

Why Diamond Testing Machines are a priority?

Technology Talk

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With the growing demand of lab grown diamonds, it is more important now than before to develop technology that can effectively distinguish natural diamonds from their synthetic counterparts. Sanjana Parikh finds out about the different diamond testing machines available in the market and how they are helping in bringing about more transparency

Technology has permeated through every aspect of the jewellery business, so it's no surprise then that the diamond industry too has become rather dependant on this technology. With the sudden increase in the volumes of synthetic diamonds, specialized machines that can accurately identify a natural diamond is the need of the hour. Not only does it give a stamp of authenticity, it also increases the confidence of the consumer towards brands selling diamonds or jewellery. Various diamond grading labs and testing companies have introduced a number of diamond testing machines that have interesting features and are available for purchase by diamond graders.

Important factors to consider before purchase

Some of the important aspects to consider before purchasing a verification instrument is types of diamonds used i.e. size, colour, shape, and loose/ mounted as those influence the choice of instrument. Large volumes of melee will require different levels of automation than small number of larger stones, so the volume of goods plays a key role. Some instruments require no experience at all whereas other devices require trained operators. So if you are considering purchasing an advanced instrument, you need to make sure that you have a skilled operator who can use it. Depending on your requirement, you must decide if you require a portable instrument if you operate in various locations or test stones outside your own premises. As with any purchase, budget plays a key role in the final decision. Diamond Verification Instruments vary greatly in cost, due to several factors and so it's important to keep cost in mind.

Understanding the indispensable nature for diamond verification systems, Diamond Producer's Association (DPA) has launched The ASSURE Program which has developed a universal standard to test the performance of Diamond Verification Instruments in a

consistent manner. “The program delivers ongoing testing of Diamond Verification Instruments to ensure the trade is fully informed of the relative performance of the Diamond Verification Instruments in the market. The instruments are rigorously tested in a transparent manner against a unique common sample and standard. The ASSURE sample will also evolve to include new synthetic diamonds as they are identified. The instruments submitted to ASSURE have been tested in accordance with the methods and protocols in the Diamond Verification Instruments Standard,” says Richa Singh, Managing Director - India, Diamond Producers Association.

Pushing Boundaries

The Gemological Institute of India (GIA) is the authority in diamond certification and grading. GIA is investing heavily in research and instrument development to understand these new materials that enter in the supply chain, and is in a unique position to develop instruments and services capable of distinguishing natural diamonds from potentially laboratory-grown and treated diamonds. The GIA iD100® gem testing device is a result of these long-standing research efforts. It is a sophisticated and easy-to-operate desktop instrument that combines advanced spectroscopic technology with GIA’s 60 years of diamond and gemstone identification research to distinguish natural diamonds from laboratory-grown (HPHT and CVD) diamonds and diamond simulants. **Nirupa Bhatt**, Managing Director, GIA, India and Middle East shares, “Rapid advances in the technology for laboratory-grown diamonds and treatments make it crucial that the gem and jewellery industry has reliable methods for identifying them. GIA is committed to continued improvements, and the device now has the capabilities to identify blue-to-green and brown diamonds in addition to diamonds in the colourless to nearcolourless range. Additionally, a Pink Diamond Software Upgrade now gives the instrument the ability to distinguish natural pink diamonds from laboratory-grown (HPHT and CVD) pink diamonds and simulants. These two significant improvements make proper identification of laboratory-grown diamonds more accessible to retailers and manufacturers around the world by expanding capabilities of the GIA iD100.

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