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Rub & Abrasion Tester

- Rub resistance of printed ink
- Abrasion test
- Wet rub test / solvent resistance

RT4 Rub & Abrasion Tester



The Hanatek Rub & Abrasion Tester (RT4) brings new levels of repeatability and convenience to testing the durability of inks and coatings on any printed material.

Designed by Hanatek to increase the efficiency and repeatability of rub proof testing, this comparative test works by abrading a printed sample against a reference material under known conditions.

The results can be used to identify alternative substrates, better ink and coating formulations for the suitability of finished cartons, films, printed books, magazines and promotional materials.

The Hanatek Rub & Abrasion Tester can be programmed for the required number of cycles, enabling it to be run concurrently with other laboratory tests.

Optional test attachments offer the ability to conduct tests under harsher conditions and can be used to check the solvent resistance or the cure of UV inks.

Benefits of using the Hanatek RT4

- ✓ Predict print performance
- ✓ Assess coating & substrate suitability
- ✓ Predict print durability
- ✓ Improve packaging effectiveness



Applications

The Hanatek RT4 allows the user to compare the durability of printed cartons, commercial print or proofs of ink and varnish on a vast array of substrates across a wide range of applications.



What is Durability and Abrasion Testing?

A laboratory rub proof tester is a tool for comparing the rubbing, scuffing and marking of inks and coatings on commercial print and packaging. It can be used as part of quality control in a production environment or an aid to development in the laboratory.

Protective packaging, magazines, commercial documents and promotional material are all printed with inks and coatings which are designed to remain clear, bright and undamaged during the items lifetime.

Unfortunately movement during packing, shipping or everyday handling can cause items to mark or scuff. The coatings and substrates used, the cure conditions and the amount of abrasion all effect the severity of this damage.



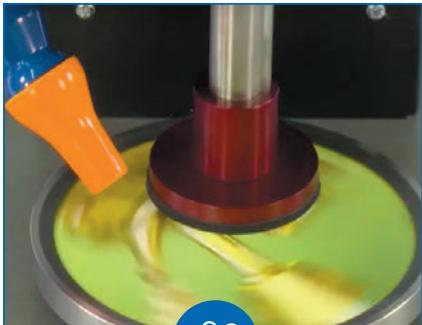
Features



Touch screen operation ensures quick configuration of test parameters



User-configurable cycle times allow tests to be run unsupervised



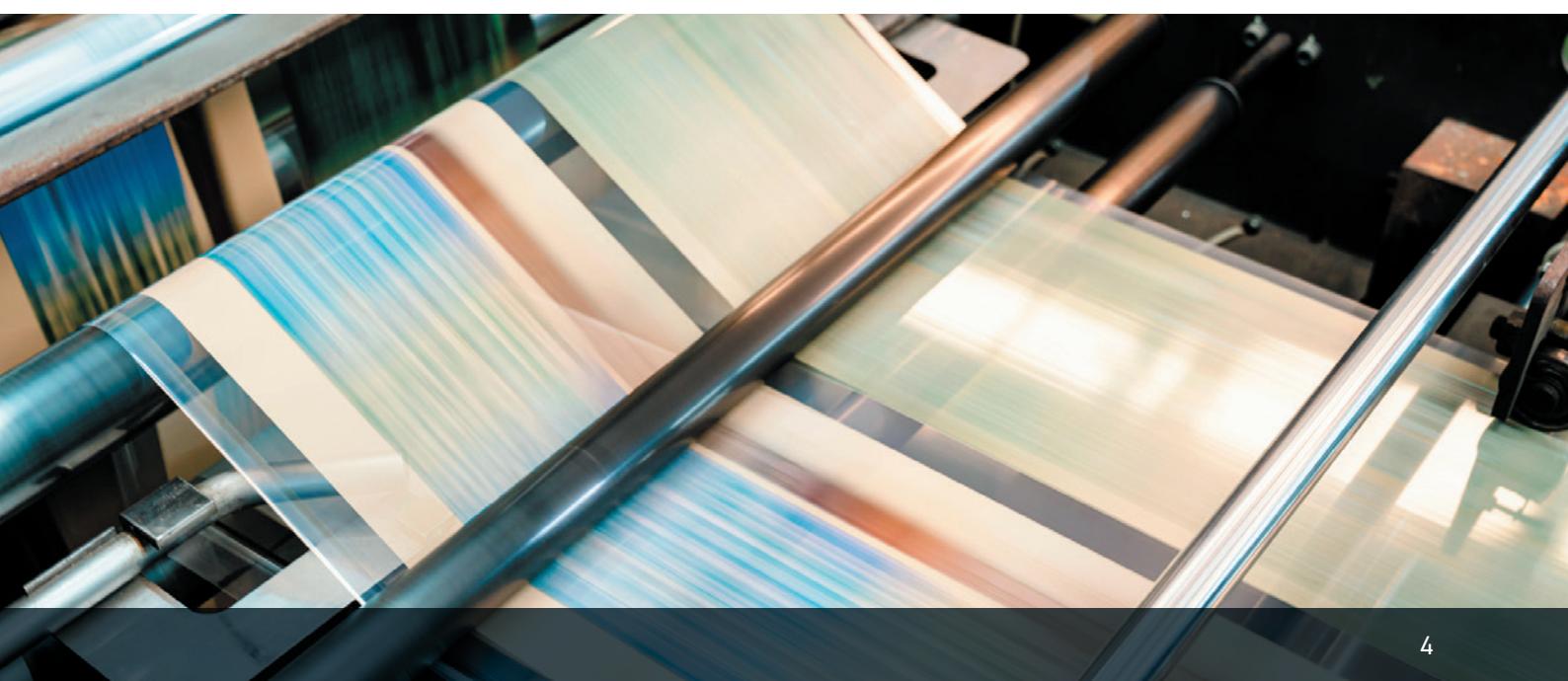
Air feed hose to remove fibres and debris which act as abrasive agents



