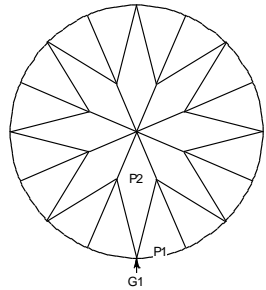
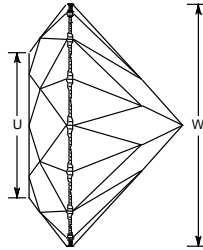
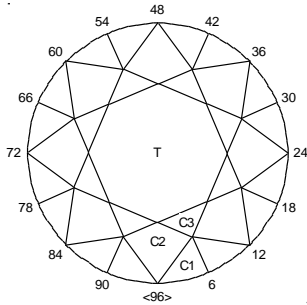


Section O.8A-1 & I.8A-2
Specified Size

Colourless Australian Topaz
11mm



4

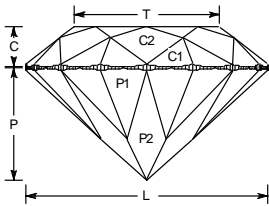
Standard Round Brilliant (Continuous Girdle)

Meets: 41 (Crown 24, Pavilion 17)

Angles for R.I. = 1.620

57 + 1 girdles = 58 facets
8-fold, mirror-image symmetry
96 index

$L/W = 1.000$ $T/W = 0.533$ $U/W = 0.533$
 $P/W = 0.428$ $C/W = 0.159$
 $Vol./W^3 = 0.208$



PAVILION

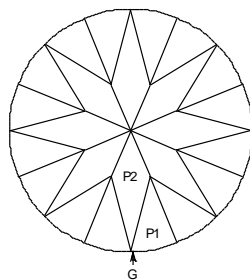
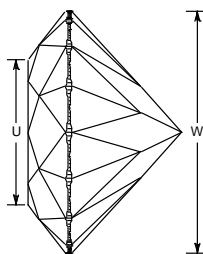
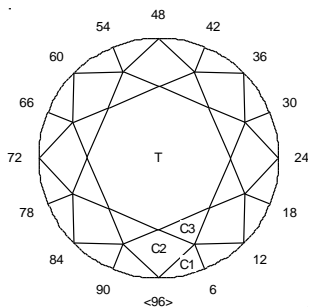
P1	42.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Cut to T.C.P.
G1	90.00°		Establish outline size.
P2	40.00°	96-12-24-36-48-60-72-84	Meet P1, P1 at girdle.

CROWN

C1	37.81°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Establish girdle width.
C2	33.00°	96-12-24-36-48-60-72-84	Meet C1, C1 at girdle.
C3	19.20°	06-18-30-42-54-66-78-90	Meet C1, C2, C2 & C1.
T	0.00°	Table	Meet C3, C2 & C3.

Section N.8A-3 & J.8A-4
Minimum Size

Coloured Cubic Zirconia
8mm



Standard Round Brilliant - Continuous Girdle

Meets: 41 (Crown 24, Pavilion 17)

Angles for R.I. = 2.160

57 + 1 girdles = 58 facets

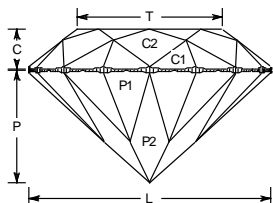
8-fold, mirror-image symmetry

96 index

L/W = 1.000 T/W = 0.593 U/W = 0.593

P/W = 0.459 C/W = 0.163

Vol./W³ = 0.218



PAVILION

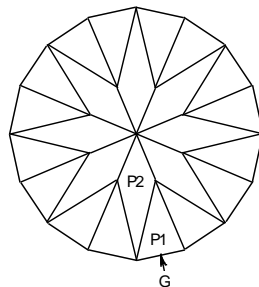
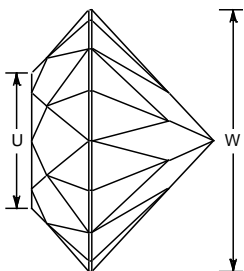
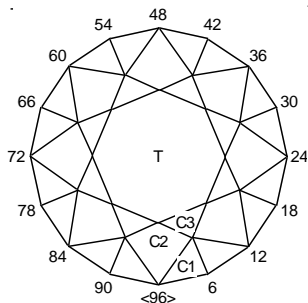
G	90.00°		Continuous Girdle
P1	44.00°	03-09-15-21-27-33-39-45- 51-57-63-69-75-81-87-93	Cut to TCP
P2	42.00°	96-12-24-36-48-60-72-84	Meet G1, P1, P1 & G1

CROWN

C1	44.00°	03-09-15-21-27-33-39-45- 51-57-63-69-75-81-87-93	Cut to create even Girdle.
C2	37.00°	96-12-24-36-48-60-72-84	Meet G, C1, C1 & G.
C3	22.00°	06-18-30-42-54-66-78-90	Meet C1, C2, C2 & C1.
T	0.00°	Table	Meet C2, C2 & C2.

