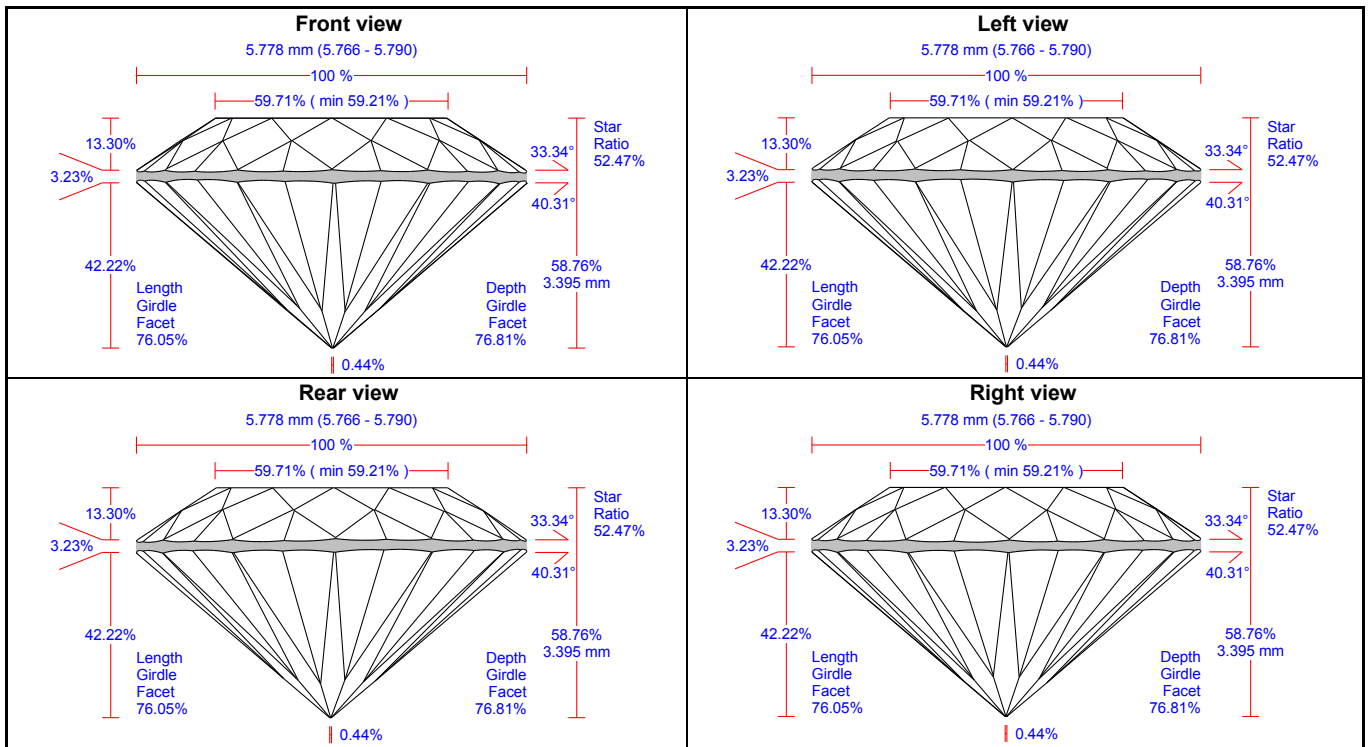


# Full Report for Brilliant

## General Information

Model	Solosfera	Extra Facet Girdle / Nat	No
Expert name	Makoed A.G.	Extra Facet Crown	No
Report date	17.08.2011	Extra Facet Pavilion	No
Real weight, ct		Appraiser title	GIA_PCTG_StarCul
Calculated weight, ct	0.69, 0.6902	Overall cut quality	V
Spread	0.02 ct, 3.22%	Symmetry appraiser title	Internal
AGS Spread	0.02 ct, 3.08%	Overall symmetry quality	GD

## Main Views



## Main Parameters

Width	Length	Ratio (L/W)	Diameter Average	Diameter Minimum	Diameter Maximum	Total height	MIC	Girdle to MIC
5.766 mm	5.790 mm	1.004	5.778 mm	5.766 mm	5.790 mm	3.395 mm	5.765 mm	0.001 mm

Parameter		Avg	Min	Max	Dev	Cut	Sym
Diameter	mm	5.778	5.766	5.790	0.41 %	E	EX
Radius	mm	2.888	2.883	2.896	0.014		
Radius	%	49.98	49.89	50.13	0.24		
Crown angle	°	33.34	33.15	33.49	0.34	Grading	EX
Crown height	%	13.30	13.15	13.51	0.36	E	EX
Crown height	mm	0.769	0.759	0.781	0.021		
Crown height bone	%	13.51	13.33	13.78	0.44		
Crown height bone	mm	0.781	0.770	0.796	0.026		
Crown height valley	%	13.73	13.56	14.05	0.50	N/A	EX
Crown height valley	mm	0.794	0.783	0.812	0.029		
Pavilion angle	°	40.31	40.25	40.38	0.13	Grading	EX
Pavilion height	%	42.22	42.00	42.39	0.39		
Pavilion height	mm	2.440	2.427	2.449	0.023		
Pavilion height bezel	%	42.22	42.00	42.39	0.39	N/A	EX
Pavilion height bezel	mm	2.440	2.427	2.449	0.023		
Pavilion height upper bone	%	42.68	42.45	42.97	0.53		
Pavilion height upper bone	mm	2.466	2.452	2.483	0.030		
Pavilion height bone	%	42.68	42.45	42.97	0.53		
Pavilion height bone	mm	2.466	2.452	2.483	0.030		

Parameter		Avg	Min	Max	Dev	Cut	Sym
Pavilion height valley	%	42.86	42.60	43.10	0.50	N/A	EX
Pavilion height valley	mm	2.476	2.462	2.490	0.029		
Pavilion height valley type 2	%	42.85	42.60	43.10	0.50	N/A	N/A
Pavilion height valley type 2	mm	2.476	2.462	2.490	0.029		
Upper girdle facets angle	°	37.80	37.42	38.17	0.75		EX
Upper girdle facets height	%	7.96	7.58	8.36	0.78		EX
Upper girdle facets height	mm	0.460	0.438	0.483	0.045		EX
Star facets angle	°	27.48	27.01	28.05	1.04		EX
Star : Upper ratio	%	52.47 : 47.53	50.76 : 49.24	54.87 : 45.13	4.11	E	GD
Lower girdle facets angle	°	41.10	40.98	41.25	0.27		EX
Lower girdle facets height	%	33.09	32.26	33.86	1.60	E	VG
Lower girdle facets height	mm	1.912	1.864	1.956	0.092		
Depth girdle facet	%	76.81	74.49	78.40	3.91		
Length girdle facet	%	76.05	73.52	77.50	3.99		
Total height	%	58.76					
Total height	mm	3.395				E	
Table	%	59.71	59.21	60.16	0.95	Grading	EX
Table	mm	3.450	3.421	3.476	0.055		
Culet	%	0.44	0.37	0.48	0.10	E	EX
Culet	mm	0.025	0.022	0.028	0.006		
Twist	°	1.17	0.06	2.95	2.89		GD
Girdle height bezel	%	3.23	3.04	3.44	0.41	E	EX
Girdle height bezel	mm	0.187	0.176	0.199	0.023		
Girdle height bone	%	2.57	2.21	2.73	0.52		EX
Girdle height bone	mm	0.148	0.128	0.158	0.030		EX
Girdle height valley	%	2.18	1.91	2.42	0.50	E	EX
Girdle height valley	mm	0.126	0.111	0.140	0.029		
Girdle height valley type 2	%	2.19	1.91	2.42	0.50	N/A	N/A
Girdle height valley type 2	mm	0.126	0.111	0.140	0.029		
Girdle height (Crown Mains)	%	3.26	3.04	3.41	0.38		
Girdle height (Crown Mains)	mm	0.188	0.175	0.197	0.022		
Girdle height (Pavilion Mains)	%	3.25	3.00	3.41	0.41		
Girdle height (Pavilion Mains)	mm	0.188	0.173	0.197	0.024		
Girdle height (Upper girdle facets)	%	2.19	1.92	2.45	0.53		
Girdle height (Upper girdle facets)	mm	0.126	0.111	0.142	0.031		
Girdle height (Lower girdle facets)	%	2.18	1.91	2.42	0.51		
Girdle height (Lower girdle facets)	mm	0.126	0.111	0.140	0.029		

Measurement as per OctoNus theory							
Crown angle	°	33.36	33.32	33.39	0.07		
Pavilion angle	°	40.32	40.31	40.33	0.02		
Culet through bezel	°	17.66				N/A	
Fish eye effect	°	4.67				N/A	

**Table of Correspondence of New Parameters and Obsolete Parameters (from Old Full Report for Brilliant)**

Obsolete parameter	New parameter		Avg	Min	Max	Dev
Pavilion depth	Pavilion height bezel	%	42.22	42.00	42.39	0.39
Pavilion depth	Pavilion height bezel	mm	2.440	2.427	2.449	0.023

**Table of Obsolete Parameters (from Old Full Report for Brilliant)**

Obsolete parameter		Avg	Min	Max	Dev
Crown height at girdle minima	%	13.73	13.56	14.05	0.50
Crown height at girdle minima	mm	0.794	0.783	0.812	0.029
Pavilion depth bone	%	42.68	42.45	42.97	0.53
Pavilion depth bone	mm	2.466	2.452	2.483	0.030
Pavilion depth at girdle minima	%	42.85	42.60	43.10	0.50
Pavilion depth at girdle minima	mm	2.476	2.462	2.490	0.029