Additional attachments available for abrasion and wet rub tests



Choice of weights to comply with BS3110 methods for measuring rub resistance of print



Method of operation

The instrument platen and test head are driven at an identical speed of 1 rev/sec. This creates a very even abrasion between the top surface and the entire area of the larger test sample.

An air hose blows away sample test debris to ensure no additional abrasion from loose ink particles affects the results.

After testing, the 2 samples are visually analysed. Pass/fail of each test is determined visually or by further analysis by using a densitometer, [glossmeter](#) or spectrophotometer.



Sample Preparation

- **Upper Sample:** The 50mm diameter upper sample is typically cut from a sample of printed material. Select an area for testing; it is usual to test areas that are MOST likely to fail; these include any heavy ink build areas or spot colours.



Sample template cutter for 50mm and 115mm Ø included with instrument.
Suitable for low volume testing.

- **Lower Sample:** The lower sample is 115mm in diameter - This can either be another sample of the printed material or white paper to see clearly see the ink transference.

Types of tests/pads

The instrument is supplied as standard with the foam measuring head and pad which is suitable for the face to face (printed surface to printed surface) method of testing described in BS3110 and also the printed surface to reference material such as Mellotex.

Alternative measuring heads/pads are available for conducting:



Abrasion Test

Scratch Pad - used for a more aggressive test useful for assessing through cure of UV coatings or high abrasion transit testing.

Available as an optional extra.



Wet Rub Test

Felt Pad - used to test the water, detergent, solvent or fat resistance of inks and coatings.

Available as an optional extra.



After every test, the abrasive or felt pad should be checked for damage or excessive coating build up and replaced if necessary.

The standard foam pads should both be inspected prior to testing. Damaged pads can lead to uneven pressure distribution across the sample, resulting in incorrect results.



Accessories

Included accessories

- Rub test sample template - 115mm
- Rub test sample template - 50mm
- Test weight for 1 psi
- Test Weight for 2 psi (when combined with weight 1)
- Standard rub test head
- Bulls eye spirit level
- Mains leads x 3 – EU/US/UK
- DC power pack
- Knife
- Sample clamping ring
- Calibration certificate for instrument, templates & weight
- Spanner



Optional accessories:



Results printer

Simple reporting of results using the results printer can be attached to retained samples



Wet head

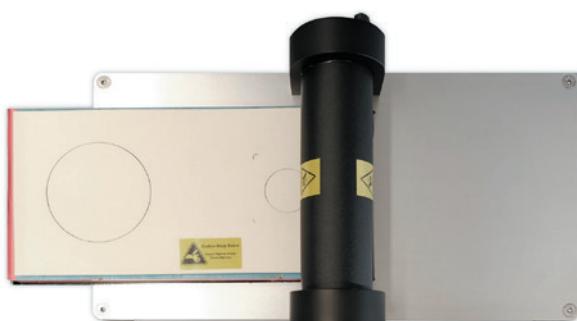
Wet head attachment plus pads



Scratch head

Scratch head attachment plus pads

Associated product: Universal Sample Cutter



The Universal Sample Cutter allows for faster and safer simultaneous cutting of 50mm and 115mm Ø samples. Suitable for all types of sample thickness and medium to high volume testing.