Section O.8B-1 & I.8B-2
Minimum Size

Natural Australian Sapphire
7mm



Standard Round Brilliant Faceted Girdle

Meets 57 (Crown 32, Pavilion 25)

Angles for R.I. = 1.760

57 + 16 girdles = 73 facets

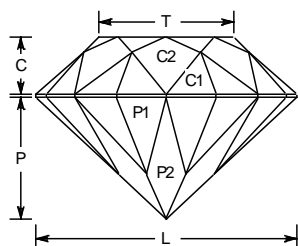
2-fold, mirror-image symmetry

96 index

$L/W = 1.000$ $T/W = 0.516$ $U/W = 0.516$

$P/W = 0.466$ $C/W = 0.218$

$Vol./W^3 = 0.236$

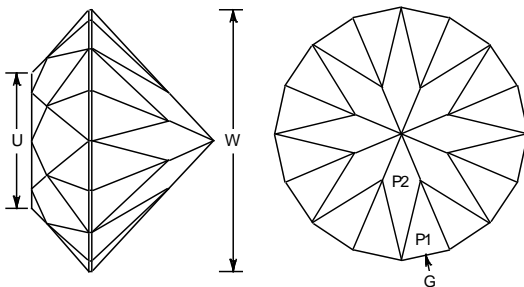
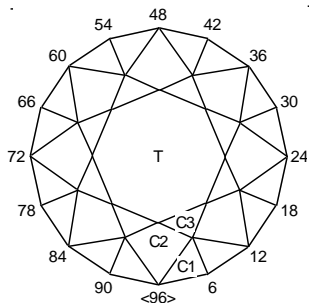


PAVILION

P1	45.00°	03-09-15-21- 27-33-39-45- 51-57-63-69- 75-81-87-93	TCP
G	90.00°	03-09-15-21- 27-33-39-45- 51-57-63-69- 75-81-87-93	Establish Outline Size
P2	43.00°	96-12-24-36- 48-60-72-84	Meet G, P1, P1 & G
CROWN			
C1	47.00°	03-09-15-21- 27-33-39-45- 51-57-63-69- 75-81-87-93	Establish width of Girdle
C2	42.00°	96-12-24-36- 48-60-72-84	Meet G, C1, C1 & G.
C3	27.00°	06-18-30-42- 54-66-78-90	Meet C1, C2, C2 & C1.
T	0.00°	Table	Meet C3, C2 & C3.

Section N.8B-3 & J.8B-4
Minimum Size

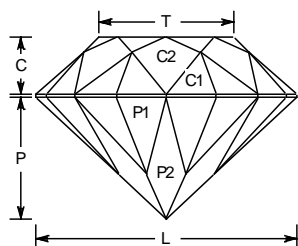
Cubic Zirconia
8mm



Standard Round Brilliant Faceted Girdle

Meets 57 (Crown 32, Pavilion 25)

Angles for R.I. = 2.160
57 + 16 girdles = 73 facets
2-fold, mirror-image symmetry
96 index
L/W = 1.000 T/W = 0.516 U/W = 0.516
P/W = 0.466 C/W = 0.218
Vol./W³ = 0.236



PAVILION

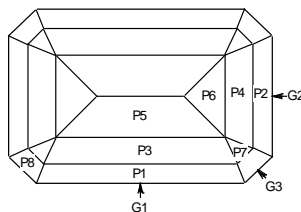
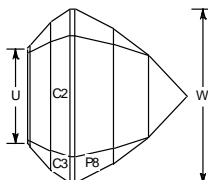
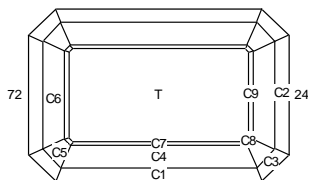
P1	45.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	TCP
G	90.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Establish Outline Size
P2	43.00°	96-12-24-36-48-60-72-84	Meet G, P1, P1 & G

CROWN

C1	47.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Establish width of Girdle
C2	42.00°	96-12-24-36-48-60-72-84	Meet G, C1, C1 & G.
C3	27.00°	06-18-30-42-54-66-78-90	Meet C1, C2, C2 & C1.
T	0.00°	Table	Meet C3, C2 & C3.

