



JTR Reveal 3S



Overview

The JTR Reveal 3S is a portable desktop diamond verification instrument for loose and mounted stones designed to separate natural diamonds from synthetic diamonds. The Reveal 3S has an Auto-Detect model that classifies each stone automatically based on fluorescence and phosphorescence properties to assist interpretation of stones. Images are displayed on a connected monitor, tablet or smartphone (not included). The Reveal 3S features a large viewing area that can analyze up to 100 loose stones or 10 rings at once.

The JTR Reveal 3S provides four views of the diamonds on the tray; i) Day light, ii) Fluorescence, iii) Phosphorescence, and iv) Result. The Result view will automatically identify some of the synthetic diamonds with a red dot. The remaining stones need to be visually interpreted by the operator based on the color characteristics of the stones under Fluorescence and Phosphorescence. An interpretation key with reference colors is shown on the monitor to assist with categorization of stones in one of following results:

- i) Diamond
- ii) Refer

When placing the stones on the tray, the culet was oriented in the up position. For jewelry testing, the stones were positioned at a common height above the tray in order to achieve the sharpest possible focus.

Capabilities

Weight range:	All
Size of stones:	all
Colour range:	D-J
Stone shape:	All
Diamond simulants:	No
Mounted stones:	Yes

Instrument Capabilities

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

ASSURE 2.0 Performance

Key ASSURE 2.0 test results for JTR Reveal 3S:

	Primary Loose	Smalls Loose	Primary Mounted
Diamond False Positive Rate (Optimal rate 0%)	0.0% +/- 0%	0.0% +/- 0%	0.0%
Diamond Referral Rate (Optimal rate 0%)	4.2% +/- 1.2%	5.9% +/- 1.8%	4.4%
Diamond Accuracy Rate (Optimal rate 100%)	95.8% +/- 1.2%	94.1% +/- 1.8%	95.6%
Test Speed Stones per hour	553 +/- 45		

Notes:

Uncertainty ranges (+/-) are based on repeatability testing (three trials) and represent spread of results in absolute terms.
Test Speed based on time to screen the full Primary Loose sample set, and includes time taken to retest challenging stones at different angles.
See Laboratory Report for full set of performance results.

Instrument Specifications

	17.5 cm (W) x 10.5 cm (D) x 13.2 cm (H)
	1.3 kg

Price: 5,750 USD (September 2026)

Contact

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