## Detailed Parameters

Parameter		1	2	3	4	5	6	7	8
Diameter	mm	5.774	5.768	5.789	5.777				
Radius	mm	2.886	2.883	2.892	2.886	2.888	2.885	2.895	2.890
Radius	%	49.96	49.91	50.06	49.95	49.98	49.93	50.12	50.02
Crown angle	°	33.36	33.49	33.39	33.38	33.45	33.23	33.43	33.15
Crown height	%	13.51	13.43	13.26	13.17	13.26	13.33	13.30	13.15
Crown height	mm	0.781	0.776	0.766	0.761	0.766	0.770	0.769	0.759
Crown height bone	%	13.78	13.58	13.41	13.53	13.58	13.52	13.33	13.37
Crown height bone	mm	0.796	0.785	0.775	0.782	0.784	0.781	0.770	0.773
Crown height valley	%	14.05	13.95	13.82	13.77	13.66	13.61	13.66	13.70
		13.79	13.77	13.76	13.74	13.69	13.56	13.61	13.62
Crown height valley	mm	0.812	0.806	0.798	0.795	0.789	0.786	0.789	0.791
		0.797	0.795	0.795	0.794	0.791	0.783	0.786	0.787
Crown azimuth	°	0.6	30.1	60.1	90.5	120.1	148.7	178.4	208.8
Crown azimuth deviation from ideal	°	0.61	-14.95	-29.86	-44.53	-59.94	-76.34	-91.56	-106.24
Pavilion angle	°	40.37	40.36	40.33	40.32	40.38	40.28	40.25	40.29
Pavilion height	%	42.05	42.00	42.14	42.14	42.39	42.39	42.32	42.35
Pavilion height	mm	2.430	2.427	2.435	2.435	2.449	2.449	2.445	2.447
Pavilion height bezel	%	42.05	42.00	42.14	42.14	42.39	42.39	42.32	42.35
Pavilion height bezel	mm	2.430	2.427	2.435	2.435	2.449	2.449	2.445	2.447
Pavilion height upper bone	%	42.45	42.52	42.62	42.57	42.97	42.69	42.92	42.71
Pavilion height upper bone	mm	2.452	2.457	2.463	2.460	2.483	2.467	2.480	2.467
Pavilion height bone	%	42.45	42.52	42.62	42.57	42.97	42.69	42.92	42.71
Pavilion height bone	mm	2.452	2.457	2.463	2.460	2.483	2.467	2.480	2.467
Pavilion height valley	%	42.72	42.60	42.68	42.71	42.81	42.75	42.72	42.88
		43.07	43.10	42.90	42.90	43.05	43.02	42.92	42.96
Pavilion height valley	mm	2.468	2.462	2.466	2.468	2.474	2.470	2.468	2.477
		2.488	2.490	2.479	2.479	2.487	2.486	2.480	2.482
Pavilion height valley type 2	%	42.72	42.60	42.68	42.71	42.81	42.75	42.72	42.88
		43.07	43.10	42.90	42.90	43.05	43.02	42.92	42.96
Pavilion height valley type 2	mm	2.468	2.462	2.466	2.468	2.474	2.470	2.468	2.477
		2.488	2.490	2.479	2.479	2.487	2.486	2.480	2.482
Pavilion azimuth	°	360.0	30.0	59.4	88.8	118.9	145.7	177.5	207.5
Pavilion azimuth deviation from ideal	°	-0.00	-15.01	-30.57	-46.20	-61.09	-79.30	-92.48	-107.48
Upper girdle facets angle	°	37.87	37.74	37.73	37.73	37.77	37.74	37.95	38.17
		37.65	37.59	37.49	37.44	37.42	37.58	37.57	37.85
Upper girdle facets height	%	8.36	8.36	8.17	8.08	7.97	7.91	7.93	7.93
		7.98	7.93	8.02	7.99	7.88	7.63	7.58	7.60
Upper girdle facets height	mm	0.483	0.483	0.472	0.467	0.460	0.457	0.458	0.458
		0.461	0.458	0.463	0.462	0.456	0.441	0.438	0.439
Upper girdle facets azimuth	°	8.8	21.6	39.0	51.2	69.0	81.6	99.3	110.1
		128.0	139.8	157.2	170.1	186.2	199.8	216.6	229.4
Upper girdle facets azimuth deviation from ideal	°	-2.42	-12.18	-17.22	-27.52	-32.30	-42.18	-46.94	-58.64
		-63.26	-73.92	-79.09	-88.63	-95.04	-103.93	-109.62	-119.31
Star facets angle	°	27.38	27.54	27.67	27.48	28.05	27.78	27.01	27.66
Star facets azimuth	°	15.6	45.8	75.8	106.0	135.0	163.4	193.5	223.9
Star facets azimuth deviation from ideal	°	-6.90	-21.73	-36.70	-51.46	-67.54	-84.11	-98.96	-113.61
Star : Upper ratio	%	50.76 :	51.52 :	52.18 :	52.69 :	51.99 :	51.85 :	53.93 :	54.87 :
		49.24	48.48	47.82	47.31	48.01	48.15	46.07	45.13
Lower girdle facets angle	°	41.25	41.17	41.12	41.04	41.11	41.06	41.04	41.08
		41.16	41.12	41.03	40.98	41.17	41.14	41.00	40.99
Lower girdle facets height	%	32.28	32.59	32.81	33.42	33.73	32.88	33.36	32.80
		33.05	32.26	32.62	33.10	33.70	33.30	33.67	33.86
Lower girdle facets height	mm	1.865	1.883	1.896	1.931	1.949	1.900	1.927	1.895
		1.910	1.864	1.884	1.913	1.947	1.924	1.945	1.956
Lower girdle facets azimuth	°	9.6	20.7	40.1	50.7	70.5	79.8	99.0	110.2
		128.9	137.4	157.2	168.9	189.1	197.7	216.9	228.9
Lower girdle facets azimuth deviation from ideal	°	-1.69	-13.05	-16.17	-28.04	-30.76	-43.97	-47.28	-58.51
		-62.35	-76.36	-79.01	-89.84	-92.10	-106.02	-109.32	-119.80
Depth girdle facet	%	75.11	76.11	76.52	77.85	78.39	76.55	77.71	76.04
		76.41	74.49	75.63	76.77	77.92	77.06	78.04	78.40
Length girdle facet	%	77.50	76.28	76.02	76.12	77.39	75.54	76.73	75.05
		75.44	73.52	74.52	75.66	76.75	75.89	77.02	77.38
Table	%	59.21	59.39	60.08	60.16				
Table	mm	3.421	3.432	3.471	3.476				
Twist	°	0.61	0.06	0.71	1.67	1.15	2.95	0.92	1.24
Girdle height bezel	%	3.20	3.34	3.35	3.44	3.11	3.04	3.14	3.26
Girdle height bezel	mm	0.185	0.193	0.194	0.199	0.180	0.176	0.181	0.188
Girdle height bone	%	2.54	2.65	2.73	2.66	2.21	2.55	2.51	2.68
Girdle height bone	mm	0.147	0.153	0.158	0.153	0.128	0.147	0.145	0.155

Parameter		1	2	3	4	5	6	7	8
Girdle height valley	%	1.98	2.21	2.27	2.28	2.30	2.42	2.38	2.19
		1.91	1.92	2.10	2.13	2.12	2.20	2.23	2.18
Girdle height valley	mm	0.115	0.128	0.131	0.132	0.133	0.140	0.137	0.126
		0.111	0.111	0.121	0.123	0.123	0.127	0.129	0.126
Girdle height valley type 2	%	1.98	2.21	2.27	2.28	2.30	2.42	2.38	2.19
		1.91	1.92	2.10	2.13	2.12	2.20	2.23	2.18
Girdle height valley type 2	mm	0.115	0.128	0.131	0.132	0.133	0.140	0.137	0.126
		0.111	0.111	0.121	0.123	0.123	0.127	0.129	0.126
Girdle height (Crown Mains)	%	3.18	3.25	3.37	3.41	3.11	3.04	3.14	3.26
Girdle height (Crown Mains)	mm	0.183	0.188	0.194	0.197	0.180	0.175	0.181	0.188
Girdle height (Pavilion Mains)	%	3.16	3.28	3.30	3.36	3.11	3.00	3.14	3.26
Girdle height (Pavilion Mains)	mm	0.183	0.189	0.191	0.194	0.180	0.173	0.181	0.188
Girdle height (Upper girdle facets)	%	1.99	2.21	2.27	2.29	2.30	2.45	2.38	2.20
		1.92	1.94	2.10	2.13	2.13	2.25	2.23	2.18
Girdle height (Upper girdle facets)	mm	0.115	0.128	0.131	0.132	0.133	0.142	0.137	0.127
		0.111	0.112	0.121	0.123	0.123	0.130	0.129	0.126
Girdle height (Lower girdle facets)	%	1.99	2.23	2.27	2.28	2.30	2.42	2.39	2.19
		1.91	1.92	2.10	2.15	2.14	2.21	2.23	2.20
Girdle height (Lower girdle facets)	mm	0.115	0.129	0.131	0.132	0.133	0.140	0.138	0.127
		0.111	0.111	0.121	0.124	0.124	0.128	0.129	0.127

Measurement as per OctoNus theory									
Crown angle	°	33.39	33.32	N/A	N/A				
Pavilion angle	°	40.31	40.33	N/A	N/A				

**Table of Correspondence of New Parameters and Obsolete Parameters (from Old Full Report for Brilliant)**

Obsolete parameter	New parameter		1	2	3	4	5	6	7	8
Pavilion depth	Pavilion height bezel	%	42.05	42.00	42.14	42.14	42.39	42.39	42.32	42.35
Pavilion depth	Pavilion height bezel	mm	2.430	2.427	2.435	2.435	2.449	2.449	2.445	2.447

**Table Correspondence of New Parameters and Obsolete Parameters (from Old Full Report for Semi-Polished Brilliant)**

Obsolete parameter	New parameter		1	2	3	4	5	6	7	8
Crown height (Mains)	Crown height	%	13.51	13.43	13.26	13.17	13.26	13.33	13.30	13.15
Crown height (Mains)	Crown height	mm	0.781	0.776	0.766	0.761	0.766	0.770	0.769	0.759
Pavilion depth (Mains)	Pavilion height bezel	%	42.05	41.99	42.14	42.14	42.39	42.38	42.32	42.35
Pavilion depth (Mains)	Pavilion height bezel	mm	2.430	2.426	2.435	2.435	2.449	2.449	2.445	2.447