Section O.9A-1, I.9A-2 & N.9A-3 Natural Amethyst
 Minimum Size 6mm

60 48 36

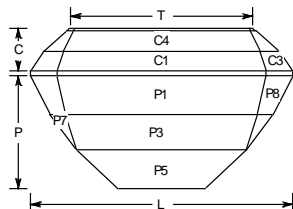


84 <96> 12

Standard Oblong Step Cut with Cut Corners

Meets 44 (Crown: 24, Pavilion: 20)

Angles for R.I. = 1.540
 45 + 8 girdles = 53 facets
 2-fold, mirror-image symmetry
 96 index



PAVILION

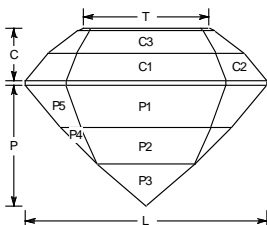
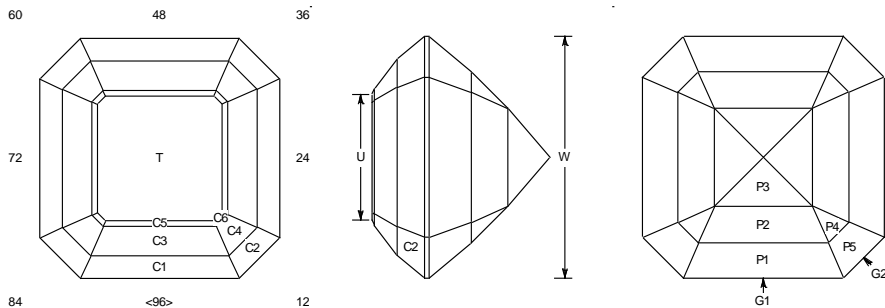
G1	90.00°	96-48	Set width
G2	90.00°	24-72	Set Length
P1	63.00°	96-48	Form level Girdle.
P2	63.00°	24-72	Form level Girdle with P1
P3	53.00°	96-48	Size by Eye.
P4	53.00°	24-72	Meet P1, P2, & P3
P5	43.00°	96-48	Size by Eye.
P6	43.00°	24-72	Meet P3, P4, & P5.
P7	53.00°	12-36-60-84	Meet P3, P4, P5, P6.
P8	63.00°	12-36-60-84	Meet P1, P3, P7.
G3	90.00°	12-36-60-84	Cut for level Girdle.

CROWN

C1	55.00°	96-48	Set Girdle width.
C2	55.00°	24-72	Level girdle with C1.
C3	55.00°	12-36-60-84	Level Girdle with C1, & C2.
C4	42.00°	96-48	Size by eye.
C5	42.00°	12-36-60-84	Meet C1, C3, C4.
C6	42.00°	24-72	Meet C2, C3, C5,
C7	26.00°	96-48	Size by eye.
C8	26.00°	12-36-60-84	Meet C4, C5, C7.
C9	26.00°	24-72	Meet C5, C6, C8.
T	0.00°	Table	Size by eye.

Section Minimum Size

O.9B-1 Coloured Australian Topaz 6mm



Standard Square Step Cut With Cut Corners.
Meets 45 (crown 24 Pavilion 21)

Angles for R.I. = 1.620
45 + 8 girdles = 53 facets
4-fold, mirror-image symmetry
96 index
L/W = 1.000

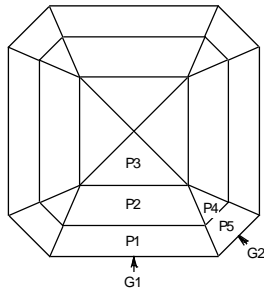
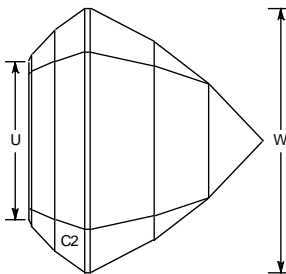
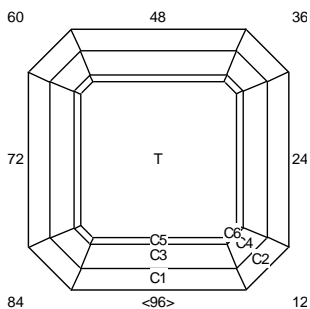
PAVILION

