

# IGT Drying-Abrasion-Rub

## Time saving test equipment



Rub resistance determines the suitability of printed matter, folding cartons, brochures, newspapers, and wrappers for further processing, mailing or other purposes. It is influenced by the properties and combinations of ink, substrate, spray powder, varnish and dampening liquid. Therefore, test of rub resistance is vital to printers, converters and manufacturers of inks and substrates.

The IGT Dryers are small units for quick curing of (UV-) inks and varnishes, heatset inks and sheetfed inks, on paper, plastic, electronic boards, glass, metal, ceramic and other small to medium sized prints. In the graphic arts industry the dryers are used in QC to dry test prints for colour matching. In R&D laboratories of ink and chemical suppliers they are used to simulate the drying process on the printing press.

### Applications

The IGT Drying testers, Rub Testers and Abrasion Testers are instruments intended for objective and reproducible tests under standard, pre-programmed or preset conditions. With these devices one can simulate both normal and excessive stresses on printed and unprinted products. Generally, the printed sample is rubbed against a foreign material with specific abrasion properties in case of abrasion, or against the back or the same side of the same type of substrate in case of rub.

### The IGT Dry- Rub- en Abrasion Testers are used by

- Printing ink industry
- Security printers
- Packaging printers
- Pigment-, Resin- and Varnish industry
- Chemical industry
- Raw materials suppliers
- Training Centres, R&D institutes, Universities

# IGT Drying-Abrasion-Rub

## Modern design, easy to operate



### Sutherland type Ink Rub Tester

The Sutherland type Ink Rub tester is an automated instrument to rub a test strip under specified pressure, speed and temperature over a print determining the resistance to abrasion of the print. Abrasion resistance is a critical property for printed materials. Damage due to abrasion can occur during transport, storage, handling or use, resulting in deterioration of the image and readability of the information.

The Ink Rub tester allows comparison of the abrasion resistance of different materials under controlled conditions.

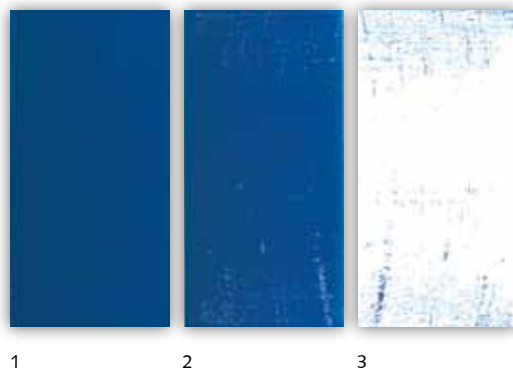
Weights for higher or lower forces well as heated weights are available.

**Applicable standards:** ASTM F1571, F685, F2497, D5264, F1478

### IGT Rub en Abrasion Tester

This laboratory rub tester is a tool to test rub, scuffing and marking of inks and coatings on print and packaging. It can be used as part of a QC system in production or as development tool in the lab. Protective packaging, labels, magazines, documents and other materials are printed with inks and coatings designed to remain undamaged during the item's lifetime. To simulate the effect on these materials, liquids, fats or others can be applied on the abrasion device. Movement during packing, shipping or handling can cause marks or scuff. The coatings and substrates used, the cure conditions and the amount of abrasion, all affect the severity of the caused damage.

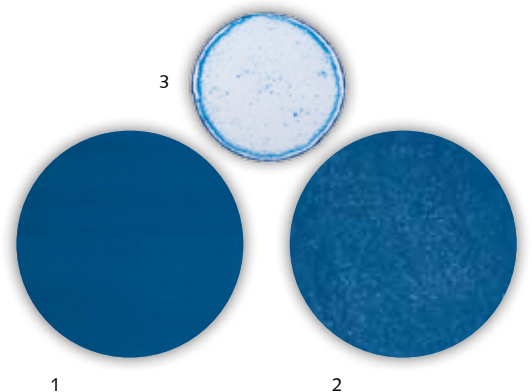
Additional weights for higher or lower forces are available.



