of facets' azimuth angles from their ideal positions for the round brilliant

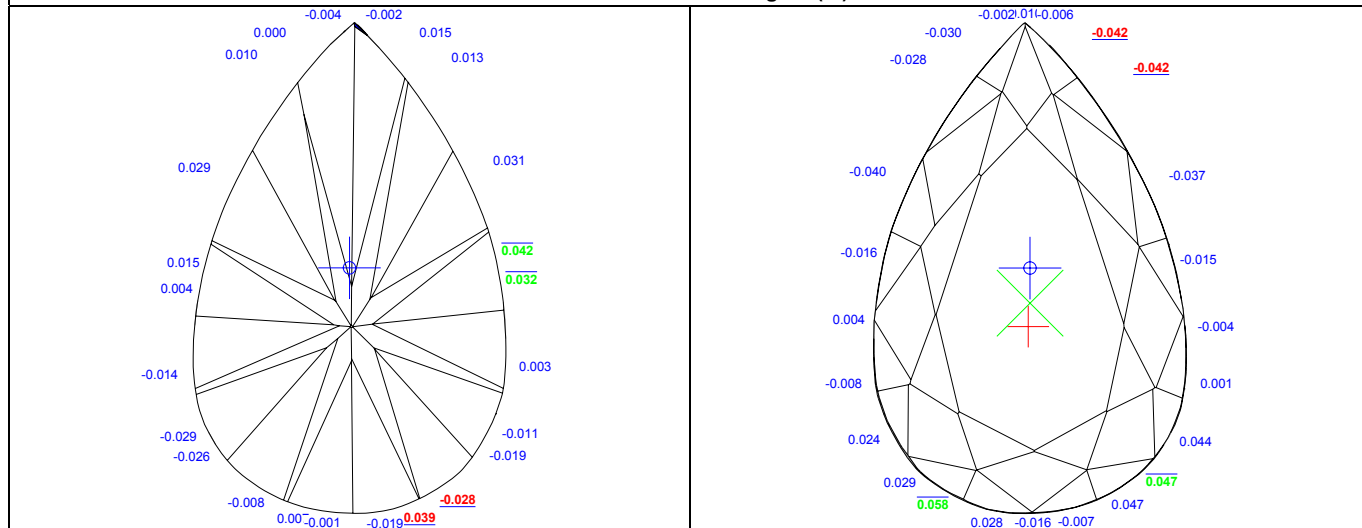
Pavilion and Crown heights



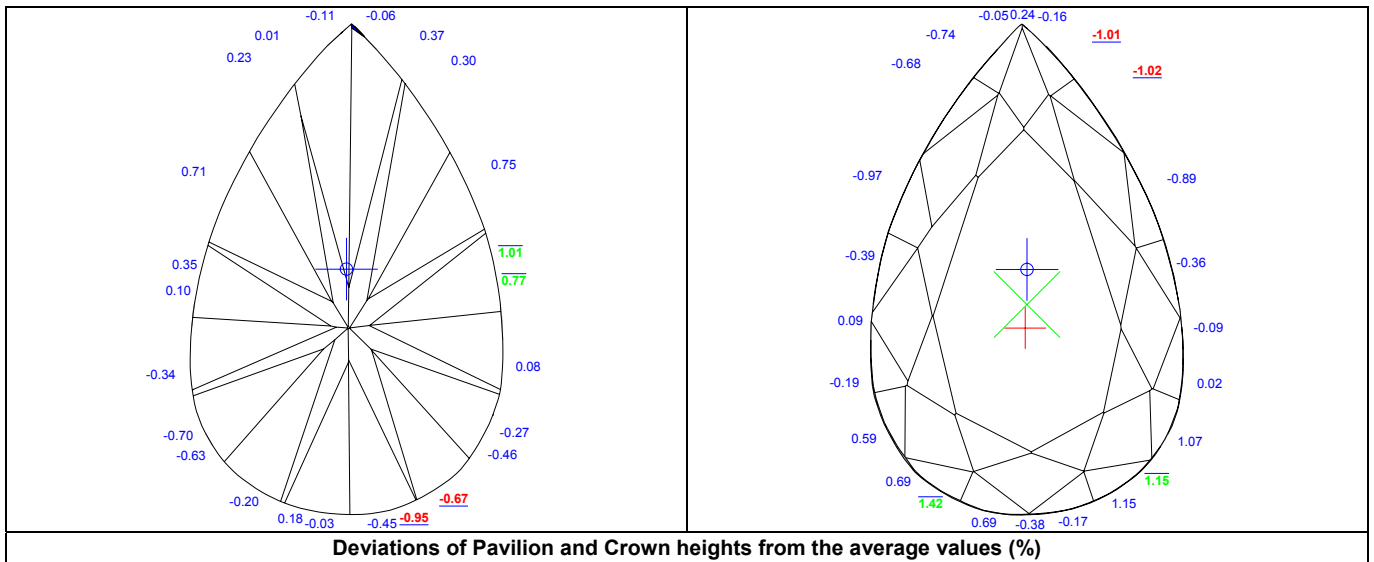
Pavilion and Crown heights (mm)



