

Supplementary Materials

Table S1

Factor response table of aperture

	Control factors			
	A	B	C	D
Level 1	56.01	51.71	52.81	51.97
Level 2	53.80	58.34	60.35	56.88
Level 3	52.75	52.51	49.40	53.71
Maximum difference	3.25	6.63	10.96	4.91

Table S2

Factor response table of addendum circle

	Control factors			
	A	B	C	D
Level 1	55.55	55.53	61.82	61.47
Level 2	51.33	52.87	59.31	50.35
Level 3	63.57	62.06	49.33	58.64
Maximum difference	12.24	9.19	12.48	11.12

Table S3

Factor response table of dedendum circle

	Control factors			
	A	B	C	D
Level 1	57.93	56.01	59.97	57.63
Level 2	60.08	62.42	52.26	56.74
Level 3	56.51	56.09	62.29	60.14
Maximum difference	3.57	6.41	10.04	3.40

Table S4

Factor response table of surface width

	Control factors			
	A	B	C	D
Level 1	34.27	37.89	35.45	38.56
Level 2	39.37	39.69	42.12	39.30
Level 3	40.42	36.48	36.48	36.21
Maximum difference	6.15	3.21	6.67	3.09

Table S5

ANOVA of aperture

Factor	<i>dof</i>	<i>SS</i>	<i>V</i>	<i>SS'</i>	ρ
A	2	16.57	8.29	16.57	5.16%
B	2	78.74	39.37	78.75	24.53%
C	2	188.60	94.30	188.60	58.74%
D	2	37.13	18.57	37.13	11.57%
Total	8	321.05	-	321.05	100%

Table S6

ANOVA of addendum circle

Factor	<i>dof</i>	<i>SS</i>	<i>V</i>	<i>SS'</i>	ρ
A	2	231.80	115.91	231.82	28.00%
B	2	134.20	67.08	134.15	16.21%
C	2	261.70	130.83	261.66	31.61%
D	2	200.40	100.19	200.38	24.20%
Total	8	828	-	828.01	100%

Table S7

ANOVA of dedendum circle

Factor	<i>dof</i>	<i>SS</i>	<i>V</i>	<i>SS'</i>	ρ
A	2	19.37	9.68	19.37	6.81%
B	2	81.08	40.54	81.08	28.49%
C	2	165.57	82.78	165.57	58.17%
D	2	18.60	9.30	18.60	6.54%
Total	8	284.61	-	284.61	100%

Table S8

ANOVA of surface width

Factor	<i>dof</i>	<i>SS</i>	<i>V</i>	<i>SS'</i>	ρ
A	2	65.03	32.52	65.03	37.48%
B	2	15.49	7.75	15.49	8.93%
C	2	77.39	38.69	77.39	44.60%
D	2	15.60	7.80	15.60	8.99%
Total	8	173.52	-	173.52	100%