G1	90.00°	96-24-48-72	Set size of stone.
P1	50.00°	96-24-48-72	Cut for level Girdle.
P2	45.00°	96-24-48-72	Size P1 by eye.
P3	40.00°	96-24-48-72	Size P1, P2, P3 by eye.
P4	45.00°	12-36-60-84	Meet P2, P3.
P5	50.00°	12-36-60-84	Meet P1, P2, P4.
G2	90.00°	12-36-60-84	Cut for level Girdle.
CROWN			
C1	50.00°	96-24-48-72	Set Girdle width.
C2	50.00°	12-36-60-84	Cut for level Girdle with C1.
C3	37.00°	96-24-48-72	Size C1, & C2, by eye.
C4	37.00°	12-36-60-84	Meet C1, C2, C3.
C5	22.00°	96-24-48-72	Size C3, C4 by eye.
C6	22.00°	12-36-60-84	Meet C3, C4, C5.
T	0.00°	Table	Size C5, & C6 by eye.

Section Minimum Size

I.9B-2 & N.9B-3

Citrine
6mm



Standard Square Step Cut with Cut Corners

Meets 45 (Crown 24, Pavilion 21)

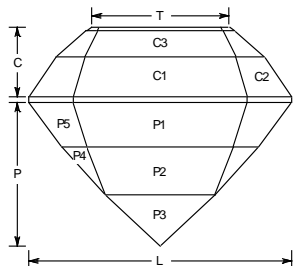
Angles for R.I. = 1.540

45 + 8 girdles = 53 facets

4-fold, mirror-image symmetry

96 index

L/W = 1.



PAVILION

G1	90.00°	96-24-48-72
P1	53.00°	96-24-48-72
P2	48.00°	96-24-48-72
P3	43.00°	96-24-48-72
P4	48.00°	12-36-60-84
P5	53.00°	12-36-60-84
G2	90.00°	12-36-60-84

Set Size.
Cut for Level Girdle.
Size by eye.
Size by eye. Form PCP.
Meet P2, P3.
Meet P1, P2, & P4.
Cut for Level Girdle.

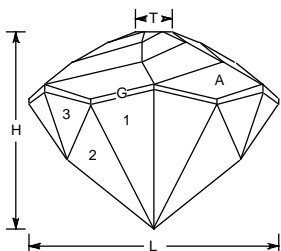
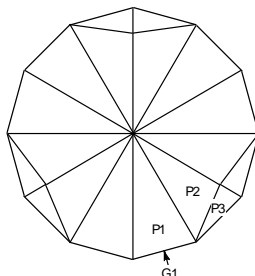
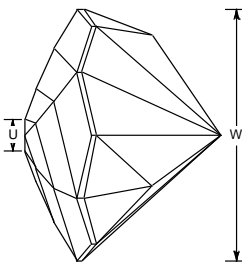
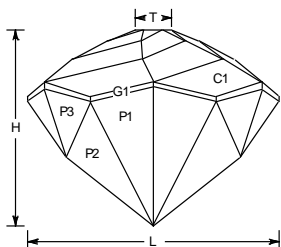
CROWN

C1	55.00°	96-24-48-72
C2	55.00°	12-36-60-84
C3	42.00°	96-24-48-72
C4	42.00°	12-36-60-84
C5	26.00°	96-24-48-72
C6	26.00°	12-36-60-84
T	0.00°	Table

Set girdle width.
Cut for level Girdle with C1.
Size C1, & C2 By eye.
Meet C1, C2, & C3.
Size C3, & C4 by eye.
Meet C3, C4, C5.
Size C5, & C6 by eye.