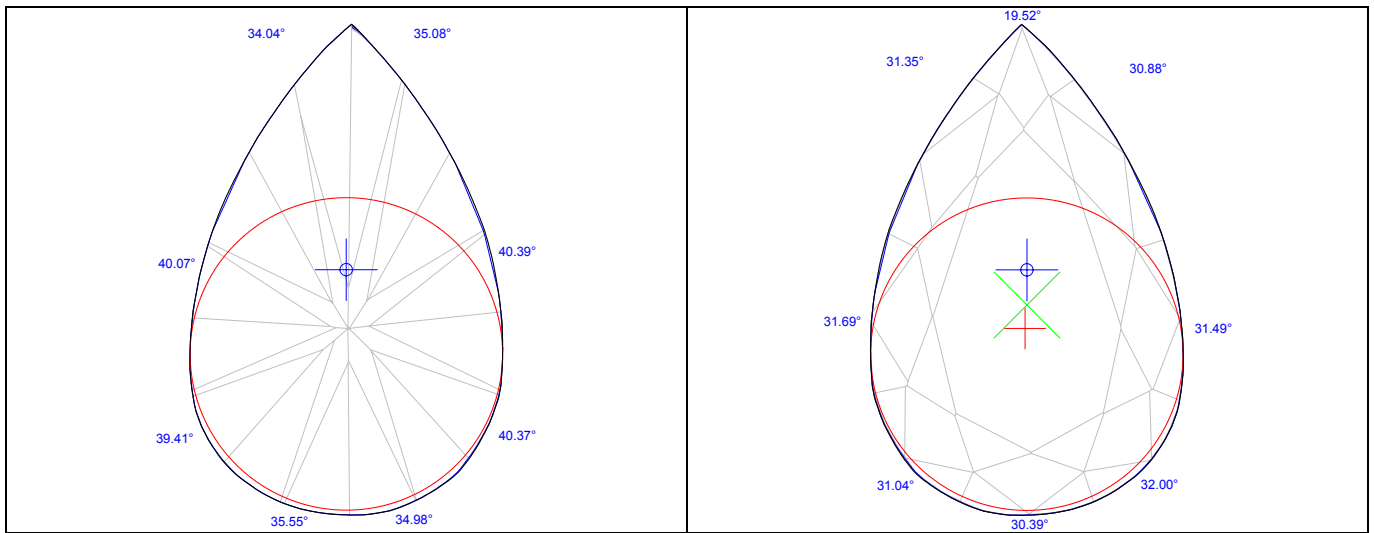
Pavilion and Crown heights (%)



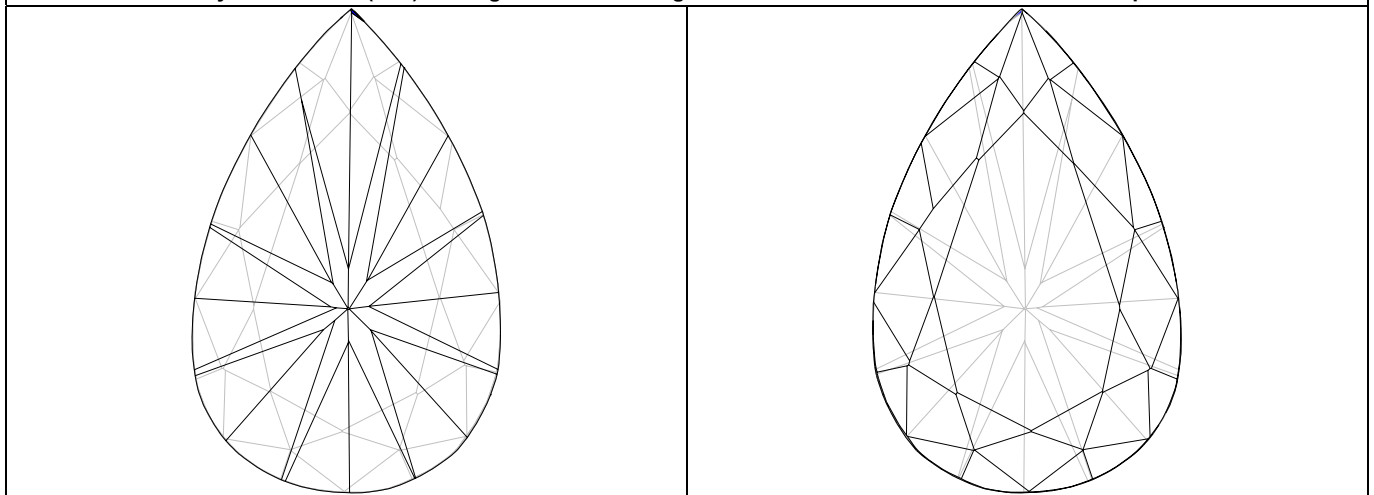
Deviations of Pavilion and Crown heights from the average values (mm)



Additional illustrations



Pavilion and crown views of the diamond with indication of the maximum circle that may be inscribed (MIC) in the girdle outline along with the section of the model in the circle's plane



Pavilion and crown views of the diamond with indication of invisible edges without refraction

	Girdle center		Culet center		Table center
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