KULSEN & HENNIG
DOMINIK KULSEN
Nature's Brilliant Colours

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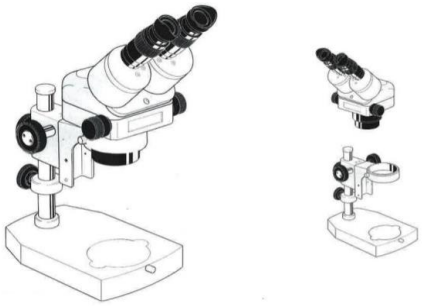
Gemmology Corner

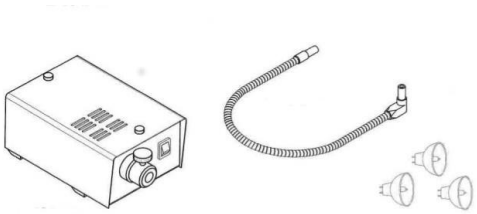
On a Buying trip with the Sortoscope®

We consider it our duty to offer our customers only exquisite goods of the highest quality. This requires an accurate assessment on our part of the diamonds offered to us by our suppliers; the Sortoscope® is the main tool we use to do this.

The Sortoscope®
The Sortoscope®, developed by the Nossigem Company in Bonn, is a device similar to a microscope that allows the user to efficiently examine and sort even the smallest diamonds by purity, colour and cut. The results are much more precise and reliable than those obtained with a 10 X magnifying glass. Specially developed lighting technology makes it possible to examine the diamonds without reflexion.

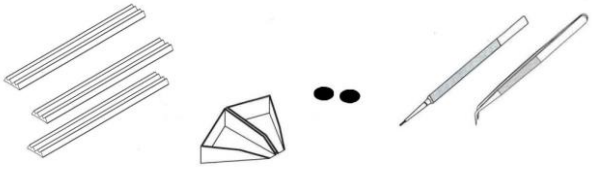


Microscope optics binocular Stereo Zoom



From left to right: Fiber optic light source Nossigem Fiberlite; glass fiber light conductor, single arm, flexible; cold light-reflector halogen bulbs

Working stage and Glass fiber light conductor



Sliding rails; sorting scoops; conversion (daylight) filter discs; fine brush and special angled tweezers, superfine

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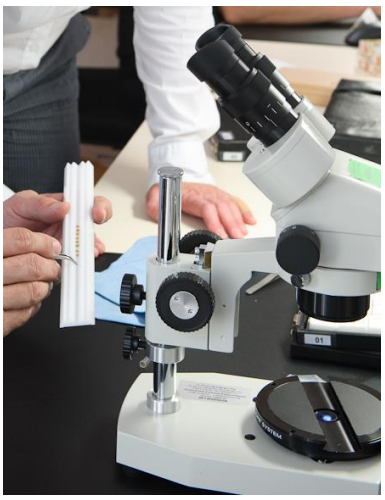
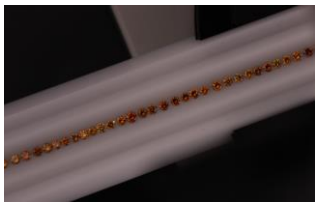
Handling the Sortoscope®

The user first sets the unit to individual requirements like the height of the eye pieces, visual acuity and viewing distance. Next, the diamonds are carefully distributed onto the sorting rail (slide system) using a diamond shovel.

The sorting rail is inserted into the rotary working stage which is lit from below at certain points. Because the rail is made of a milky, translucent material, the light diffuses and produces a softly lit area with a very low degree of reflexion. The stones can then easily be examined one by one.





Shopping for Diamond

When we are shopping for diamonds, we first obtain an office, for example in Antwerp, where we meet with diamond traders. Our equipment includes diamond sieves, diamond shovels, tweezers of various sizes and the Sortoscope®. Ideally, at least two people are involved in selecting diamonds – one to prepare the sorting rails and one to examine the diamonds under the Sortoscope®.

When a trader offers, for example, 100.00 ct of brown pavé diamonds, ranging in diameter from 0,8 mm to 2,7 mm, we first use the sieve to separate the diamonds by batches according to standard increments, from 0,8 to 1,25 mm. This way, it is not necessary to continuously change the focus on the Sortoscope® from large to small and from small to large.

Finally, the diamonds are spread out evenly along the sorting rails using a diamond shovel and then turned upwards. According to the manufacturer, the rails have been designed in such a way that the stones turn upward themselves when the rails are shaken gently several times vertically and horizontally; in fact, though, many stones have to be turned with tweezers.

Diamonds with a diameter of 0,8 mm represent are quite challenging to examine and require much time, patience, skill and experience. Once several sorting rails have been prepared, the examination of the diamonds with the Sortoscope® can begin. This process, namely the preparation of the sorting rails and the examination of the diamonds, is repeated over and over again until all 100.00 ct have been examined.

Our Selection Criteria

When selecting diamonds, we choose those that show no exterior damage such as ragged girdles, cracks or nicks. Because unfinished or poorly executed cuts adversely affect a stone's brilliance, we also pay close attention to the right proportions. Stones that have a crown that is too high, a table that is too large or a girdle that is too thick or too thin will be sorted out. At the same time, we carefully evaluate each stone's clarity and the quality of its colour.

In principle, any diamond presenting a strong mixed colour or a tarnished, dirty effect will be eliminated during our quality assessment. Brown diamonds often contain an undesirable grey or greenish colour; olive green diamonds should not be either too yellow or too brown.

In yellow diamonds, we make sure that there are no brownish, greenish or greyish modifiers, and in grey diamonds, we sort out any that show tints of yellow, green or brown.

Out of all the goods we examine, a maximum of 10 percent ultimately meet our quality standards.

Damaged culet

Large inclusions

Reduced brilliance because the table is too large

This diamond corresponds to our quality criteria

Prices

There are three price categories when buying small goods. If the buyer takes the whole parcel, a lower wholesale price applies. If the buyer decides to take an unsorted portion of the parcel, a higher "cut price" applies. Because we select the best stones from a given parcel, we pay the highest price, known as the "selection price".

Although this, of course, has an impact on our sales prices, our customers can be sure they are buying Natural Fancy Coloured Diamonds of exceptional quality.