



## M-Screen+



M-Screen+ 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+ automatically separates diamonds from synthetic diamonds and diamonds simulants.

M-Screen+ dispenses the stones into four categories:

- ◇ 'Needs rescreening': stones were not well positioned
- ◇ 100% natural diamonds
- ◇ Refer
- ◇ Diamonds out of spec or simulants

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

### Stone Testing Capabilities

Weight of stones:	<b>0.005 ct - 0.2 ct</b>
Size of stones:	<b>0.98 mm - 3.80 mm</b>
Colour of stones:	<b>D-J</b>
Shape of stones:	<b>Round</b>
Diamond simulants:	<b>Yes</b>
Mounted stones:	<b>No</b>

### Instrument Capabilities

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

### Instrument Performance

The results demonstrate the performance of the M-Screen+ tested by a novice operator:

	<b>Core Sample</b>	<b>Smalls Sample</b>
<b>Diamond False Positive Rate</b> <i>Optimal rate 0%</i>	<b>0%</b>	<b>0%</b>
<b>Diamond Referral Rate</b> <i>Optimal rate 0%</i>	<b>4.1%</b>	<b>9.1%</b>
<b>Diamond Accuracy Rate</b> <i>Optimal rate 100%</i>	<b>95.9%</b>	<b>90.9%</b>
<b>Speed</b> <i>Stones tested per hour</i>	<b>12,317</b>	<b>12,317</b>

### Instrument Specifications

**45 cm (w) x 30 cm (d) x 55 cm (h)**

**45 kg**

**63,000 USD** February 2019

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