**Table of Obsolete Parameters (from Old Full Report for Brilliant)**

Obsolete parameter		1	2	3	4	5	6	7	8
Crown height at girdle minima	%	14.05	13.95	13.82	13.77	13.66	13.61	13.66	13.70
		13.79	13.77	13.76	13.74	13.69	13.56	13.61	13.62
Crown height at girdle minima	mm	0.812	0.806	0.798	0.795	0.789	0.786	0.789	0.791
		0.797	0.795	0.795	0.794	0.791	0.783	0.786	0.787
Pavilion depth bone	%	42.45	42.52	42.62	42.57	42.97	42.69	42.92	42.71
Pavilion depth bone	mm	2.452	2.457	2.463	2.460	2.483	2.467	2.480	2.467
Pavilion depth at girdle minima	%	42.72	42.60	42.68	42.71	42.81	42.75	42.72	42.88
		43.07	43.10	42.90	42.90	43.05	43.02	42.92	42.96
Pavilion depth at girdle minima	mm	2.468	2.462	2.466	2.468	2.474	2.470	2.468	2.477
		2.488	2.490	2.479	2.479	2.487	2.486	2.480	2.482

**Table of Obsolete Parameters (from Old Full Report for Semi-Polished Brilliant)**

Obsolete parameter		1	2	3	4	5	6	7	8
Crown height (Upper girdle facets)	%	14.05	13.95	13.82	13.77	13.66	13.61	13.66	13.70
		13.79	13.77	13.76	13.74	13.68	13.56	13.61	13.62
Crown height (Upper girdle facets)	mm	0.812	0.806	0.798	0.795	0.789	0.786	0.789	0.791
		0.797	0.795	0.795	0.794	0.791	0.783	0.786	0.787
Pavilion depth (Lower girdle facets)	%	42.72	42.60	42.68	42.71	42.81	42.75	42.72	42.88
		43.07	43.10	42.90	42.90	43.05	43.02	42.92	42.96
Pavilion depth (Lower girdle facets)	mm	2.468	2.462	2.466	2.468	2.474	2.470	2.468	2.477
		2.488	2.490	2.479	2.479	2.487	2.486	2.480	2.482

Paint / Dug		Avg	Type	Sym	Max	Dev	Sym
Crown	°	-2.65	Painting	EX	-3.48	2.18	EX
Crown	notches	0.7, Small			0.9	0.6	
Pavilion	°	-1.62	Painting	EX	-2.98	3.36	EX
Pavilion	notches	0.4, Small			0.8	0.9	

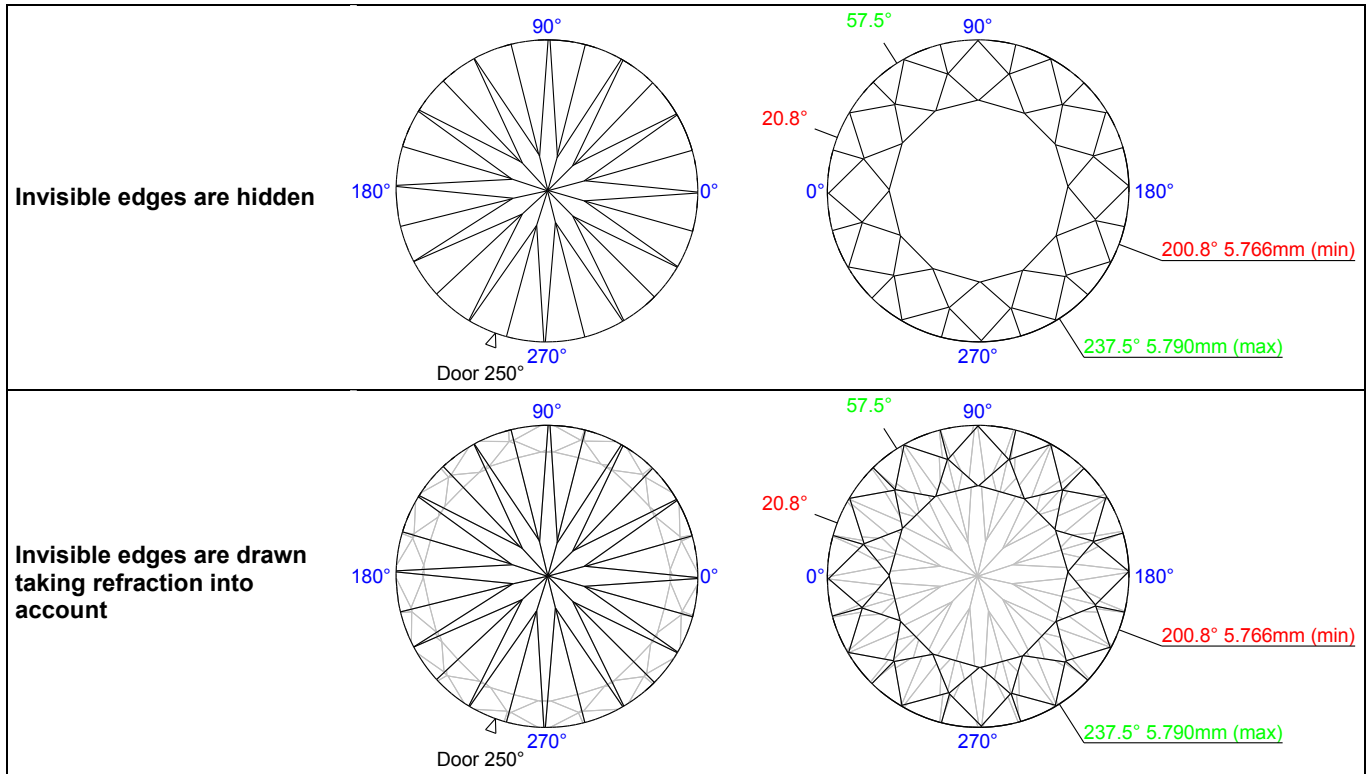
Paint / Dug		1	2	3	4	5	6	7	8
Crown painting	°	-3.04	-2.77	-2.27	-2.34	-2.44	-2.35	-2.41	-1.30
		-3.32	-2.43	-2.75	-2.93	-3.48	-2.31	-3.38	-2.81
Crown painting	notches	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.3
		0.9	0.6	0.7	0.8	0.9	0.6	0.9	0.7
Pavilion painting	°	-1.69	-1.95	-1.16	-2.53	-0.19	-2.23	-1.08	-2.58
		-1.26	-2.94	0.28	-2.64	0.38	-1.46	-1.84	-2.98
Pavilion painting	notches	0.5	0.5	0.3	0.7	0.1	0.6	0.3	0.7
		0.3	0.8	0.1	0.7	0.1	0.4	0.5	0.8

Offset	Distance, %	Distance, mm
Girdle-Culet offset by table axis	0.25 ± 0.22	0.005 ± 0.011
Girdle-Table offset by table axis	0.09 ± 0.20	0.015 ± 0.013
Culet-Table offset by table axis	0.34 ± 0.23	0.020 ± 0.014
Girdle to table-culet line offset	0.01	0.000

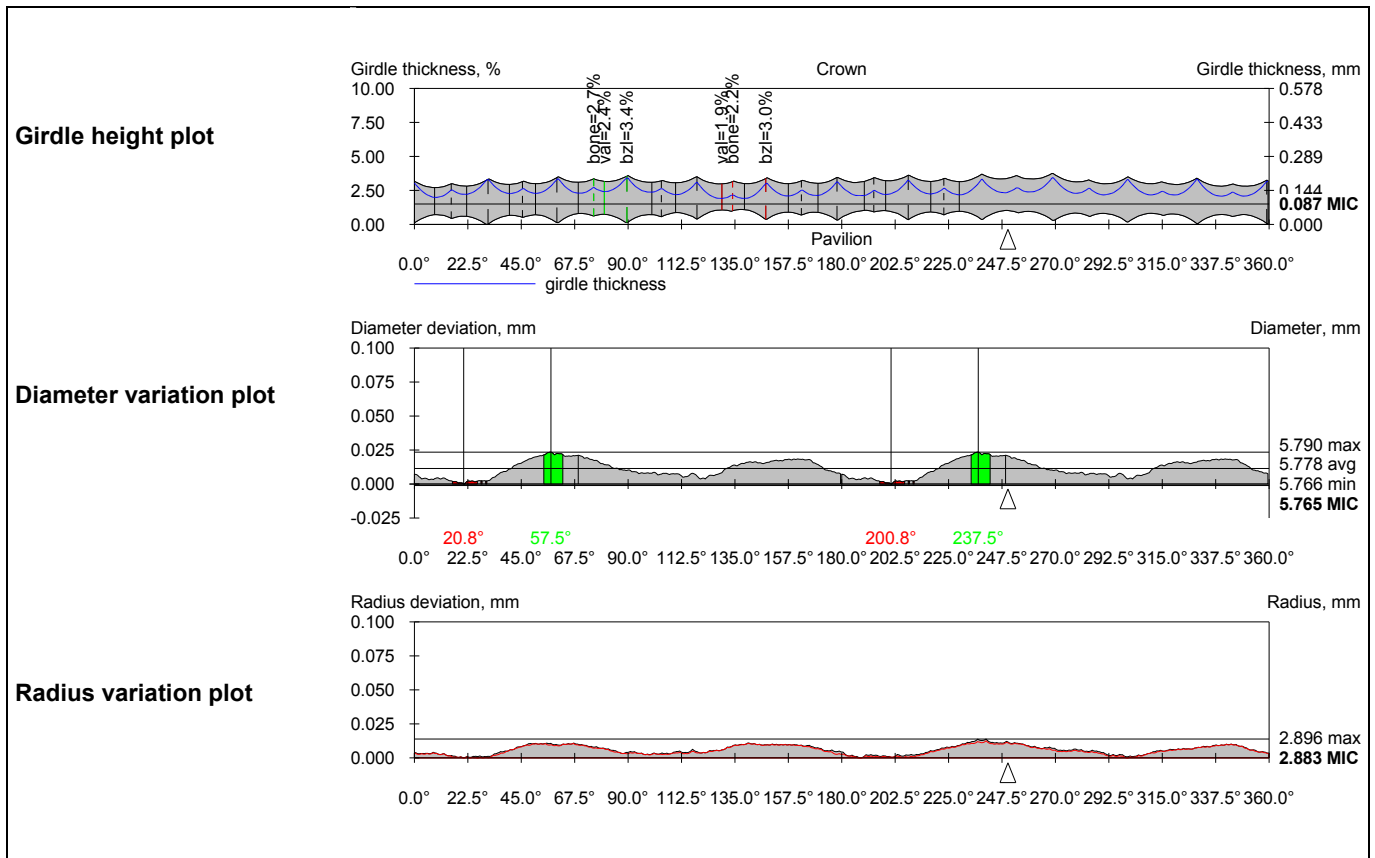
Culet shift ratio by main diameter	
Main diameter (avg)	5.778 mm, 100%
Width-wise culet shift ratio	2.901 mm, 50.22 %      2.872 mm, 49.71 %
Length-wise culet shift ratio	2.893 mm, 50.07 %      2.884 mm, 49.91 %

