

# Building Virtual Model

During a girdle heights [calculation](#), when there is an extra facet adjacent to the girdle, **GIA** and **Octonus** use different [methods](#) to handle them, which defines different shapes of the corresponding girdle curve. The **Octonus** method uses the ***virtual model*** built via:

- leaving **steep girdle extra facets** in their places and calculating them as a part of a girdle
- excluding **shallow girdle extra facets**
- excluding **caverns**
- for RBC, in all HPO versions except 5.2.10 - excluding **crown** and **pavilion extra facets** adjacent to the girdle
- when excluding a facet, the neighboring facets are continued until they intersect

*i* For an explanation about how to distinguish girdle extra facets from the adjacent crown and pavilion extra facets and how to distinguish steep and shallow girdle extra facets, see [Girdle Heights Calculation Methods](#).

Below you can find several examples of how the virtual model is built.

On this page:

1

Example 1

1.1

View 1: Excluding pavilion extra facet (RBC), leaving steep girdle extra facet, excluding shallow girdle extra facet

1.2

View 2: Excluding crown and pavilion extra facet (RBC)

2

Example 2

2.1

View 1: Excluding pavilion and crown extra facets (RBC), leaving steep girdle extra facet, excluding shallow girdle extra facet

3

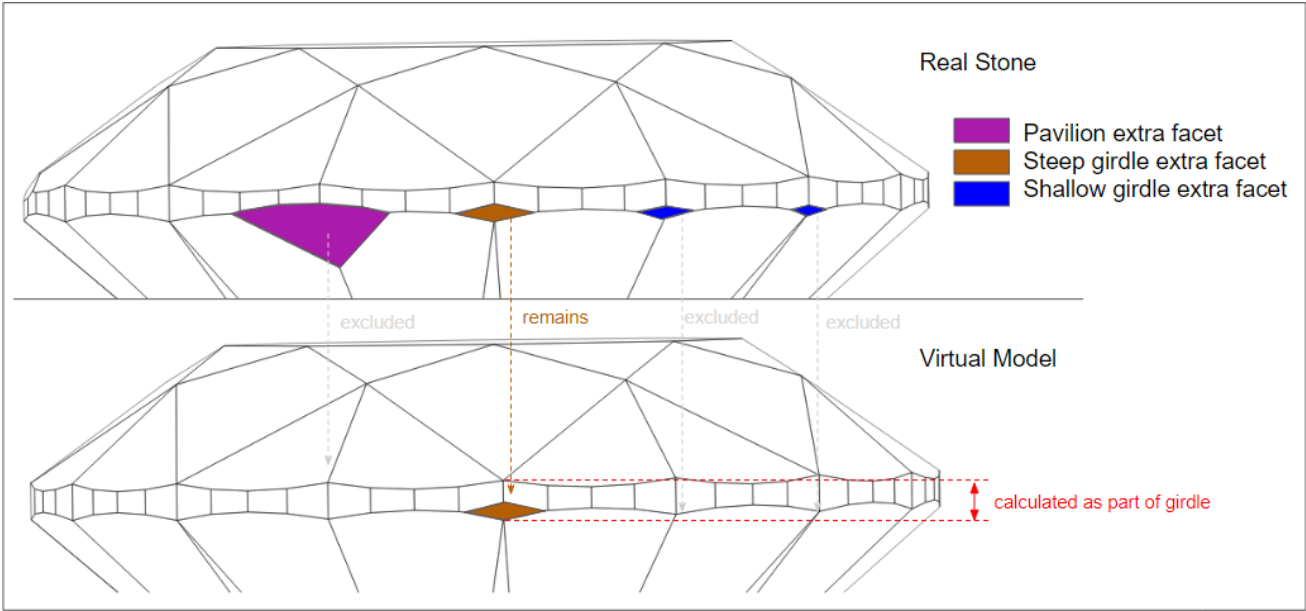
Related Pages

## Example 1

*i* Sample project: [RBC\\_girdle\\_extra\\_facets\\_Sample\\_1.oxgz](#)

