ASSURE TESTED

AMS2

AMS2 is a desktop fully automated diamond verification instrument. AMS2 is designed to screen large quantities of loose stones at high speed. AMS2 automatically separates diamonds, synthetic diamonds and diamond simulants.

The user loads up to 500 carats of loose polished stones into the AMS2 in a specific size range. The instrument then automatically processes the stones and dispenses them into their respective category.

AMS2 dispenses the stones into four categories:

◇ Pass (i.e. diamond)
◇ Synthetic
◇ Non-diamond
◇ Refer

'Refer' could indicate potential synthetic diamonds and diamonds. The referrals should be tested further for full verification.

AMS2 needs to be calibrated periodically.

Stone Testing Capabilities

Weight of stones:	**0.0033 ct - 0.20 ct** for round brilliants
Size of stones:	**0.90 mm - 3.80 mm** for round brilliants and 1.00 mm-4.00 mm for fancy cuts
Colour of stones:	**D-J** failsafe across all colours although natural fancy colours will give a higher referral rate
Shape of stones:	**All**
Diamond simulants:	**Yes**
Mounted stones:	**No**

Instrument Capabilities

Automated feed:	**Yes**
Automated results:	**Yes**
Automated dispense:	**Yes**
Detect or Refer (synthetic diamonds)	**Detect**
Detect or Refer (diamond simulants)	**Detect**
Multiple stones at once:	**Yes**
Training required:	**No**

Instrument Performance

The results demonstrate the performance of the AMS2 tested by a novice operator:

	Core Sample	Smalls Sample
Diamond False Positive Rate *Optimal rate 0%*	0%	0%
Diamond Referral Rate *Optimal rate 0%*	0.7%	0.7%
Diamond Accuracy Rate *Optimal rate 100%*	99.1%	98.9%
Speed *Stones tested per hour*	2,677	2,677

Instrument Specifications

31.5 cm (w) x 40 cm (d) x 55 cm (h)

25 kg

45,000 USD February 2019

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ASSURE Tested March 2019
ASSURE ID 678514