Model building info		1	2	3	4	5	6	7	8
The model is built correctly									
Girdle deviation / error	mkm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inner linear deviation / error	mkm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average deviation / error	mkm	2.6	2.5	2.4	2.3	2.3	2.3	2.2	2.2
		small	small	small	small	small	small	small	small

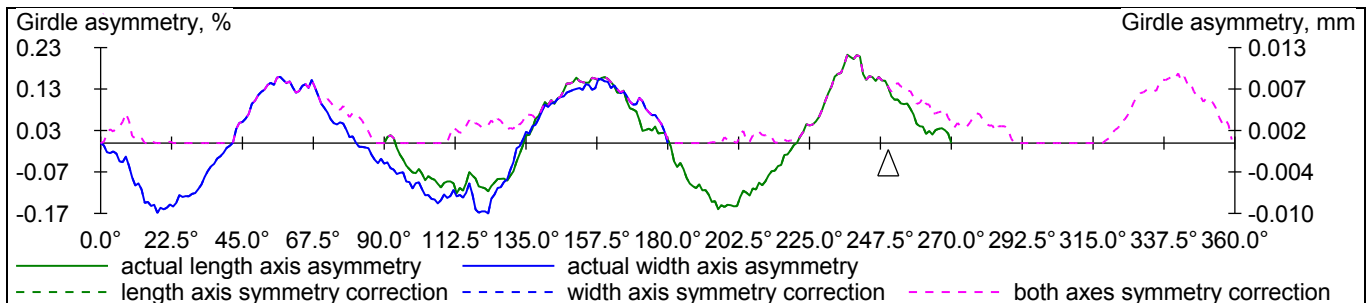
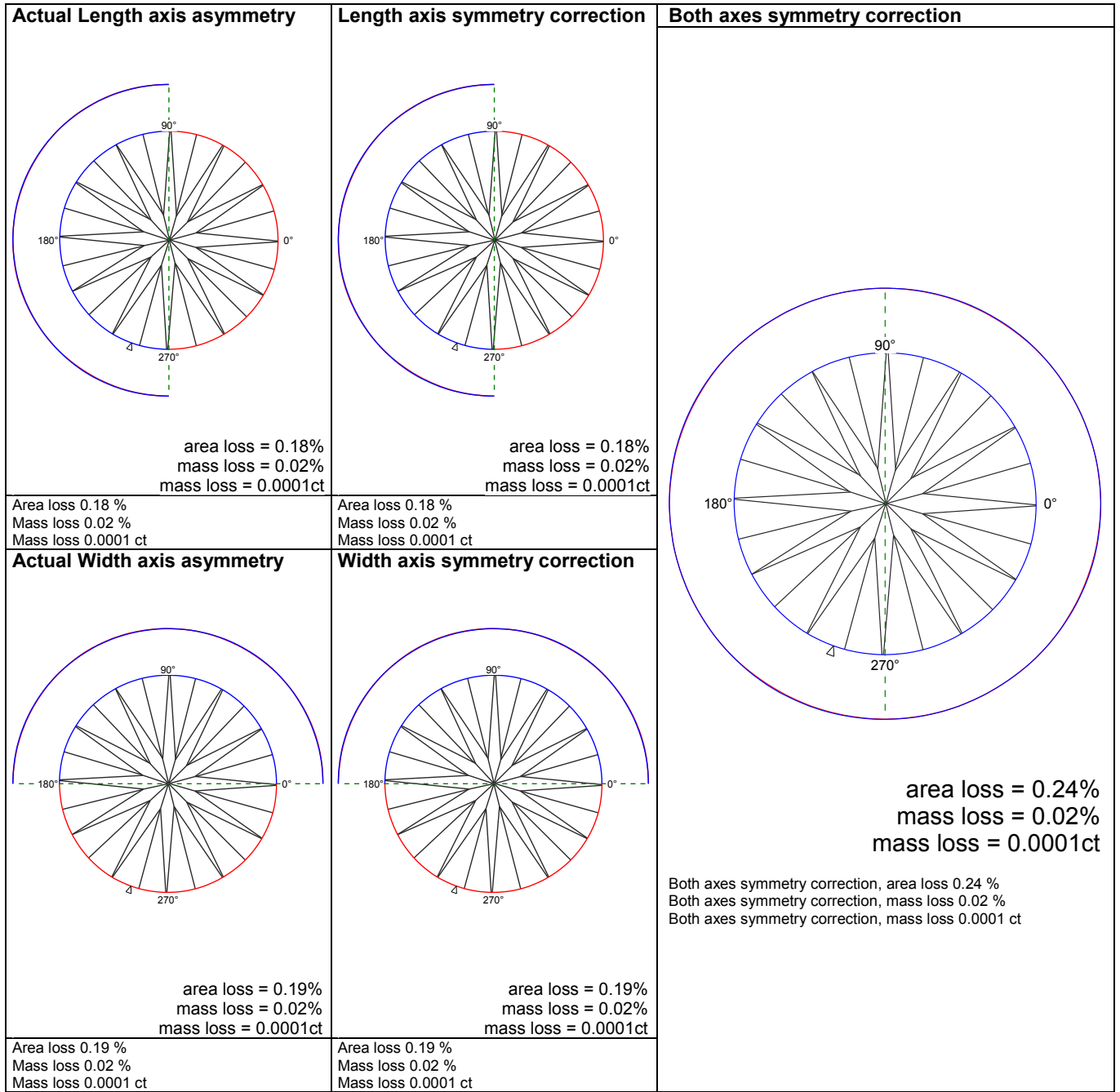
# Crown and pavilion views with indication minimum and maximum



