



HS Technology M-Screen Ultra



Overview

M-Screen Ultra is a desktop fully automated diamond verification instrument designed to screen large quantities of colourless and near colourless loose stones at a high speed. M-Screen Ultra automatically separates diamonds from synthetic diamonds and diamond simulants.

M-Screen Ultra dispenses stones into four categories:

- i) Pass (collects 100% natural diamonds)
- ii) Refer
- iii) Out of spec/Simulant (collects all diamond simulants)
- iv) Not on table (used to collect stones following a purge and/or stones not properly positioned)

The 'Referral' category may include both synthetic diamonds and natural diamonds. These should be further tested for full verification.

During ASSURE 2.0 testing, all synthetic diamonds in the sample sets reported to 'Referral' and all diamond simulants reported to 'Out-of-Spec'.

Stone Testing Capabilities

Weight range:	0.004 ct to 0.2 ct
Size range:	1.0 mm to 3.6 mm
Colour range:	D to J
Stone shape:	Round
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):	Refer
Multiple stones at once:	Yes
Training required:	No

ASSURE 2.0 Performance



Key ASSURE 2.0 test results for the M-Screen Ultra:

	Primary Sample	Smalls Sample	Jewellery Sample
Diamond False Positive Rate (Optimal rate 0%)	0.0% +/- 0.0%	0.0% +/- 0.0%	N/A
Diamond Referral Rate (Optimal rate 0%)	1.7% +/- 0.0%	1.7% +/- 0.3%	N/A
Diamond Accuracy Rate (Optimal rate 100%)	98.3% +/- 0.0%	98.3% +/- 0.3%	N/A
Operating Speed Stones per hour	13,700 +/- 800		

Notes:

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 operating at steady state.

Instrument Specifications

	45 cm (w) x 30 cm (d) x 55 cm (h)
	44 kg

Contact

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