Section O.10-1,
Minimum Size

Coloured Quartz
8mm



Whirly Retro

by Robert W. Strickland 9/17/02

Meets 40 (Crown 24, Pavilion 16)

Angles for R.I. = 1.540

43 + 12 girdles = 55 facets

3-fold, mirror-image symmetry

96 index

$L/W = 1.000$ $T/W = 0.145$ $U/W = 0.126$

$H/W = 0.784$

$Vol./W^3 = 0.248$

PAVILION

G1	90.00°	04-12-20-28-36-44- 52-60-68-76-84-92	12 equal sides.
P1	48.00°	01-31-33-63-65-95	Cut to meet PCP.
P2	46.45°	03-29-35-61-67-93	Meet PCP.
P3	70.00°	13-19-45-51-77-83	Meet G1, P1, P1 & G1.

CROWN

C1	40.00°	08-24-40-56-72-88	Establish width of Girdle.
C2	30.00°	10-26-42-58-74-90	Meet G1, C1, C1 & G1.
C3	25.00°	12-28-44-60-76-92	Meet C1, C2 & C2.
C4	20.00°	96-16-32-48-64-80	Meet C2, C3 & C3.
T	0.00°	Table	Meet C4, C3 & C4.

This design uses the retro reflector principle on the pavilion.

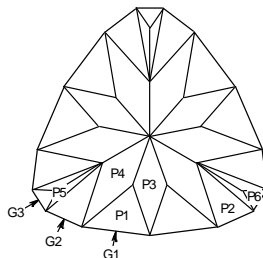
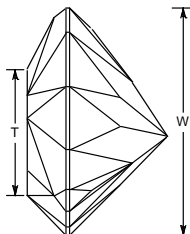
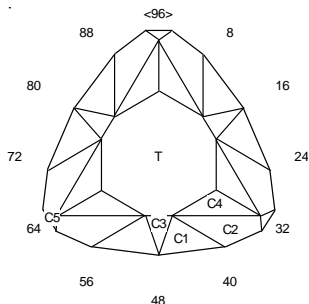
Most light rays make three bounces off pavilion

facets. Don't change the angles for different materials.

Symmetry: Pavilion:3-fold, mirror-image Crown: 6-fold

Section I.10-2,
Minimum Size

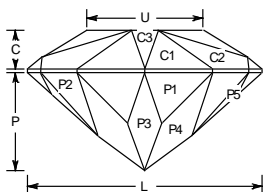
Any Material
8mm



TRIBBLE: A Triangular Brilliant

by Robert W. Strickland
Meets 43 (Crown 24 , Pavilion 19)

Angles for R.I. = 1.540
55 + 15 girdles = 70 facets
3-fold, mirror-image symmetry
96 index
L/W = 1.032 T/W = 0.553 U/W = 0.508
P/W = 0.430 C/W = 0.171
Vol./W³ = 0.201



PAVILION

P1	46.00°	14-18-46-50-78-82	Cut to TCP
P2	43.00°	10-22-42-54-74-86	Meet TCP.
G1	90.00°	14-18-46-50-78-82	Cut to final size
G2	90.00°	10-22-42-54-74-86	Meet P1, P2 & G1 (level girdle)
P3	44.50°	16-48-80	Meet G1, P1, P1 & G1.
P4	42.96°	12-20-44-52-76-84	Adjust to meet culet and G2, P2, P1 & G1.
P5	42.10°	09-23-41-55-73-87	Meet P2, P4, P4 & P2. Sensitive to angle!
P6	47.00°	96-32-64	Meet P2, P5 & G2.
G3	90.00°	96-32-64	Meet P2, P5, G2 & P6.

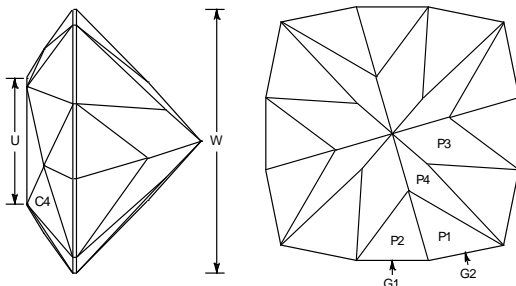
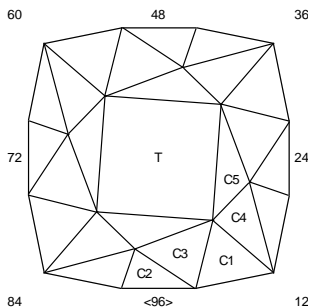
CROWN

C1	45.50°	14-18-46-50-78-82	Establish width of girdle.
C2	38.00°	10-22-42-54-74-86	Level girdle
C3	44.00°	16-48-80	Meet G1, C1, C1 & G1.
C4	30.94°	08-24-40-56-72-88	Meet C1, C2 & C3.
C5	52.20°	96-32-64	Adjust to meet C2, C4, C4 & C2 and girdle
T	0.00°	Table	Meet C1, C2, C3 & C4.