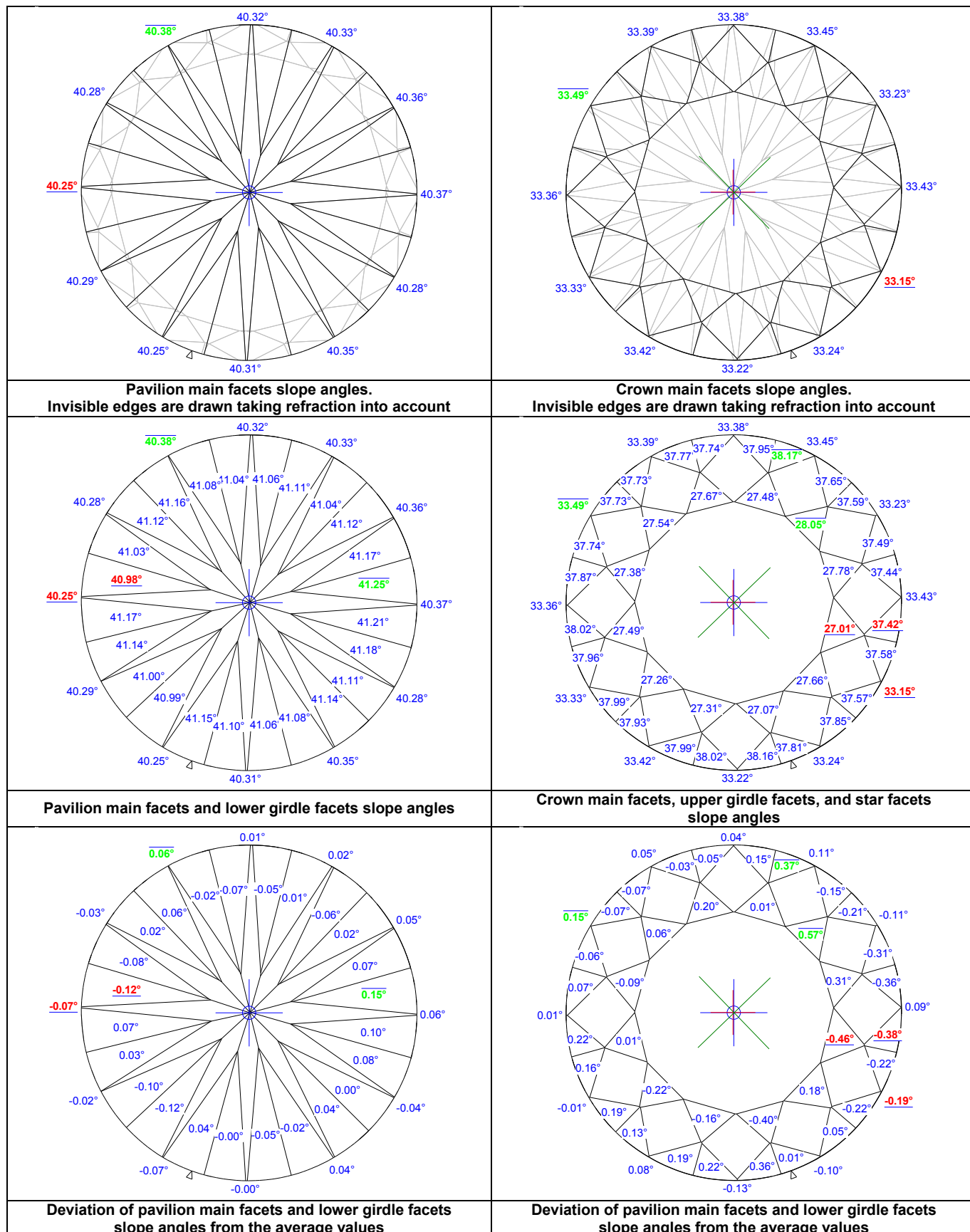
## Plots



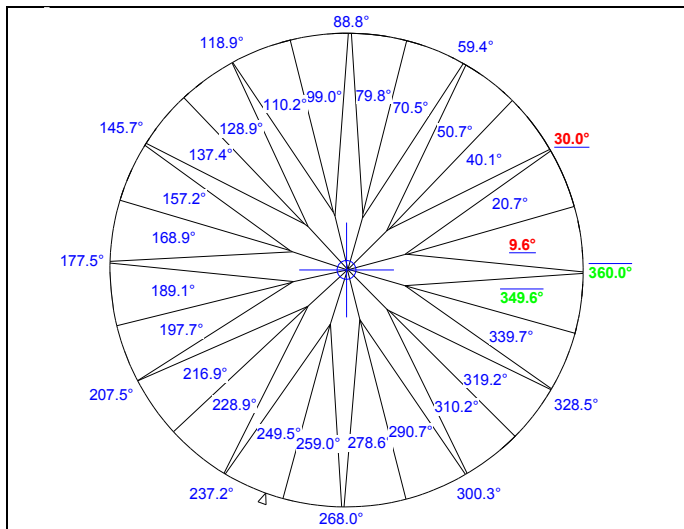
# Girdle asymmetry



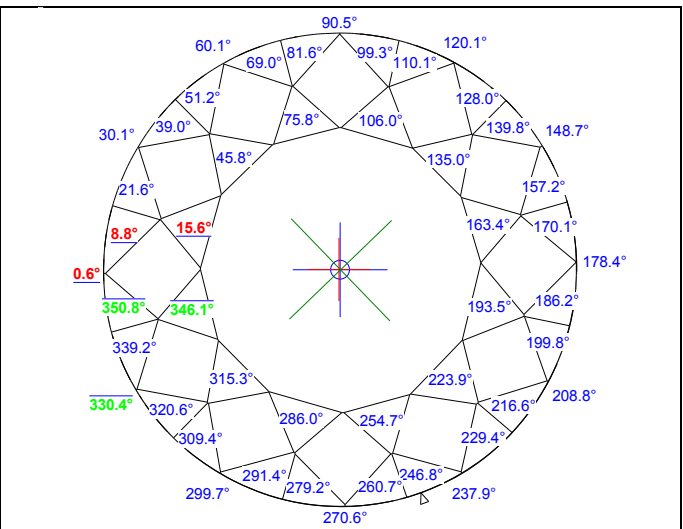
# Facets slope and azimuth angles



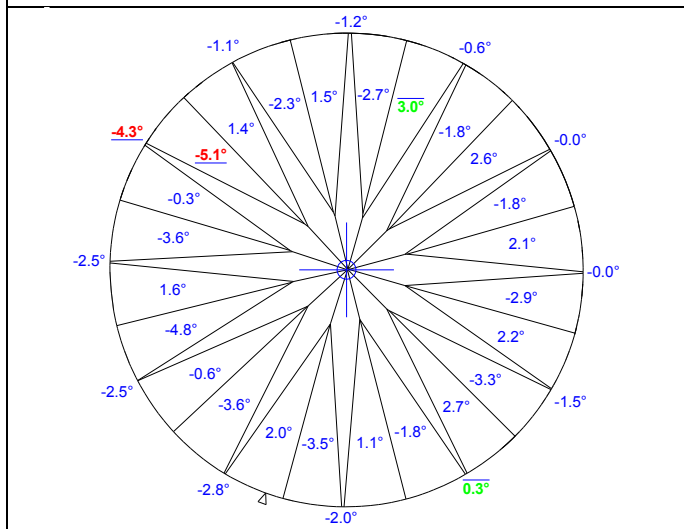




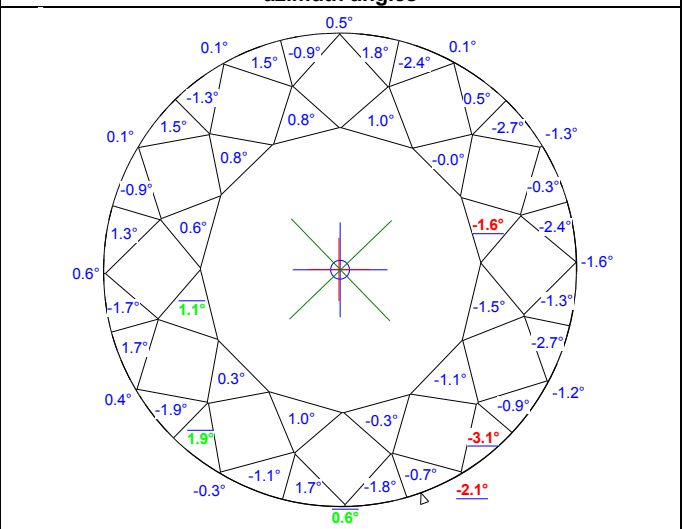
**Pavilion main facets and lower girdle facets azimuth angles**



**Crown main facets, upper girdle facets, and star facets azimuth angles**

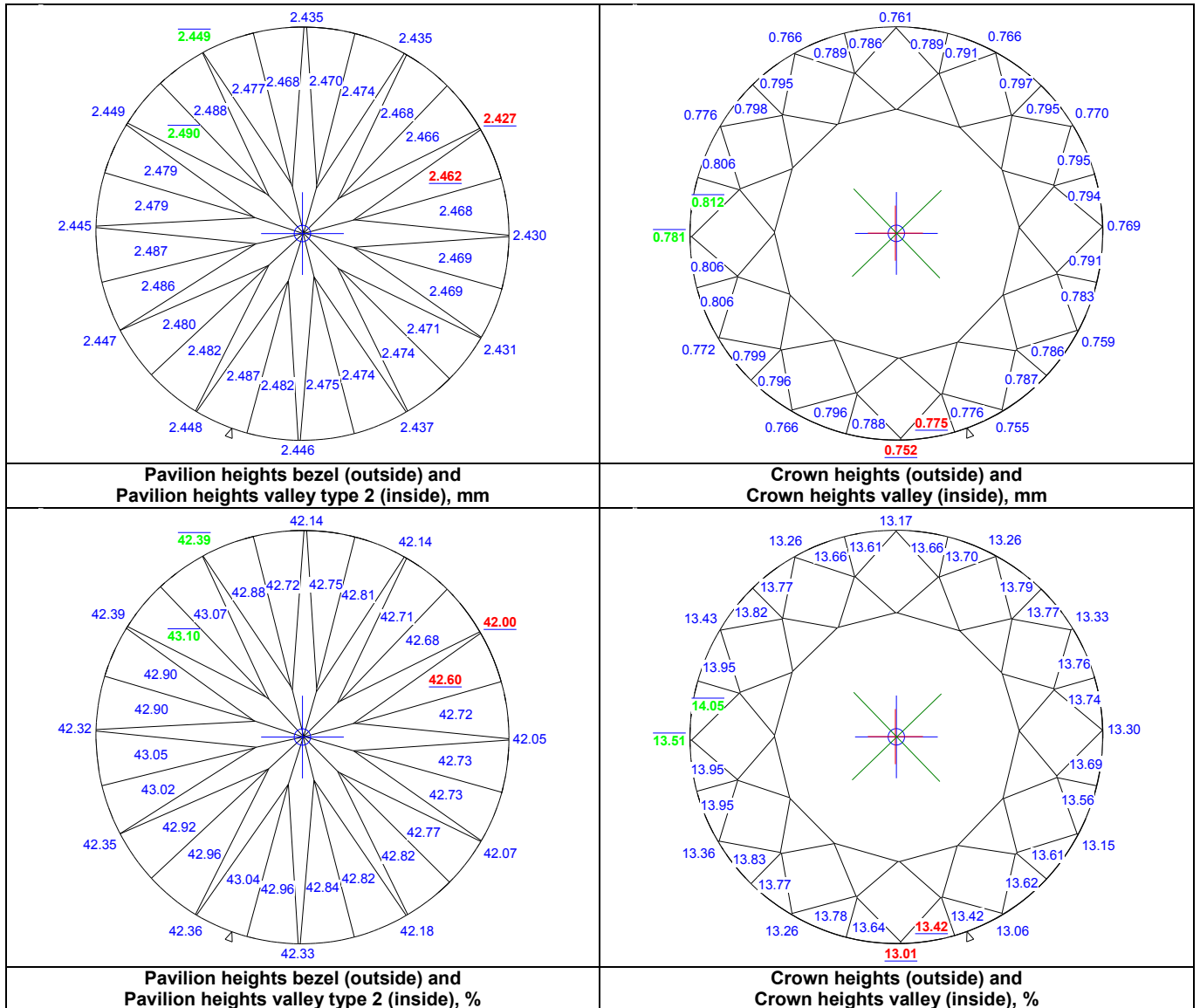


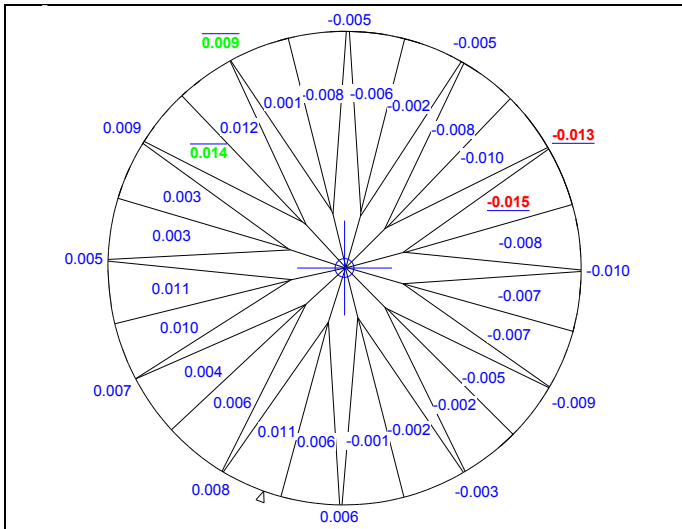
**Deviation of pavilion main facets and lower girdle facets azimuth angles from their ideal positions for the round brilliant**