1

2

3



1

2

3

# IGT

### Abrasion showing:

1. The original print

2. The original print after abrasion

3. The contaminated counter print

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## Pre-programmed test conditions



### **TZ8 Drying Time Tester**

The Drying Time Tester TZ8 is designed to determine the absorption behavior and drying time of inks on printed paper, plastic or metal foils. Set-off characteristics of coated or laminated materials can also be tested. The TZ8 is equipped with eight test stations, each station consists of a pressure application roller and a driving roller. After printing or coating, samples are entered in the nip with the printed/coated side facing an unprinted set-off paper, the back or the front side of a same substrate. The wet ink film produces a set-off trace on the plain paper until the ink film is dry. This way the drying time can be determined by measuring the length of the set-off trace on the plain paper. The speed can be adjusted between 10 and 2000 mm/h.



### **IGT Heatset Dryer**

The IGT Heatset Dryer dries a heatset ink using practice temperatures. After drying under identical temperature and speed conditions, the test result can be compared with a print with a reference ink. The heating element in this instrument uses 'diffuser' technology to spread the heat evenly over the printed surface from front and back.

Microprocessors continuously monitor the system to maintain a constant temperature in combination with a minimum heat exhaust to the lab, in combination with a low noise level.

An infra-red temperature sensor measures the surface temperature of the paper after it has passed the heat chamber.

**Standards:** ASTM 6073

### **IGT UV-Dryer**

The IGT UV-dryers are small units for quick curing of UV-inks and varnishes on flat material and small moulded parts like paper, plastic, printed circuit boards, glass or metal. In the graphic arts industry, these UV-dryers are used in the ink department to cure test prints for colour matching. In the R&D of ink and chemical suppliers they are used for simulation of the curing process. The testers are available with variable belt speed, adjustable lamp power and easy exchangeable lamps. On the tested samples the curing properties, rub and abrasion resistance and adhesion can be checked in a reproducible way close to the practical circumstances.



**Accessories:** Ozone-free lamps

# IGT Drying-Abrasion-Rub

## Excellent reproducibility

### TECHNICAL DATA

#### IGT Sutherland type Rub Tester

- Standards: ASTM F1571, F685, F2497, D5264, F1478
- Weights: 0,5; 1,0 and 2,0 Psi pressure
- Electrical ratings: 110/240V 50/60 Hz, 30 VA
- Dimensions (HxWxD): 290 x 200 x 313 mm<sup>3</sup>
- Weight: 13 kg

#### IGT Rub en Abrasion Tester

- Standards: BS 3110
- Programmable testing
- Weights: 1,0 and 2,0 Psi pressure
- Electrical ratings: 110/240V 50/60 Hz, 30 VA
- Dimensions (HxWxD): 420 x 250 x 350 mm<sup>3</sup>
- Weight: 10 kg

#### Heatset Dryer

- Standards: ASTM 6073
- Electrical ratings: 110-115 or 220-240 V, 50-60 Hz / 1600 VA
- Dimensions (HxWxD): 440 x 1100 x 300 mm<sup>3</sup>
- Weight: 41kg

#### Drying Time Tester

- Speed: 10 - 2000 mm/hour
- Thickness of samples: max. 1,5 mm
- Number of test stations: 8
- Line printing pressure: 20 N/cm, 50 N per sample test station
- Electrical ratings: 115-230V/50-60Hz, 1A / 30 VA
- Dimensions (HxWxD): 204 x 460 x 360 mm<sup>3</sup>
- Working width: 30-48 mm
- Weight: 21 kg

#### UV-Dryer

- Belt speed (adjustable): 3 – 20 m/min
- Total belt length: 750 mm
- Substrate width: ≤150 mm
- Curing width: 60 mm
- Passage height: 12 – 50 mm
- UV-radiator (type depended): 500 VA, 700 VA, 1000 VA
- Electrical ratings: 110-115 or 220-240 V, 50-60 Hz / 1600 VA
- Dimensions (HxWxD): 300 x 750 x 200 mm<sup>3</sup>
- Weight: 15 kg

### Agent

## IGT Testing Systems

Research, development and production of testing equipment for the printing and allied industries

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