

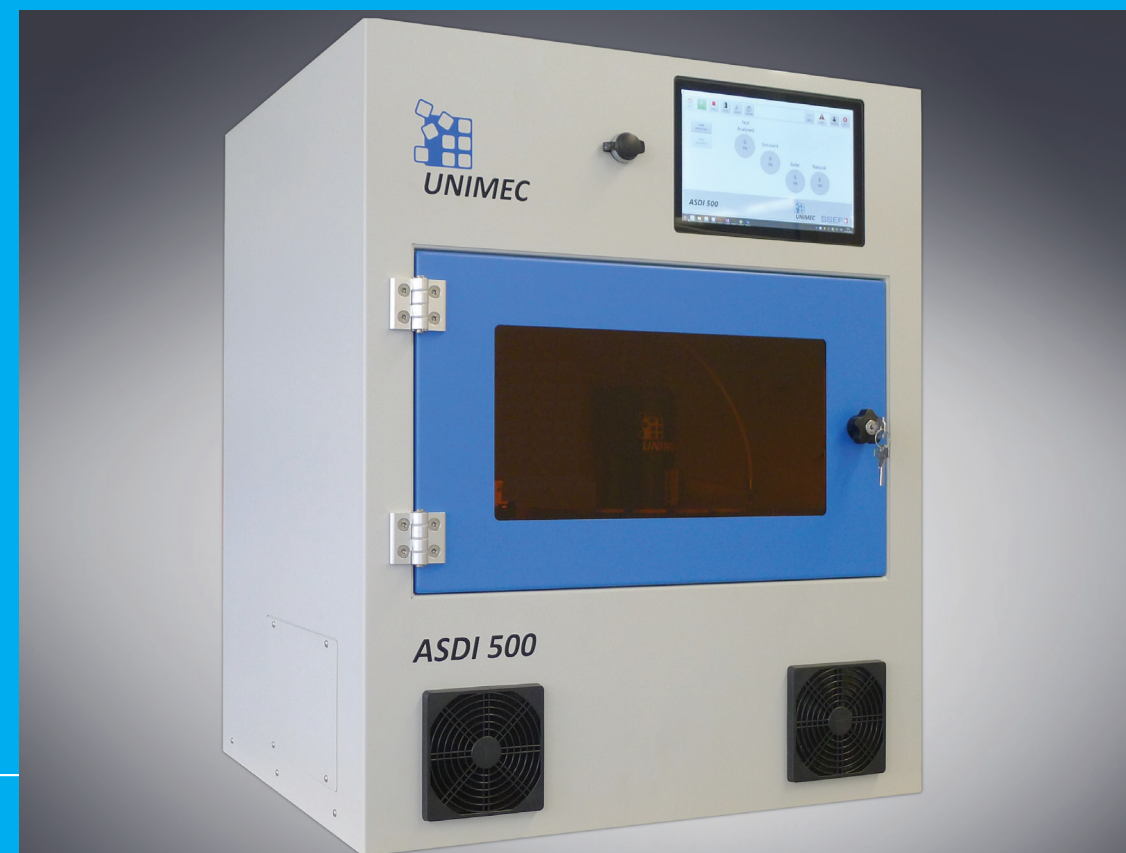
OUR BUSINESS SECTORS:

- AUTOMATION UNITS
- MEASURING AND AGEING MACHINES
- ASSEMBLY AND MACHINING EQUIPMENT
- SUBCONTRACTING

ASDI-500

AUTOMATED SPECTRAL DIAMOND INSPECTION

Batches of melee
from 0.50 to 3.80 mm



ASDI-500

A robust 100% Swiss partnership between UNIMEC SA and SSEF



■ Equipment

The ASDI-500 instrument is now being brought to the market to test melee diamonds with diameters down to 0.50 mm or 500 microns, hence its name ASDI-500.

First automatised authentication solution for melee smaller than 0.85 mm.

■ Principle

A batch of stones submitted to the ASDI-500 shall be made of colourless (D to J) round polished (full cut, 8/8, 16/16) stones. The maximum diameter divergence in one batch is approximately +/-0.05 mm. ASDI-500 can automatically inspect batches of melee as small as 0.50 mm up to batches of melee as large as 3.80 mm.

Refer rate of < 1%.

■ Feeding a batch of melee for inspection

An operator pours a large batch of colourless melees - several thousand - into a vibrating hopper.

On the touch screen, the operator enters customisable references (e.g. batch reference, total weight, etc.) and just clicks on "START".

■ Diamond inspection

Prior to starting inspection, the ASDI-500 runs a fast – less than one minute - automated internal calibration on a diamond of reference included inside the device.

This calibration is usually performed once a day and can be launched on demand at any time by the operator. As soon as the calibration is performed the automated inspection starts.

■ Result of the inspection

The ASDI-500 counts accurately and places automatically all tested stones in one of the following bins:

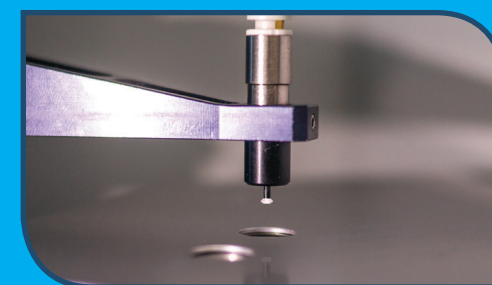
- "Natural Diamond" 128 cm³
- "Refer" 27 cm³
- "Simulant" 27 cm³
- "Not analysed" 27 cm³

■ Result output

At the end of the process, the operator can export an inspection result file.

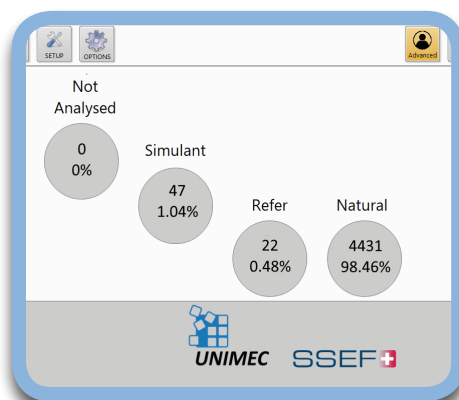
■ Options

- Dimensional measurement
- Colorimetry
- Analysis by fluorescence
- Sorting and classification



■ Ease of use

- The ASDI-500 is a very user-friendly touch screen device.
- It is designed for the global jewellery and watch industries.
- The end of batch report is clearly visible and immediate.



Technical data

Dimensions	653 x 565 x 844 mm
Weight	98.0 Kg
Sorting speed	850 stones per hour
Voltage	110 - 230 V / 50 Hz / 13 A
Diameter of stones	0.50 mm up to 3.80 mm
Maximum diameter divergence in a batch	+/- 0.05 mm
Load capacity	128 cm ³