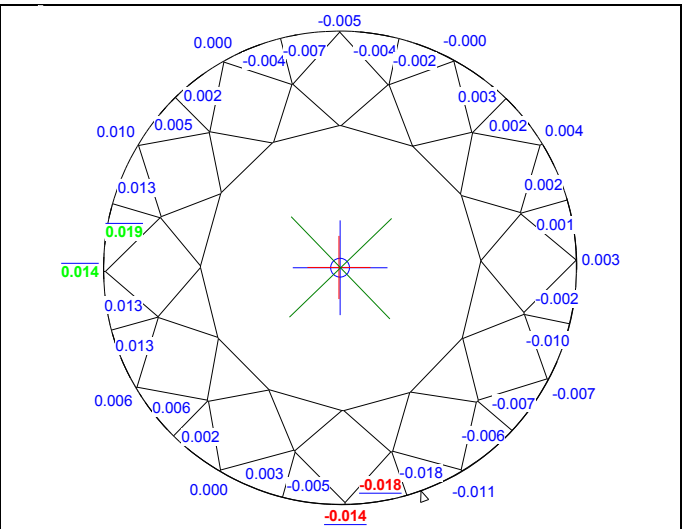
**Deviation of crown main facets, upper girdle facets, and star facets azimuth angles from their ideal positions for the round brilliant**

# Pavilion and crown heights

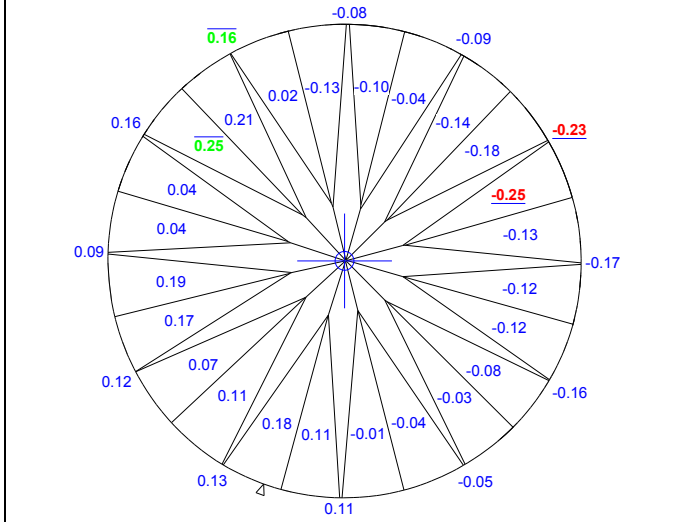




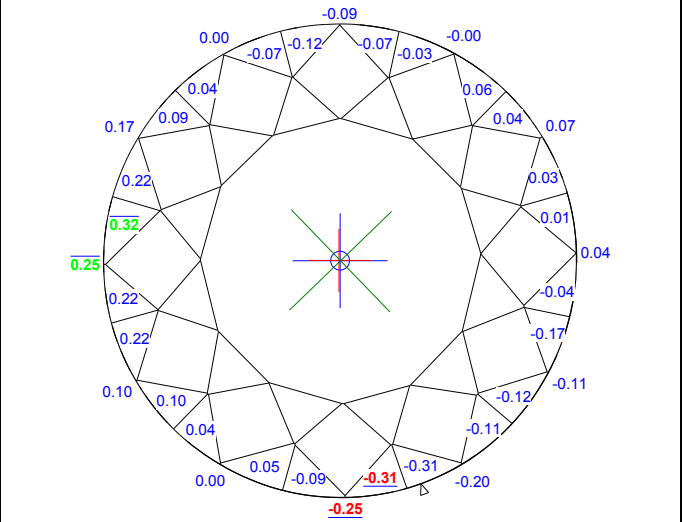
**Deviations of Pavilion heights bezel (outside) and Pavilion heights valley type 2 (inside) from the average values, mm**



**Deviations of Crown heights (outside) and Crown heights valley (inside) from the average values (mm)**

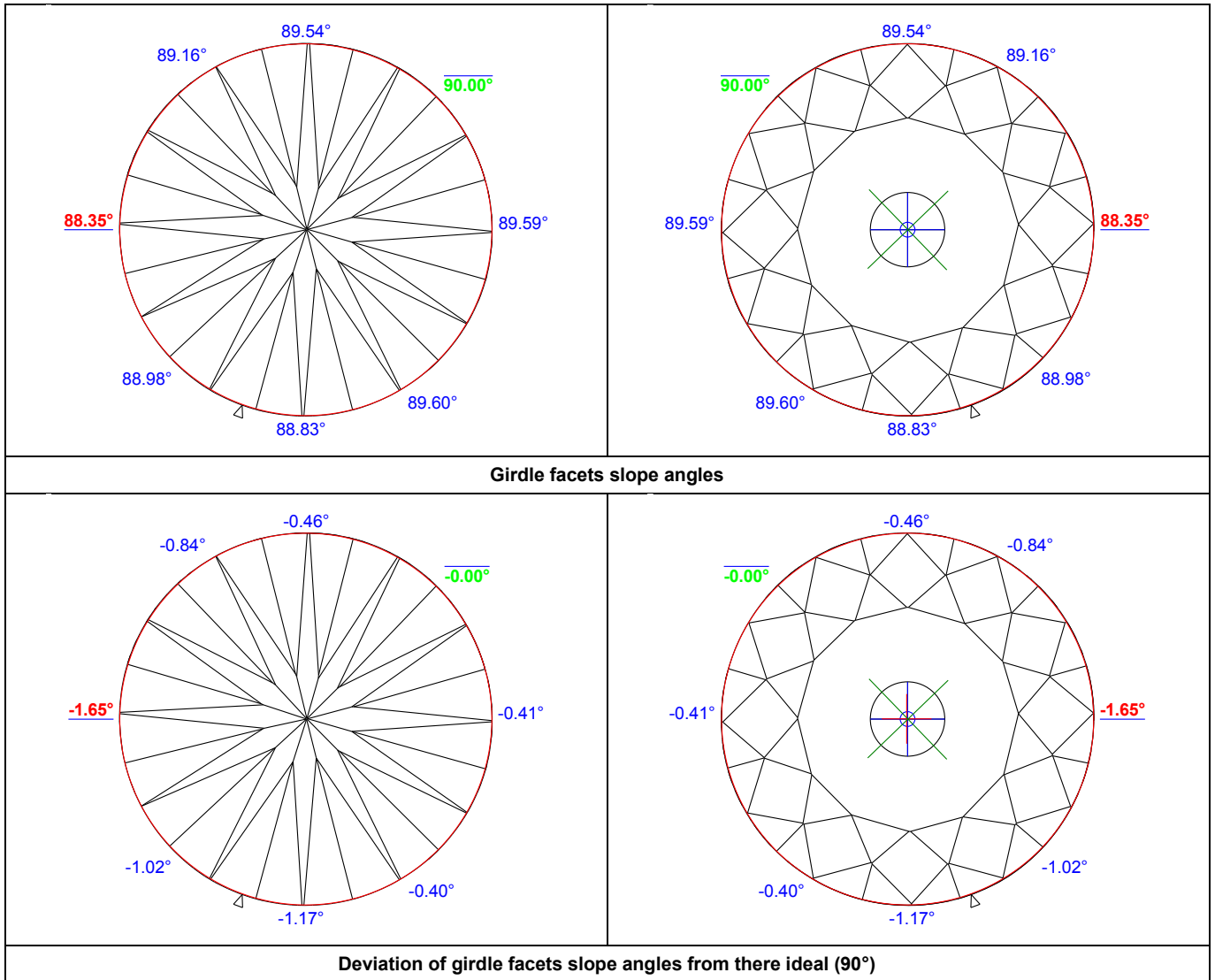


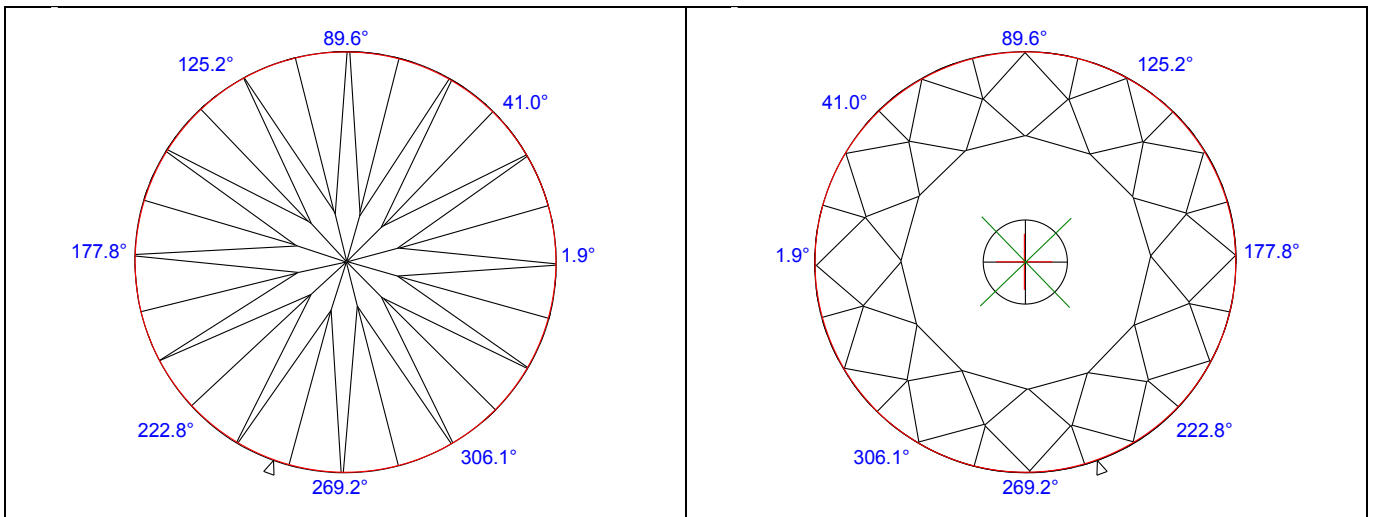
**Deviations of Pavilion heights bezel (outside) and Pavilion heights valley type 2 (inside) from the average values (%)**



