


# Center offsets

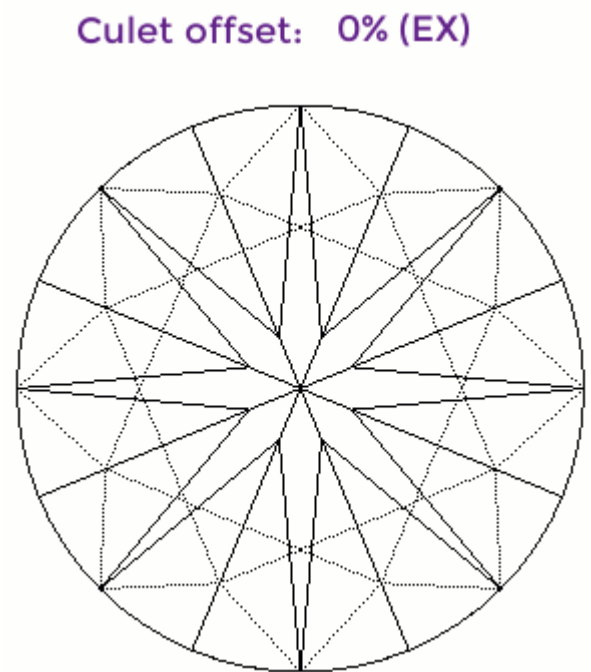


These parameters are applicable to all cuts.

HPOxygen measures offsets as the distances between the projections of the centers (those of table, girdle, and culet) onto the table plane.

From	To	Name in MyAppraiser	Name in the Full report
Girdle	Table	Table Offset	Girdle-Table offset by table axis
Girdle	Culet	Culet Offset	Girdle-Culet offset by table axis
Table	Culet	Table Culet Offset	Table-Culet offset by table axis

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Illustrations of crown view and pavilion view have images of table center, girdle center, and culet center for visualization of the parameters described above.

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Diameter of circle on image Girdle center equals 2% from average stone diameter to visual estimation of symmetry and distance between table, girdle and culet centers.

## Estimation of Girdle, Table and Culet centers for different cuts

### Brilliant

- Girdle center: center of maximum inscribed circle (MIC)
- Table center: table center of mass
- Culet center:
  - if culet has facets, then culet center is its center of mass
  - else culet center is the point of maximum height.

### Rounded Fancies

- Girdle center: first create a perpendicular to the center of maximum diameter. The center of the parallel to the perpendicular diameter is girdle center.
- Table center: table center of mass
- Culet center:
  - if culet has facets, then culet center is its center of mass
  - else culet center is the point of maximum height.

### Rectangular Fancies

- Girdle center: at the intersection of diagonals
- Table center: table center of mass
- Culet center:
  - if culet has facets, then culet center is its center of mass
  - else culet center is the point of maximum height.

StepCuts

- Girdle center: at the intersection of diagonals from opposite corners. First diagonal is maximum diameter. Second is the vertical mirror symmetry to first diagonal.
- Table center: table center of mass
- Culet center:
  - if there is a culet segment with lengthening 1.1, culet center is the segment center
  - else if culet has facets, then culet center is its center of mass
  - else culet center is the point of maximum height.

StepCuts / Triangle

- Girdle center: center of maximum inscribed circle (MIC)
- Table center: table center of mass
- Culet center:
  - if culet has facets, then culet center is its center of mass
  - else culet center is the point of maximum height.

Unknown cuts

- Girdle center: girdle center of mass
- Table center: table center of mass
- Culet center:
  - if there is a big segment includes point near maximum height point and slope less then 5 degree, culet center is the segment center
  - else if culet has facets, then culet center is its center of mass
  - else culet center is the point of maximum height.

Reporting

The offsets are reported together with corresponding errors. Additionally, for the non-round cuts the components of the offsets in the direction of width and length are reported.

Reported in	Section	Values	Units	Bookmarks
All full reports	Detailed Parameters	Girdle-Culet offset ± error	%(diameter), mm, and grades	OFFSET_GIRDLE_CULET_PC, OFFSET_ERROR_GIRDLE_CULET_PC, OFFSET_GIRDLE_CULET_MM, OFFSET_ERROR_GIRDLE_CULET_MM, GIRDLE_CULET_OFFSET_SYM
		Girdle-Table offset ± error		OFFSET_GIRDLE_TABLE_PC, OFFSET_ERROR_GIRDLE_TABLE_PC, OFFSET_GIRDLE_TABLE_MM, OFFSET_ERROR_GIRDLE_TABLE_MM, GIRDLE_TABLE_OFFSET_SYM
		Culet-Table offset ± error		OFFSET_TABLE_CULET_PC, OFFSET_ERROR_TABLE_CULET_PC, OFFSET_TABLE_CULET_MM, OFFSET_ERROR_TABLE_CULET_MM, TABLE_CULET_OFFSET_SYM
		Girdle to table-culet line offset	%(diameter) and mm	OFFSET_GIRDLE_TABLE_CULET_LINE_PC, OFFSET_GIRDLE_TABLE_CULET_LINE_MM
Full report for Rounded Fancies, Full report for Cushion, Full report for Princess, Full report for Radiant, Full report for Step Cuts	Detailed Parameters	Girdle-Culet offset widthwise	%(diameter) and mm	OFFSETX_GIRDLE_CULET_PC, OFFSETX_GIRDLE_CULET_MM
		Girdle-Culet offset lengthwise		OFFSETY_GIRDLE_CULET_PC, OFFSETY_GIRDLE_CULET_MM
		Girdle-Table offset widthwise		OFFSETX_GIRDLE_TABLE_PC, OFFSETX_GIRDLE_TABLE_MM
		Girdle-Table offset lengthwise		OFFSETY_GIRDLE_TABLE_PC, OFFSETY_GIRDLE_TABLE_MM
		Culet-Table offset widthwise		OFFSETX_TABLE_CULET_PC, OFFSETX_TABLE_CULET_MM
		Culet-Table offset lengthwise		OFFSETY_TABLE_CULET_PC, OFFSETY_TABLE_CULET_MM