

Diamond Cut

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Thursday, 31 May 2007
Last Updated Monday, 11 June 2007

Grading Polished Diamonds For Cut

The cutting of a diamond and its proportioning, called "Make" in the jewelry trade, are of extreme importance. The fire (variety and concentration of the prismatic colors emitted) and the brilliance (liveliness or sparkle, of the diamond) directly depend on the proper cutting and proportioning of the diamond. Cut refers not only to the shape of the diamond, but its proportions and finish, factors that influence the final cost of the diamond. Diamonds deliver the most intense flashes and variety of colors to the eye when properly cut of any of gemstones.

When talking about the cut of a stone it is important to be familiar with the anatomy of a diamond. The illustration below is for a round brilliant cut diamond. Different diamond shapes have the same components, however special cuts, radiant cut, princess cut, and all custom cuts have additional facets for added brilliance. Anatomy of a Diamond

There are many popular shapes for diamonds. Each shape affects the overall look, fire and brilliance of the diamond. Each shape has different ranges of cutting proportions. For purposes of our discussion, we will concentrate on the round brilliant cut diamond.

The modern round brilliant cut diamond has 58 facets and accounts for about 75% of all diamonds. There are many schools of thought about correct proportions, however these thoughts are usually directly affected by selling technique and desire on the selling party to maximize profits. In any event it cannot be denied that a certain respectable proportion must be maintained to maximize the fire and brilliance of a round diamond. As in all endeavors it is desirable to obtain the best possible outcome (ranges of proportions) without sacrificing fire and brilliance and obtaining a diamond without an excessive premium attached to the price.

The following grading range will keep us in the proper range for a great diamond.

Table Percentage - 57% - 64% Depth Percentage - 60% - 63% Girdle - Very Thick to Thin, faceted Culet - Pointed or None Polish - Very Good to Fair Symmetry - Very Good to Fair

By adhering to these above ranges the diamond will give off the proper brilliance and fire.

The goal of extracting the greatest beauty from a Diamond, is to have light enter a Diamond, disperse the light as it bounces inside the Diamond, thereby producing the different prismatic colors and brilliance, finally returning as much light to the eye as possible. According to conventional wisdom, the proportions shown above are the best for maximum light return. The illustrations below shows the theoretical path a ray of light will take through an ideal-cut Diamond.

As you can see, the rays of light entering the Diamond reflect back to the eye. It is possible for a diamond cutter to extract more weight out of the diamond by increasing the diameter of the stone. This will make the stone too shallow allowing light to escape from the side and or the bottom of the stone, as shown here.

Another side effect of this shallow cut is that it makes the stone appear larger. The fact that it appears larger than it actually is does not make a better stone. If you compare a shallow stone to a well-made stone, you will see the superior brilliance in the well-made stone. It is common to see the opposite problem, a stone that is cut too deep and allows light to leak out in much the same way as the shallow stone.

This is not to say that a shallow or deep stone is a sign of a poor, or "low-quality" diamond cutter. Sometimes the shape of the rough diamond makes it impractical to cut a stone closer to "ideal" proportions without losing significant weight. It is important to note the "light leakage" which results from the shallow or deep cut diamonds. Fancy cut Diamonds

The information provided on a diamond report pertaining to proportions is critically important for round brilliant cut diamonds. Unfortunately, it is only of minimal use with fancy shapes, (marquise, pear shape, emerald cut, princess cut, ect.). For fancies, you must rely on your own eye to tell whether or not the proportioning is acceptable, to pick up flatness or dark spots such as "bow-tie" which results from poor proportioning.

Within the popular fancy shapes, certain deviations have been established as standard. Some fall within acceptable range, while other do not. Deviations, which exceed acceptable tolerances, can seriously reduce a diamond's beauty and value. One of the most obvious deviations in fancy shape proportioning is the "bow tie", or "butterfly" affect, a darkened area across the center or widest part of the diamond. The bow tie is most commonly seen in the pear shape or marquise shape and may exist in other fancy shapes. The degree of disproportion is directly related to the degree to which the bow tie is pronounced. The larger the bow tie, the greater degree of the incorrect proportion.

Fancy shape diamonds can be cut too broad or too narrow, and the pavilion can be cut too deep or too shallow. The Dimensions for fancy shape diamonds are not as important as they are for round diamonds. However, there are length to width ratios that are considered normal and deviations may result in lower prices.

Marquise: 1.75:1 to 2.25:1

Pear Shape: 1.50:1 to 1.75:1

Emerald Cut: 1.50:1 to 1.75:1

Oval: 1.50:1 to 1.75:1

Prices for fancy shape diamond generally are 15% to 20% below round diamond prices at the wholesale level, holding the quality constant, depending on trends and fads.