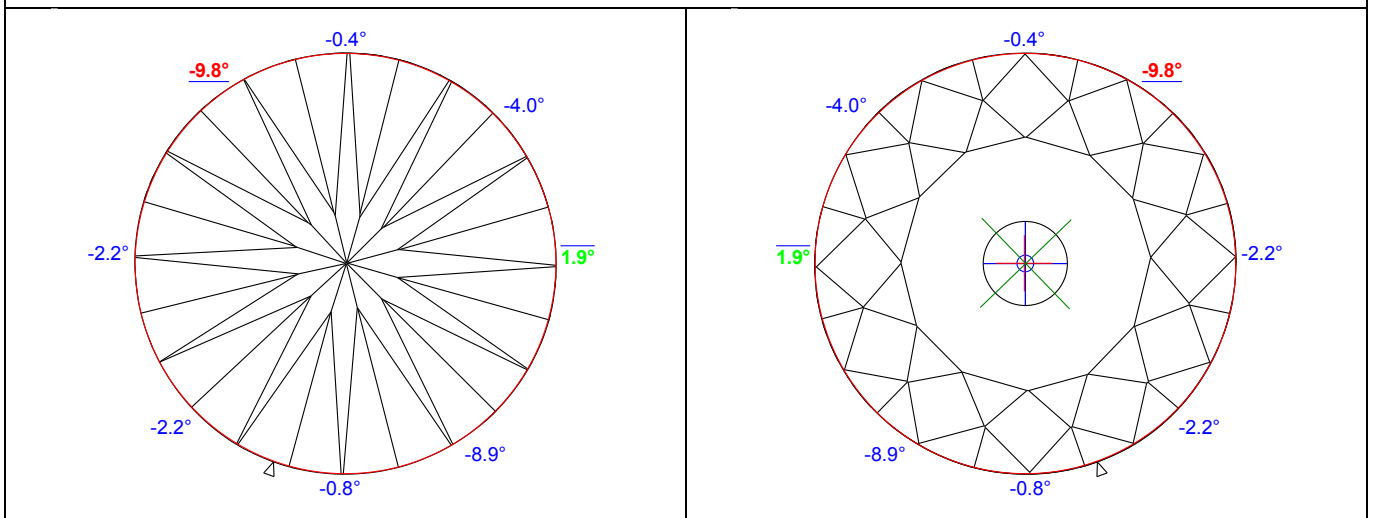
**Deviations of Crown heights (outside) and Crown heights valley (inside) from the average values (%)**