The designer expresses his gratitude to Walter Carss for proof-cutting the design and making several valuable suggestions.

Section N.10-3,
Minimum Size

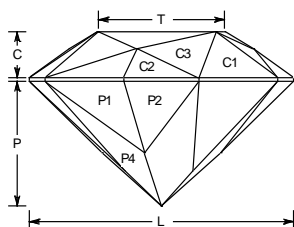
Labradorite
8mm



Lightning
by John Bailey, 2004

Meets 37 (Crown 20, Pavilion 17)

Angles for R.I. = 1.540
 45 + 12 girdles = 57 facets
 2-fold radial symmetry
 96 index
 $L/W = 1.000$ $T/W = 0.475$ $U/W = 0.475$
 $P/W = 0.474$ $C/W = 0.174$
 $Vol./W^3 = 0.255$



PAVILION

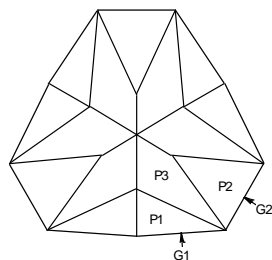
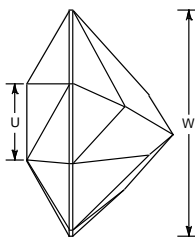
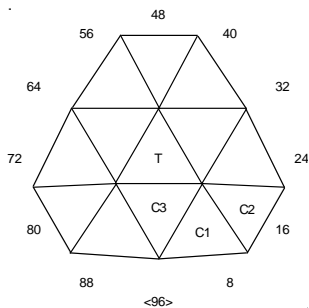
P1	43.30°	03-21-27-45- 51-69-75-93	Cut to T.C.P.
P2	44.30°	96-24-48-72	Meet T.C.P.
G1	90.00°	96-24-48-72	Establish outline.
G2	90.00°	03-21-27-45- 51-69-75-93	Level girdle.
P3	43.00°	23-47-71-95	Meet G2, P1,P2 & G1.
P4	41.30°	04-28-52-76	Meet G2, P1, P1 & G2.

CROWN

C1	35.40°	03-21-27-45- 51-69-75-93	Establish width of girdle.
C2	36.55°	96-24-48-72	Level girdle.
C3	34.00°	01-25-49-73	Meet G1,C2, C1 & G2.
C4	32.10°	20-44-68-92	Meet G2, C1, C2 & G2.
C5	25.30°	23-47-71-95	Met C1, C4, C3 & C2.
T	0.00°	Table	Meet C1, C3, C5, C5 & C4.

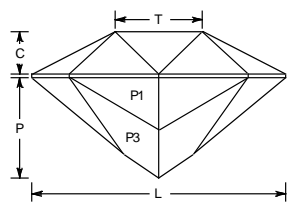
Section J.10-4,
Minimum Size

Synthetic Corundum
8mm



Morgan's Mirth
Design by John Bailey

Meets 25 (Crown 12, Pavilion 13)



Angles for R.I. = 1.760
28 + 9 girdles = 37 facets
3-fold, mirror-image symmetry
96 index
 $L/W = 1.125$ $T/W = 0.389$ $U/W = 0.337$
 $P/W = 0.442$ $C/W = 0.186$
 $Vol./W^3 = 0.214$

PAVILION

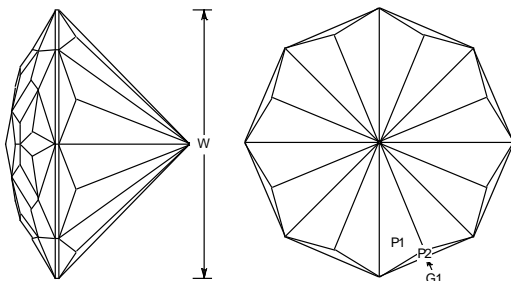
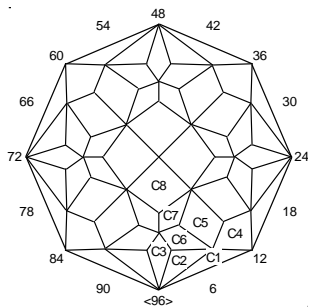
P1	48.00°	01-31-33-63-65-95	Cut to T.C.P.
P2	42.00°	16-48-80	Meet at culet.
G1	90.00°	01-31-33-63-65-95	Establish girdle.
G2	90.00°	16-48-80	Level girdle.
P3	42.00°	03-29-35-61-67-93	Meet G1, P1, P2 & G2.