Specifications

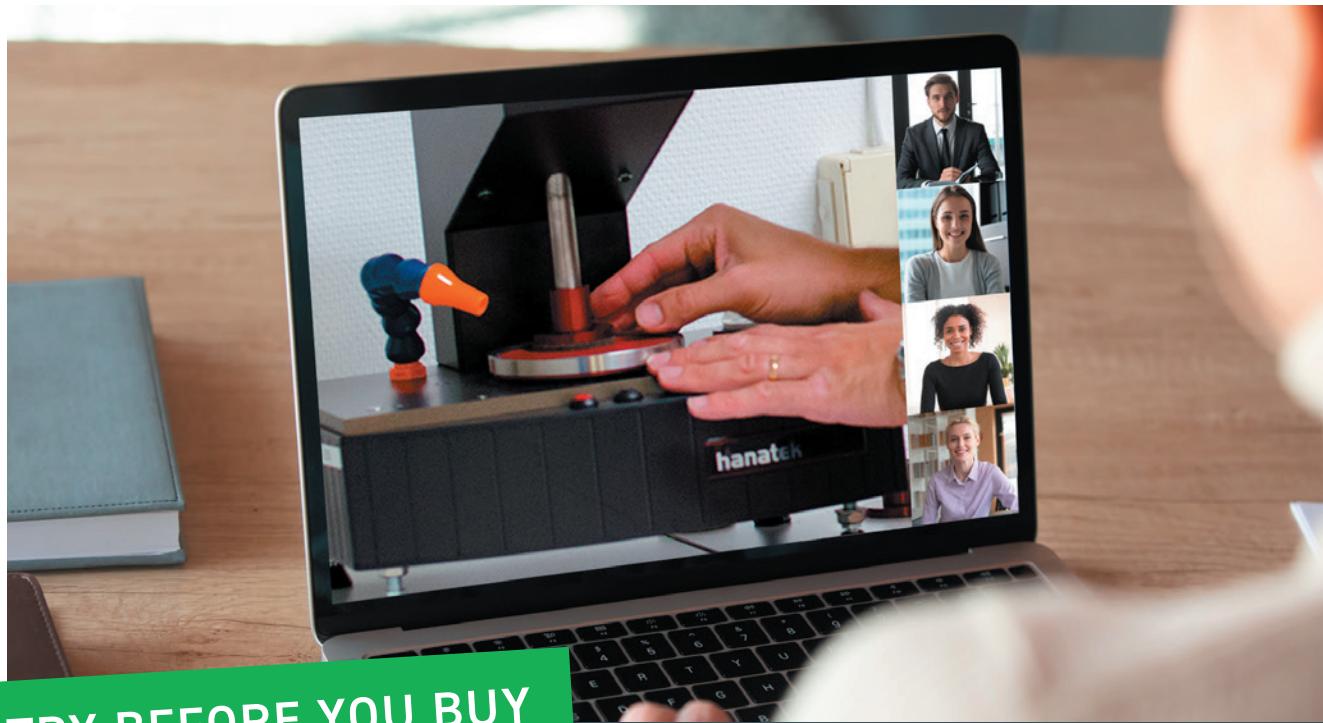
Specification	Details
Standards	BS 3110
Weights	0.5, 1.0 and 2.0 psi pressure
Certification	UKAS traceable calibration certificates (Instrument and test masses)
Power	110/240V 50/60Hz
Net weight	10kg max
Dimensions	(H) 510mm x (W) 450mm x (D) 420mm
Packed weight	16kg
Packed dimensions	(H) 420mm x (W) 350mm x (D) 250mm
Commodity code	9024 8011

Order Codes	
Rub & Abrasion Tester	HAN-A1002RUBTESTER
Sample Cutter	RL-A80-005
Wet Test Attachment	HAN-B1002RT4HEAD-W
Scratch Test Attachment	HAN-B1002RT4HEAD-S
UK Printer	HAN-B-PRINTER240

Free extended 2 year warranty: Requires registration at www.rhopointinstruments.com/instrument-registration within 28 days of purchase. Without registration, 1 year standard warranty applies.

Calibration and service: Fast and economical service via our global network of accredited calibration and service centres. Please visit www.rhopointinstruments.com/support for detailed information.





We offer two options for you to try out the Rub & Abrasion Tester before buying

1

Online demonstration: Online presentation of the Rub & Abrasion Tester with your samples measured LIVE on Zoom, Microsoft Teams or Skype. Includes a consultation with an application specialist.

2

Factory sample testing: Send in samples of your material for testing and receive a comprehensive test report.

[Arrange a demo](#)**Ready to receive a quote?**[Click here](#)**Rhopoint Instruments**

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