## Girdle facets slope and azimuth angles



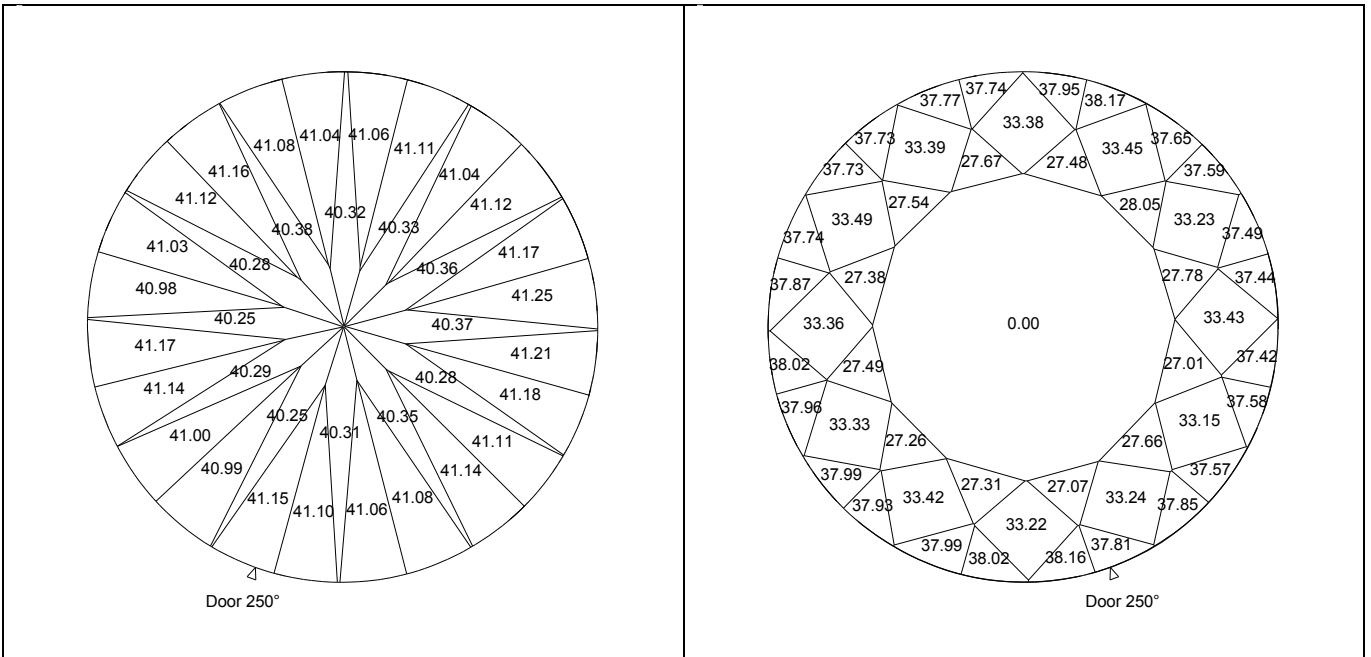


**Girdle facets azimuth angles**

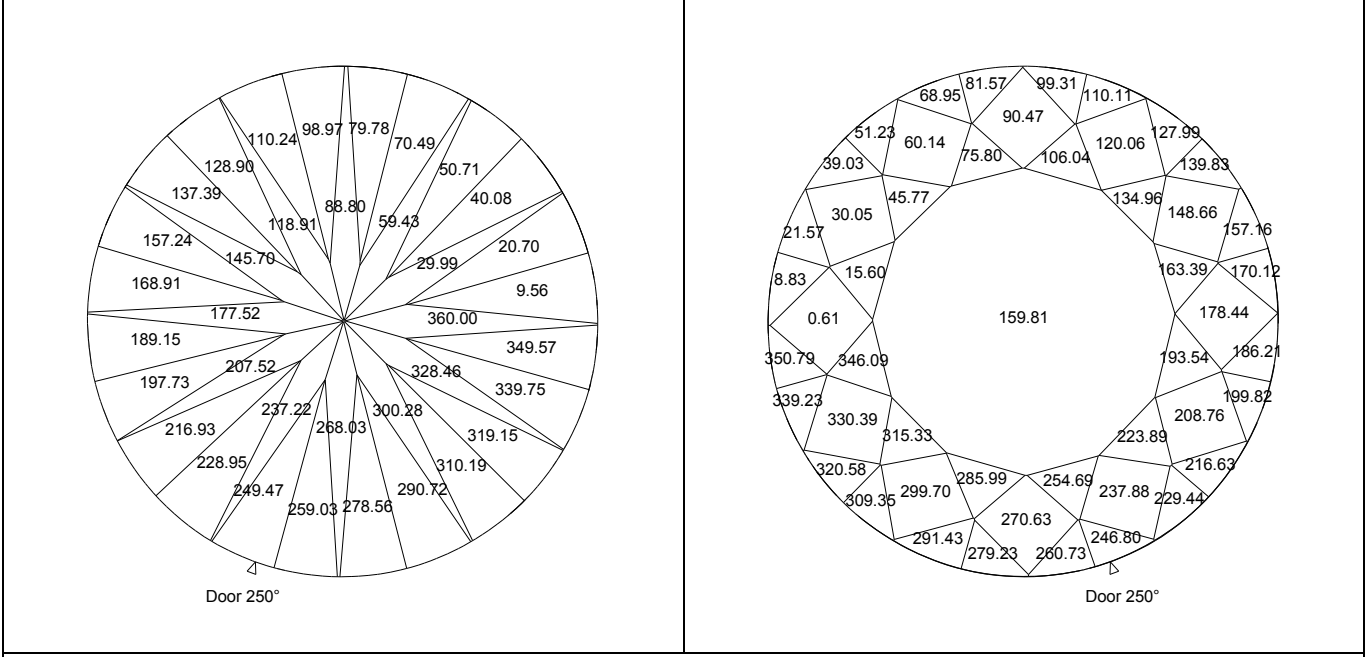


**Deviation of girdle facets azimuth angles**

## All facets slope and azimuth angles without breakdown into groups

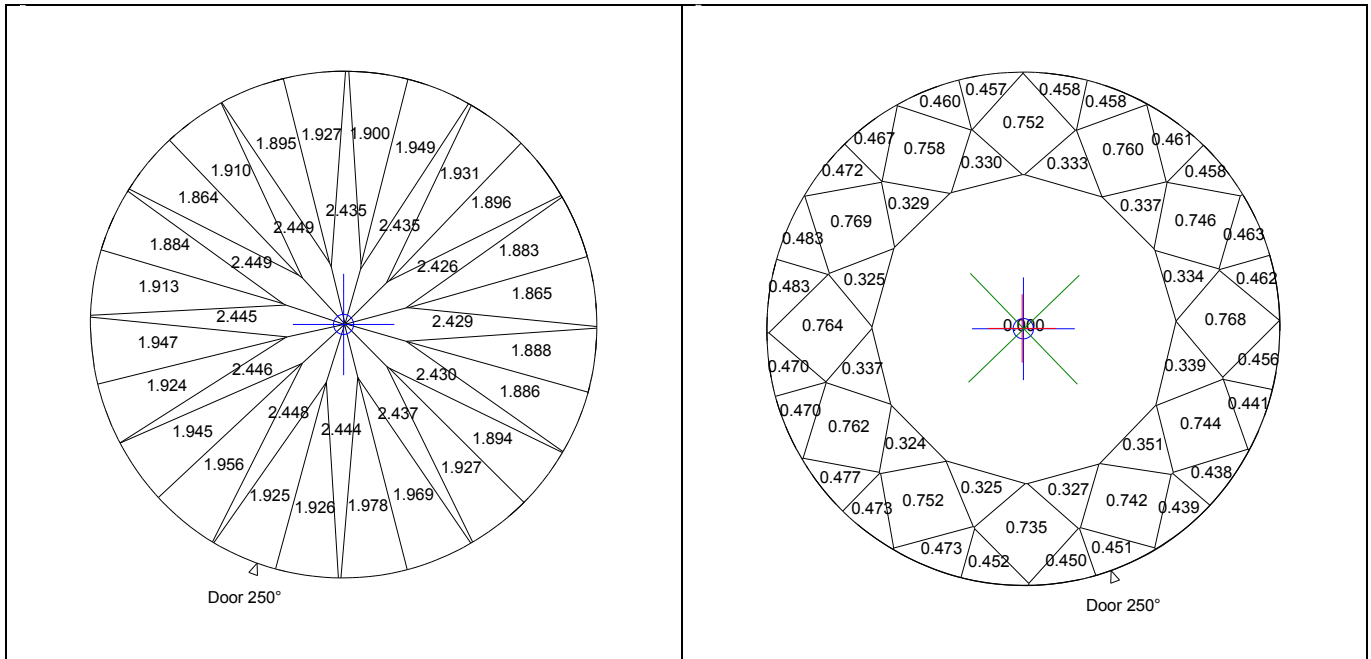


## All facets slope angles without breakdown into groups

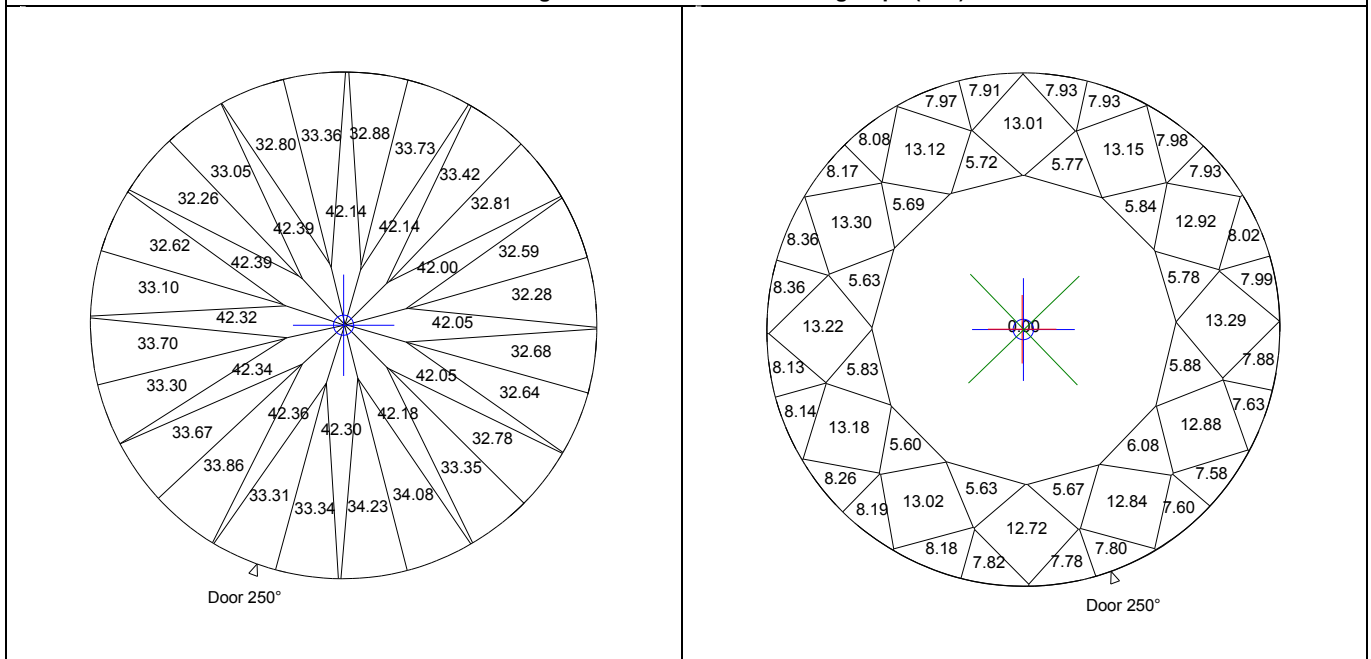


## All facets azimuth angles without breakdown into groups

## All facets heights without breakdown into groups

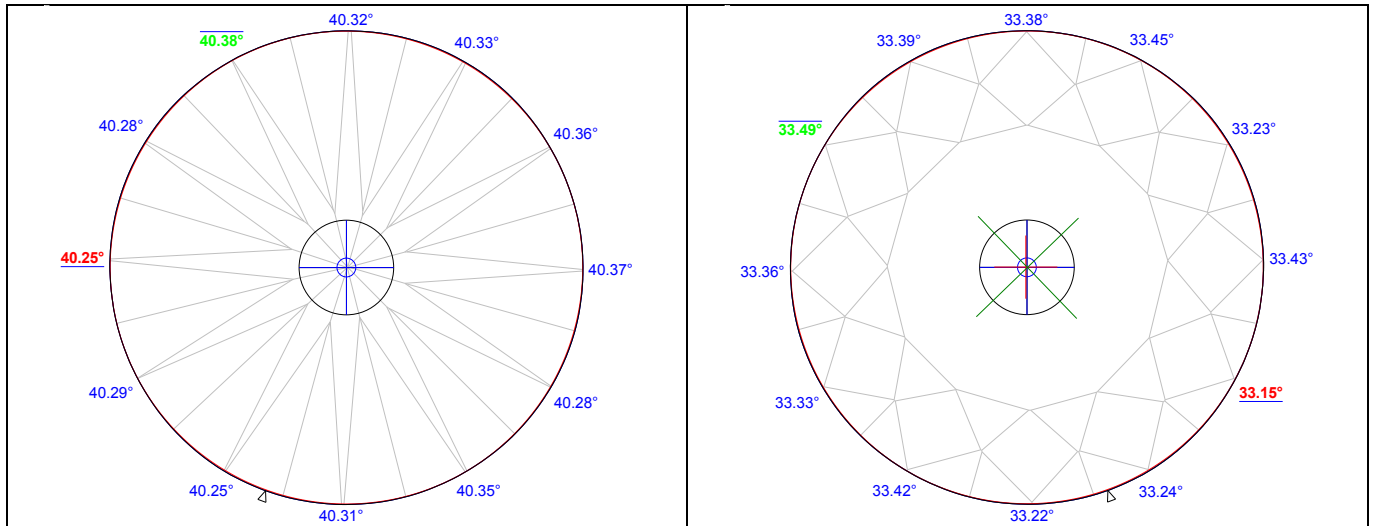


## All facets heights without breakdown into groups (mm)

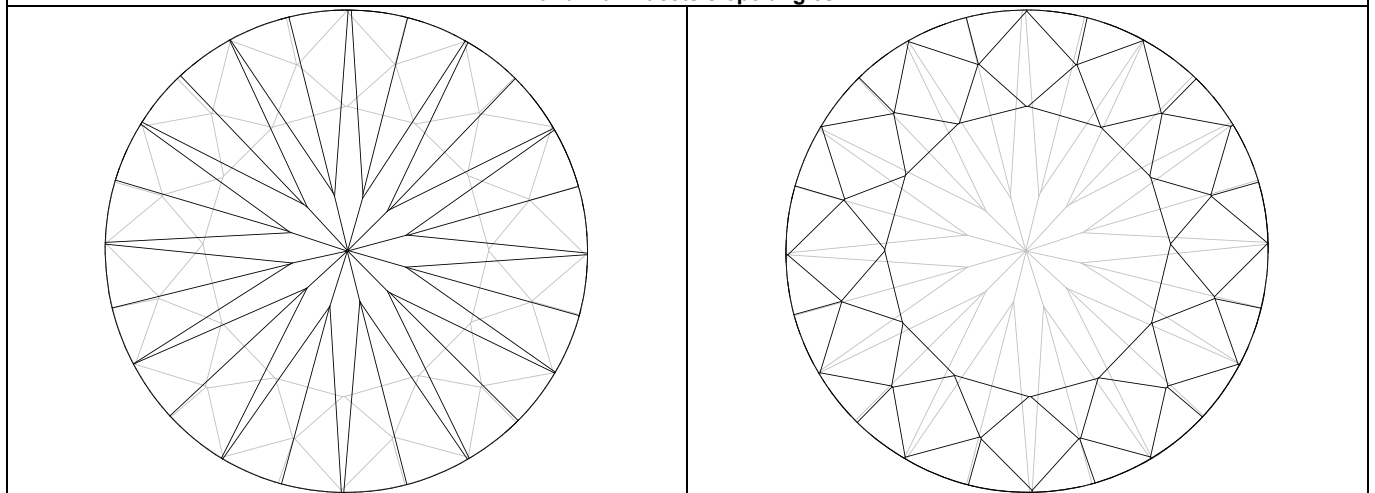


## All facets heights without breakdown into groups (%)

## Additional illustrations



**Pavilion and crown views 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, and main facets slope angles**



**Pavilion and crown views with indication of invisible edges without refraction**

+ **Girdle center**     
 + **Culet center**     
 X **Table center**     
 + **MIC center**