



**E.G.L. COLLEGE OF  
GEMOLOGY**

**SOUTH AFRICA**

**POLISHED DIAMONDS FOR THE RETAIL JEWELLER**

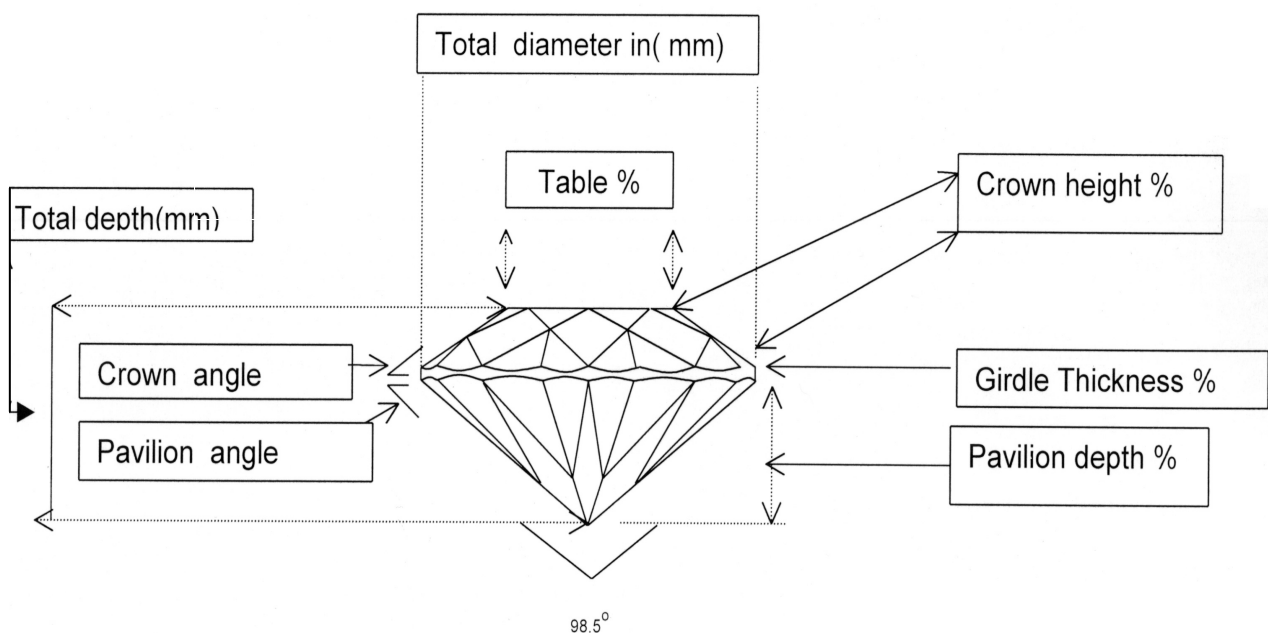
## SECTION 6

### 6.1 THE SECTIONS OF A DIAMOND THAT ARE MEASURED TO DETERMINE THE PROPORTIONS.

The chart below indicates the areas or angles that are measured when determining the proportions of a diamond. Some of the areas measured are expressed as a percentage of one another:

- The **table width** is expressed as a percentage of the diameter of the stone.
- The **crown height** is expressed as a percentage of the total depth of the stone.
- The **girdle thickness** is expressed as a percentage of the total depth of the stone.
- The **pavilion depth** is expressed as a percentage of the total depth of the stone.
- The **depth of the stone** is expressed as a percentage of the diameter of the stone.
- The **crown angle** is the measurement of the angle from the top of the girdle to the top of the crown.
- The **pavilion angle** is the measurement of the angle from the bottom of the girdle to the bottom of the pavilion.

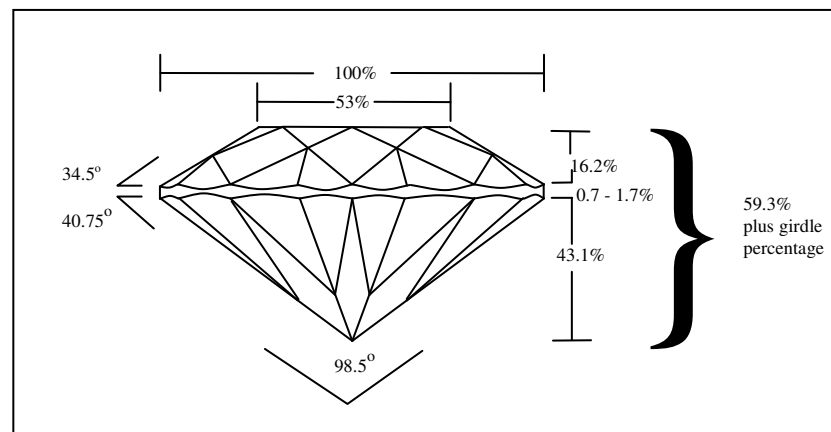
Each of the above is given an individual proportion comment and these comments combined will give the overall comment of the proportions as given by the laboratories.



## 6.2 THE PROPORTIONS

The American Ideal Cut has the crown cut at an angle of  $34.5^{\circ}$  and the pavilion at  $40.75^{\circ}$ . Both of these angles are measured from the horizontal. There is a specific table diameter of 53%, pavilion depth of 43.1%, a crown height of 16.2% and a girdle thickness of 0.7 – 1.7% given for the American Ideal Cut (*see illustration 1*).

However some leeway is allowed by various laboratories and remember, certain customers in the countries of the world prefer for instance a slightly larger table or a slightly steeper crown angle. Also remember that, particularly on smaller stones, or those of a lesser quality in colour, clarity or both, weight recovery from the rough becomes critical. And sometimes, in these instances, proportion perfection may be sacrificed for maximum weight recovery. The average weight recovery from rough to polished gem is about 48%.



*Illustration 1 - American Ideal Cut*