



## ASDI-500



### Overview

ASDI-500 is a stationary fully automated diamond verification instrument designed to screen large quantities of colourless and near colourless loose stones at high speed. The instrument uses a robotic arm to physically separate diamonds from synthetic diamonds and diamond simulants. It is capable of handling stones down to 0.5mm in diameter.

The operator loads a parcel of loose polished stones into the ASDI-500. The parcel must have a size range tolerance of +/- 0.05mm. The instrument then automatically processes the stones and physically dispenses them into their respective categories:

- 1) Diamond
- 2) Refer
- 3) Diamond Simulant
- 4) Not Analysed

Stones reporting to 'Refer' should be tested further, and may include potential synthetic diamonds and natural diamonds.

ASDI-500 runs a quick automated internal calibration before use.

### Stone Testing Capabilities

Weight range: **0.001 ct to 0.2 ct (round brilliant)**

Colour range: **D to J**

Stone shape: **Round brilliant**

Diamond simulants: **Yes**

Mounted stones: **No**

### Instrument Capabilities

Automated feed: **Yes**

Automated results: **Yes**

Automated dispense: **Yes**

Detect or Refer (synthetic diamonds): **Refer**

Detect or Refer (diamond simulants): **Detect**

Multiple stones at once: **Yes**

Training required: **Yes**

### ASSURE 2.0 Performance

Key ASSURE 2.0 test results for the ASDI-500:

	Primary Loose	Smalls Loose	Ultra-Smalls Loose
<b>Diamond False Positive Rate</b> <i>(Optimal rate 0%)</i>	<b>0.0%</b> +/- 0.0%	<b>0.0%</b> +/- 0.0%	<b>0.0%</b>
<b>Diamond Referral Rate</b> <i>(Optimal rate 0%)</i>	<b>1.6%</b> +/- 0.3%	<b>0.9%</b> +/- 0.2%	<b>2.6%</b>
<b>Diamond Accuracy Rate</b> <i>(Optimal rate 100%)</i>	<b>98.4%</b> +/- 0.3%	<b>99.1%</b> +/- 0.2%	<b>97.4%</b>
<b>Operating Speed</b> <i>Stones per hour</i>	<b>862</b> +/- 12		

#### Notes:

Software version PLCv1.23 (Nov 2025). Uncertainty ranges (+/-) are based on repeatability testing (three trials) and represent spread of results in absolute terms. Operating Speed for fully automated instruments is measured when device is operating at steady state. See Laboratory Report for full set of performance results.

### Instrument Specifications

 65.3 cm (W) x 56.5cm (D) x 84.4 cm (H)

 98 kg

Price: 143,000 EUR (May 2024)

### Contact

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