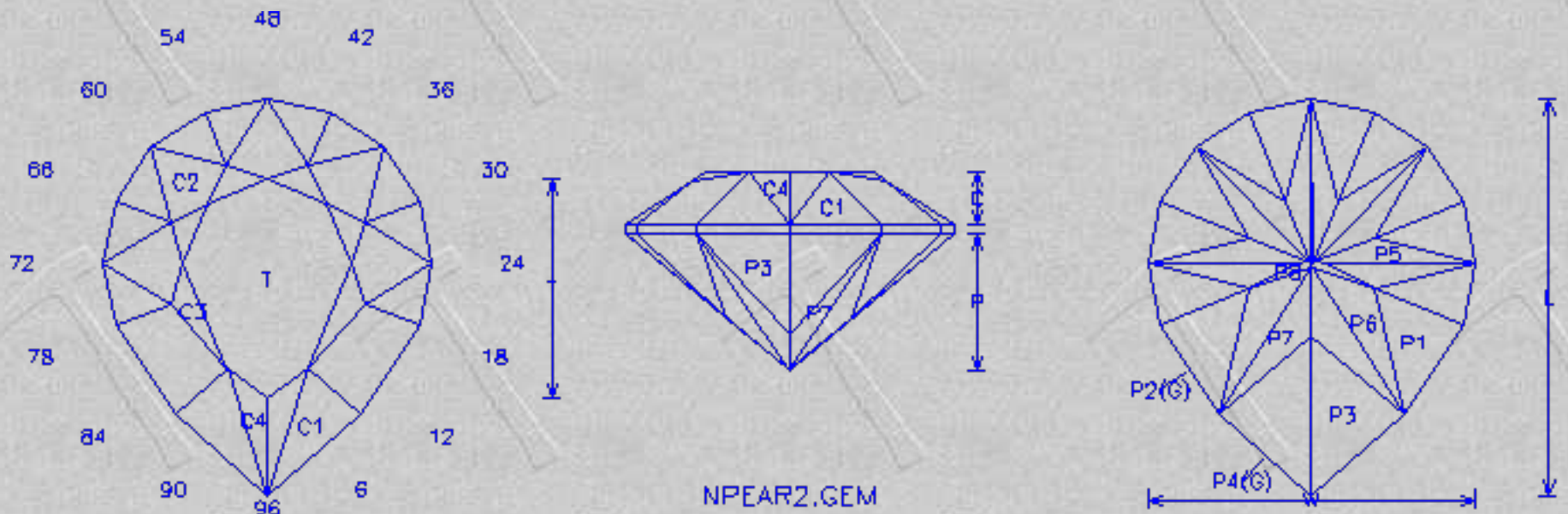


Brilliant Pear by Jeff R. Graham



NPEAR2.GEM

1.20 'Round Brilliant' Pear - designed by Jeff R. Graham jeff@faceters.com ©1998

Angles for R.I. = 1.62	58 facets + 14 facets on girdle = 72
1-fold, mirror-image symmetry	96 index
L/W = 1.209 T/W = 0.670 T/L = 0.554 P/W = 0.414 C/W = 0.165	H/W = (P+C)/W+0.02 = 0.599 P/H = 0.691 C/H = 0.275
Vol./W ³ = 0.228	Brightness at 0 degrees tilt for R.I. = 1.62 COS = 72.2 ISO = 88.3

Pavilion

P1	41.28	15-21-27-33-39-45-51-57-63-69-75-81	Cut to centerpoint.
P2(G)	90.00	15-21-27-33-39-45-51-57-63-69-75-81	Cut a level girdle, meet P1.
P3	39.30	11-85	Cut to centerpoint.
P4(G)	90.00	11-85	Cut to meet P3.
P5	39.79	23-25-35-37-47-49-59-61-71-73	Cut to centerpoint, meet girdle.
P6	39.66	14-82	Cut to centerpoint, meet girdle.
P7	39.03	13-83	Cut to centerpoint, meet girdle.
P8	39.00	22-74	Cut to meet P1, P5, P6. Note ¹

Crown

C1	38	11-15-21-27-33-39-45-51-57-63-69-75-81-85	Cut to meet girdle.
C2	34.00	24-36-48-60-72	Cut to meet girdle.
C3	18.00	18-30-42-54-66-78	Cut to meet C1,C2.
T	0.00	Table	Cut to meet C3,C4.
C4	35.26	10-86	Cut to meet C1,C3.

Note¹: P8 can be easily omitted on smaller stones. Just cut P6, P7 to centerpoint (lower their angles very slightly). On a smaller stone you won't have to do anything...



Shown at left is a 10 carat Brilliant Pear variation cut from 'watermelon' elbaite tourmaline. It measures 12.5 x 15.0 mm. This stone was cut with a high crown to maximize the yield of some rather pricey rough. The version presented on the diagrams and cutting instructions employs a lower crown and larger table.

Brilliant Pear - Cutting Remarks

The Brilliant Pear is designed to cut like a standard round brilliant and look like a pear. The light return is excellent, much better than any traditional pear I've ever seen. Unlike many pear designs, this one employs a centered culet which makes it much easier to cut. The pavilion is basically a split mains variation of the SRB with 3 elongated sets of facets, and the crown is an even simpler modification of


the SRB pattern. The Brilliant Pear does not entail the numerous height and elevation angle changes required by many pear designs, so it is relatively simple to cut. It produces a pleasingly shaped stone that is ideal for the novice who wants to cut a pear shaped stone that's well matched to his ability and experience.

The design angles presented are intended for materials with a refractive index close to 1.62, and will wear very well on beryls and tourmalines. The novice who has cut a quartz or two will find the transition to beryl to be an easy and natural one.

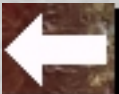
Pro cutters will also find the Brilliant Pear attractive because it is very *fast* to cut and pear shapes sell well. An added attraction is that this design can be mounted in standard 4-prong findings and settings designed for round stones.

Cut this design in order, i.e. P1 precedes P2, etc. The P8 facets are shown for faceters who cut this design large, they add some interest as the size of the stone increases. The P8 facets can and should be eliminated on smaller stones of 3 carats or less, as they would be too small to have noticeable effect and would be difficult to cut.

Enjoy cutting your Brilliant Pear! Drop me an email to let me know your results and what you've cut, or feel free to inquire if you have any questions or need some help regarding this design - Jeff.

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