CROWN

C1	30.00°	01-31-33-63-65-95	Establish width of girdle.
C2	29.60°	16-48-80	Level girdle.
C3	29.00°	96-32-64	Meet G1, C1, C1 & G1.
T	0.00°	Table	Meet C3, C1,C2, C1 & C3.

Section O.11-1,
Minimum Size

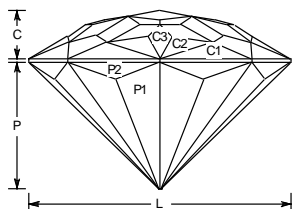
Cubic Zirconia
10mm



Four Star Cut
Design by Robert W Strickland

Meets 34 (Crown 25, Pavilion 9)

Angles for R.I. = 2.160
76 + 8 girdles = 84 facets
4-fold, mirror-image symmetry
96 index
L/W = 1.000
P/W = 0.484 C/W = 0.182
Vol./W³ = 0.199



PAVILION

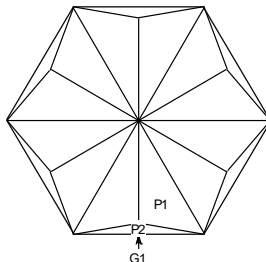
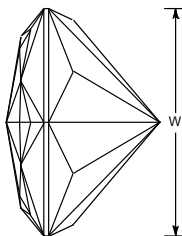
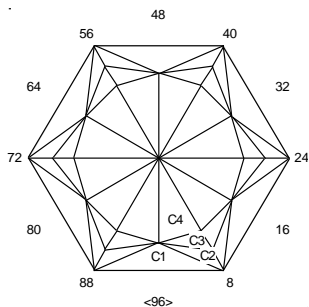
P1	45.00°	03-09-15-21- 27-33-39-45- 51-57-63-69- 75-81-87-93	Cut to P.C.P.
G1	90.00°	06-18-30-42- 54-66-78-90	Establish outline.
P2	66.86°	06-18-30-42- 54-66-78-90	Meet G1, P1, P1 & G1. (Level girdle)
CROWN			
C1	44.80°	06-18-30-42- 54-66-78-90	Establish width of girdle.
C2	33.65°	04-20-28-44- 52-68-76-92	Meet G1, C1, C1 & G1.
C3	30.63°	96-24-48-72	Meet C1,C2, C2 & C1.
C4	29.57°	12-36-60-84	Meet G1, C1, C1 & G1.
C5	23.67°	10-14-34-38- 58-62-82-86	Meet C1, C2 & C4.
C6	27.33°	05-19-29-43- 53-67-77-91	Meet C1, C2 ,C5 & C4.
C7	17.08°	05-19-29-43- 53-67-77-91	Meet C3, C6 & C6.
C8	9.00°	96-24-48-72	Meet C5,C7, C7 & C5.

Derived from Five Star Cut

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Section I.11-2,
Minimum Size

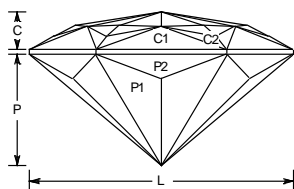
Synthetic Spinel
10mm



Mini Hexagon Apex
Steele, Norman W

Meets32 (Crown25, Pavilion7)

Angles for R.I. = 1.720
60 + 6 girdles = 66 facets
6-fold, mirror-image symmetry
96 index
L/W = 1.155
P/W = 0.485 C/W = 0.165
Vol./W³ = 0.253



PAVILION

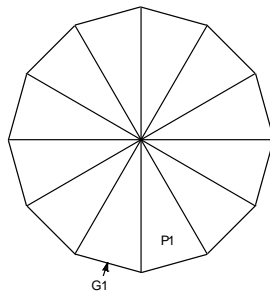
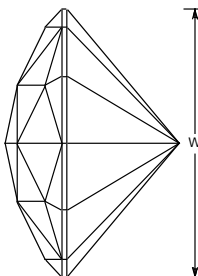
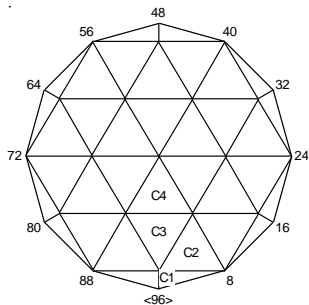
P1	41.00°	04-12-20-28-36-44- 52-60-68-76-84-92	Cut to P.C.P.
G1	90.00°	96-16-32-48-64-80	Fix size.
P2	65.00°	96-16-32-48-64-80	Meet P1 & G1.