### View 1: Excluding pavilion extra facet (RBC), leaving steep girdle extra facet, excluding shallow girdle extra facet

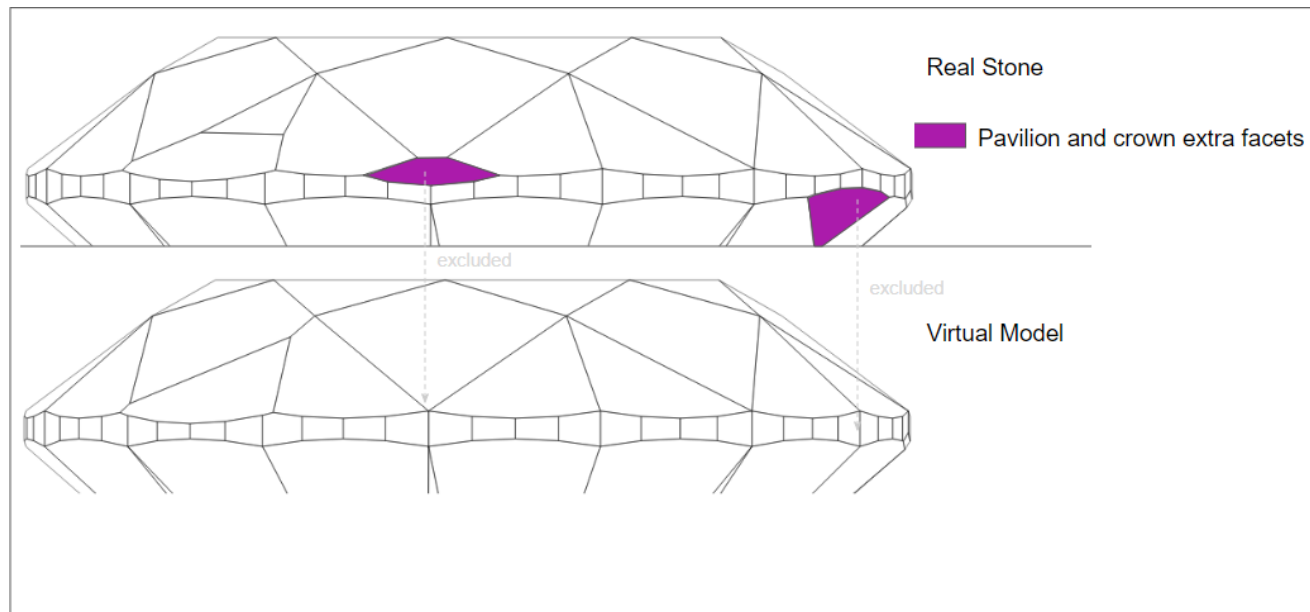
On the picture below you can see how during building the virtual model, the pavilion extra facet and two shallow girdle extra facets are excluded and steep extra girdle facet is left in its place (it will be calculated as the part of the girdle).



Note how in areas where the excluded facets were situated, the neighboring facets were continued until intersection which changed the shape of the girdle curve.

### View 2: Excluding crown and pavilion extra facet (RBC)

On the picture below you can see how during building the virtual model, the crown and pavilion extra facet are excluded and in areas where they were situated, the neighboring facets were continued until intersection which changed the shape of the girdle curve.



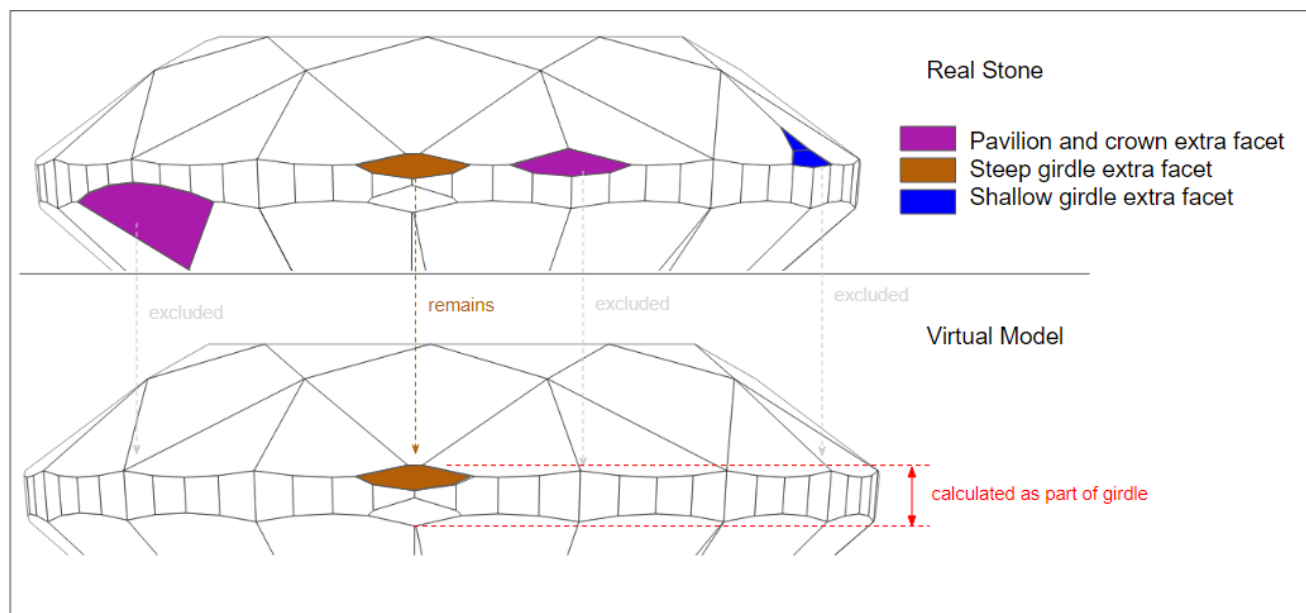
Note that the crown and pavilion extra facet are excluded only in case of RBC - in other cuttings in the virtual model they remain in their places.

## Example 2

Sample project: [RBC\\_girdle\\_extra\\_facets\\_Sample\\_2.oxgz](#)

### View 1: Excluding pavilion and crown extra facets (RBC), leaving steep girdle extra facet, excluding shallow girdle extra facet

On the picture below you can see how during building the virtual model, the pavilion and crown extra facets and shallow girdle extra facets are excluded and steep extra girdle facet is left in its place (it will be calculated as the part of the girdle).



## Related Pages

- [Stone Heights Calculation](#)
- [Building Virtual Model](#)
- [Girdle Heights Calculation Methods](#)