



Carat Size and the 4 C's

Carat, one of [The 4C's](#) (carat, color, clarity, cut), is the unit of measurement used to describe the weight of a diamond. The word carat originated from the carob tree - the tiny seeds of this tree are well known for their uniformity and consistent weight. Traditionally, diamonds and gemstones were weighed against these seeds until the system was standardized, and 1-carat was fixed at 0.2 grams. 1-carat is divided into 100 points, just as 1 dollar is equal to 100 pennies. A diamond weighing one quarter of a carat can also be described as weighing 25 points or 0.25 carats or 1/4-carat. Points are generally not used to describe weights over 1 carat.

As diamond carat size increases, both the diameter and the depth of the diamond increase. This is why a 1.00-carat diamond (6.5 mm diameter) does not look twice as wide as a 0.50-carat diamond (5 mm diameter).

The rarity of a diamond is greatly affected by its weight. The larger or more a diamond weighs, the more rare the stone is. For example, 2-carat diamond is much more rare (and much more expensive) than two diamonds each weighing 1-carat. On average, 250 tons of ore must be mined and processed to produce a one carat diamond of gem quality. Other ways to express a 1 carat diamond are:

- 1 ct.
- 200 milligrams
- 1/5 gram
- 100 points
- 4 grainer (used in the diamond trade)

The following is a chart that summarizes Carat Weight for round diamonds:

Carat Weight	Points	MM	Fraction
0.01	1	1.50	1/100 carat
0.10	10	3.00	1/10 carat
0.20	20	3.80	1/5 carat
0.25	25	4.00	1/4 carat
0.33	33	4.25	1/3 carat
0.50	50	5.00	1/2 carat
0.63	63	5.50	5/8 carat
0.75	75	6.00	3/4 carat
1.00	100	6.50	1 carat
1.50	150	7.50	1 1/2 carats
2.00	200	8.00	2 carats
3.00	300	9.50	3 carats
4.00	400	10.00	4 carats

Scarcity of Larger-Size Diamonds

Diamonds are formed between 75-120 miles beneath the earth's crust and may take thousands of years to surface where they can be mined. Most diamonds were actually formed billions of years ago. So while all diamonds are rare, the larger stones (1 ct or larger) are even scarcer. So, generally speaking, larger diamonds have a greater value per carat. This is why a diamond's carat size has the biggest impact on the price of the diamond.

Weighing the Diamond

Gemological laboratories usually measure the carat weight before the diamond is mounted, or when it is loose. In jewelry pieces that have more than one diamond, the carats are usually expressed in terms of the total carat weight. This weight is the combination of all the diamonds in the particular piece.

Size Versus Weight

People in the jewelry industry may use the terms size and weight interchangeably, although they are both different. Size refers to physical measurements in millimeters while weight refers to carat size. The variety of proportions in a diamond will yield stones that have the same carat weight but are different in size. When a diamond is cut well they tend to appear smaller in size. This is in contrast to a diamond that has been "spread" to cause the consumer to believe that the stone is larger than it really is. When considering purchasing a diamond, it is important to really understand both size and weight in terms of what appeals to your taste and budget.

Carat Affect on Cost

When considering the price of a diamond, you should think in terms of per-carat cost. In order to calculate the cost of a diamond, use the following equation:

$$\text{carat weight } \times \text{ per carat cost} = \text{total cost of the diamond.}$$

For example, a 1.50 carat diamond that costs \$4,000 per carat would be 1.50 (carat weight) *times* \$4,000 (per carat cost) or \$6,000. Most stores and websites state the total cost of a diamond but understanding the per carat cost can help you better compare different diamonds.

To calculate the diamond's per-carat cost, divide the total cost of the diamond by the weight. For example, if a diamond costs \$1,500 and the weight is 0.75 carats, the per carat price is \$1,500 divided by 0.75 carats or \$2,000.

Usually, the greater the weight of the diamond - the more rare it is and the greater the price. Expect to pay a premium for diamonds that are above 1 carat in weight. For example, a .95 carat diamond will cost slightly more than a .90 carat diamond. A 1 carat diamond will cost considerably more than a .95 carat diamond.

Girdle Can Make a Diamond Look Larger

When examining the carat size of a diamond, it is also important to understand that dimensions play a very important role in the diamond's appearance. The girdle or thickness of edge is a key factor that can affect how large a diamond appears to be. The wider the girdle, the smaller the appearance of the stone. This happens as a result of the diameter of the diamond being at its widest at the girdle. The best girdle measurements are medium to slightly thick. Also, another important consideration to keep in mind when exploring carat size is the size of the ring wearer's finger. The smaller the finger, the larger the diamond will appear.