

# Emerald Cut Geometry - Parameters, Assumptions and Naming Conventions

## Emerald Cut Shape

There are two parameters which determine the overall shape.

Parameters:

- 1) Length-to-Width Ratio
- 2) Corner Ratio Percentage

## Emerald Cut Crown

Emerald cuts have crowns containing 3 tiers of facets.

The Emerald cut crown is defined by 1 assumption and 4 parameters.

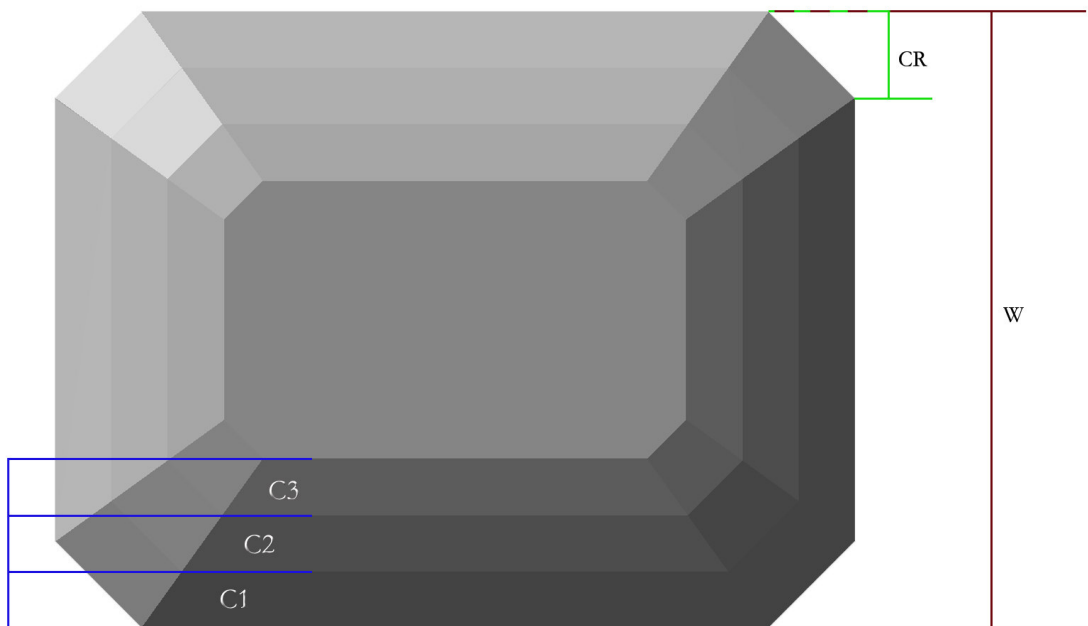
Assumption:

- 1) In a bird's eye view, the widths of all three crown tiers or step facets are equal.

Parameters:

- 1) Table diameter percentage
- 2) Crown angle 1
- 3) Crown angle 2
- 4) Crown angle 3

Corner Ratio (CR) is equal to  $CR/W$ , where W is the width.



The widths of Crown 1, 2 and 3 are equal.

Length to width ratio is determined by dividing the length by the width.  
For example: If length = 9 and width = 6 then the length to width ratio is 1.5:1  
In the above picture length to width ratio is 1.3:1

## Emerald Cut Girdle

The girdle is defined by 1 parameter:

Parameter:

- 1) Girdle thickness percentage = girdle thickness divided by stone width.

## Emerald Cut Pavilion

Emerald cuts have pavilions containing 3 tiers of facets.

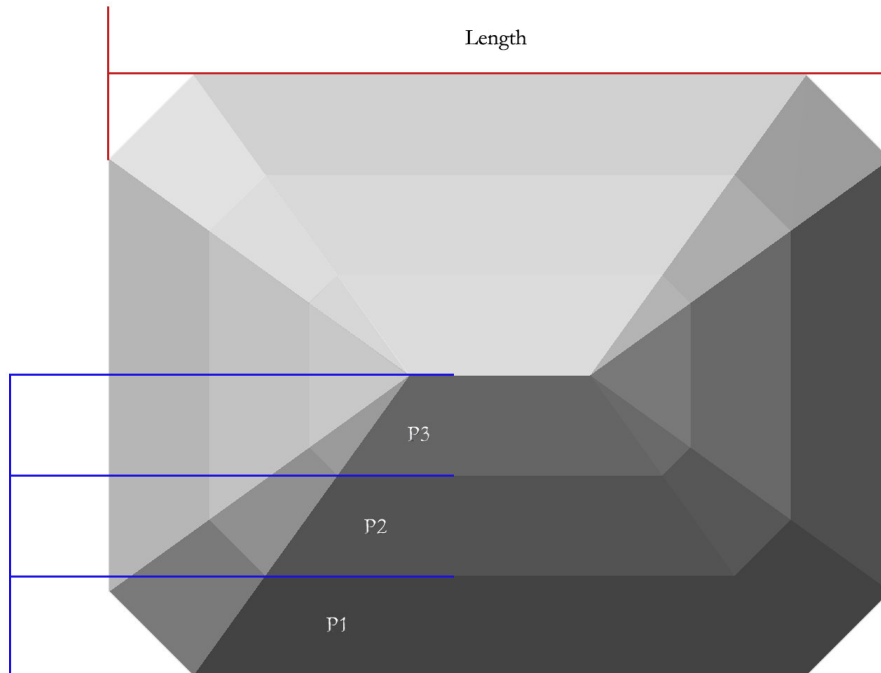
An Emerald Cut pavilion is defined by 1 assumption and 3 parameters.

Assumption:

- 1) In a bird's eye view, the widths of all three pavilion tiers or step facets are equal.

Parameters:

- 1) Pavilion angle 1
- 2) Pavilion angle 2
- 3) Pavilion angle 3



The widths of Pavilion 1, 2 and 3 are equal.

Length to width ratio is determined by dividing the length by the width.  
For example: If length = 9 and width = 6 then the length to width ratio is 1.5:1  
In the above picture length to width ratio is 1.3:1