CROWN

C1	39.00°	96-16-32-48-64-80	Establish width of girdle.
C2	32.08°	02-14-18-30-34-46- 50-62-66-78-82-94	Meet C1 & C1 at girdle.
C3	27.16°	03-13-19-29-35-45- 51-61-67-77-83-93	Meet C2, C1 & C2.
C4	9.66°	01-15-17-31-33-47- 49-63-65-79-81-95	Meet C3, C1 & C3.

Section N.11-3,
Minimum Size

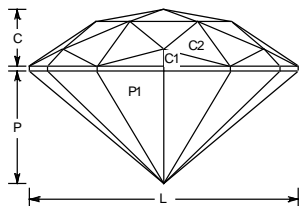
Red Cubic Zirconia
10mm



Dutch Rose Round
Designed by Bob Keller

Meets 38 (Crown 25, Pavilion 13)

Angles for R.I. = 2.160
48 + 12 girdles = 60 facets
6-fold, mirror-image symmetry
96 index
L/W = 1.000
P/W = 0.420 C/W = 0.212
Vol./W³ = 0.195



PAVILION

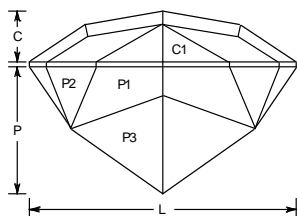
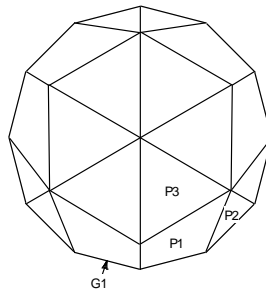
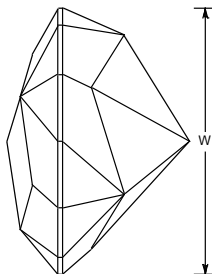
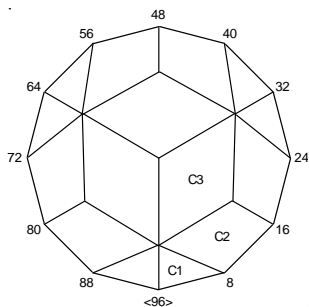
P1	41.00°	04-12-20-28-36-44- 52-60-68-76-84-92	Cut to P.C.P.
G1	90.00°	04-12-20-28-36-44- 52-60-68-76-84-92	Establish Size.

CROWN

C1	45.00°	04-12-20-28-36-44- 52-60-68-76-84-92	Establish width of girdle.
C2	34.00°	06-10-22-26-38-42- 54-58-70-74-86-90	Meet G1, C1, C1 & G1.
C3	25.30°	96-16-32-48-64-80	Meet C1, C2, C2 & C1.
C4	12.00°	96-16-32-48-64-80	Meet C2, C3, C3 & C2.

Section J.11-4
Minimum Size

Cubic Zirconia
10mm



RBC-036
Richard B. Conley

Meets 34(Crown15, Pavilion 19)

Angles for R.I. = 2.160
33 + 12 girdles = 45 facets
3-fold, mirror-image symmetry
96 index
L/W = 1.000
P/W = 0.477 C/W = 0.191
Vol./W³ = 0.222

PAVILION

G1	90.00°	04-12-20-28-36-44-52-60-68-76-84-92	Establish outline.
P1	49.00°	04-28-36-60-68-92	Locate girdle.
P2	67.00°	12-20-44-52-76-84	Level girdle.
P3	43.00°	03-29-35-61-67-93	Meet P2, P1, P1 & P2.

CROWN

C1	41.50°	04-28-36-60-68-92	Establish width of girdle.
C2	30.00°	12-20-44-52-76-84	Level girdle.
C3	16.00°	16-48-80	Meet C1, C2, C2 & C1.