IGT Global Standard Testers

A complete series of six printability testers

The IGT Global Standard Tester range are printability testers that are used to carry out a wide range of tests on paper, cardboard, foil, other substrates and offset, gravure, or flexo inks. Fields of application are primarily for quality control and research. There are models available with constant or increasing speeds. All Global Standard Testers are computer controlled and supplied with pre-programmed test conditions. There is a wide range of accessories available including a dispensing system to suit specific test requirements. The Global Standard Tester range has been specially designed and built to be very user friendly and simple to use.

- Test small quantities of ink and substrate under conditions that correspond with the practice.
- Consistent and repeatable test results.
- Large range of test methods to choose from to test the quality of various substrates including paper, film and cardboard. Flexo, gravure and offset inks can be easily proofed on the Global Standard Tester.
- Use of the Global Standard Testers enables costs to be reduced.
  - Ink and substrates can be tested without the use of valuable press time.
  - Little training is required to operate the Global Standard Tester range safely and effectively.
  - Very fast test time when the Global Standard Testers are used together with the High Speed Inking Unit 4.

Depending on the type, the Global Standard Testers consist of an impression cylinder and one or two printing discs. Characteristic for the Global Standard Testers is that they are completely computer

The Global Standard Testers are used in the following industries:

- **Printing ink, paper and board, printers**
- **Metal, plastics and packaging**
- **Resins, lacquers and coatings**
- **Raw materials**
- **Training centres and research institutes**

IGT Global Standard Testers

For quality control and research

controlled. The standard test conditions are pre-programmed into all testers. Because of this pre-programming, the risk of inaccurately setting the test conditions is minimised. It is still possible, of course, to set user defined test conditions. Different languages are also user selectable. Very special to the Global Standard Testers is that a number of versions are equipped with an automatic ink metering system to carry out certain tests. A cartridge with the selected ink / oil can be put in this system and then pneumatically a very accurate quantity of ink can be applied onto the printing disc. There are cartridges available for pick oil in all three viscosities (low, medium and high), for the Westvaco pick test, printing penetration liquid, Heliotest ink, liquid for the roughness test and for moistening tests. The automatic ink dosage increases speed, accuracy and reproducibility, making the test results more repeatable. For tests where the use of the measuring system cannot be used, we recommend the use of the High Speed Inking Unit 4. The substrate is placed on the impression cylinder and the inked printing disc is brought into contact and then the substrate is printed. There is a range of printing discs in several widths available for the different tests. The printed strip will be assessed or used for further processing. For the different tests the impression cylinder can be covered with various packings. By choosing the correct test conditions (speed, printing force, interval time, printing disc, type of ink, ink layer thickness, type of paper, etc.) a good correlation with the printing press can be realised.
For further information regarding the tests to be carried out, we refer to the brochure IGT test methods for the Global Standard Testers and to the IGT W-leaflets that describe the test methods in detail.

APPLICATIONS

The test strips that are made with the Global Standard Testers can be used for many purposes.

- Testing of many printability features of inks for offset, gravure printing and flexo, such as measuring of colour and density, determination of coverage, scratch and wear resistance, flexibility, trapping, gloss, ink transfer (in g/m^2), light fastness, chemical resistance, etc.
- Testing of many printability features of paper, cardboard and foil, such as printing quality, picking, wet pick and wet repellence, printing penetration, absorption, carbon copy, mottle, fluff, linting, missing dots, Heliotest, toner adherence, etc.

The Global Standard Testers can be used to print many types of materials:

- Paper, cardboard, plastic film, cellophane, laminate, tin, etc.

Inking unit

For the Global Standard Testers we recommended using the IGT High Speed Inking Unit 4. This unit consists of two metal distributor rollers and one rubber top roller. A specific quantity of ink is applied onto the unit, the ink is distributed and the printing discs are inked. The printing disc can then be placed on the Global Standard Tester and a test is carried out.
The construction of the unit and the adjustable speed makes very short inking times possible. Because of the high speed, the temperature of the rollers has to be regulated using a water bath. The short inking times make it possible to use all types of fast drying offset inks.

IGT High Speed Inking Unit 4

IGT Global Standard Tester P/1

Test strips can be used for many purposes:

Printability features of inks and materials

IGT Global Standard Tester P

IGT Global Standard Tester 1

IGT Global Standard Tester P

This printability tester is especially developed to carry out the pick test according to the IGT method (ISO 3783, TAPPI T514 and SCAN P 63.90). This is the simplest tester with increasing speed and one shaft for the printing disc.

IGT Global Standard Tester 1

In addition to the pick test according to the IGT method (ISO 3783, TAPPI T514 and SCAN P 63.90) the Global Standard Tester 1 can be used to carry out a range of other tests.

Standard tests:

- Pick test with aluminium printing disc (ISO 3783, TAPPI T514 and SCAN P 63.90)
- Pick test with a rubber printing disc
- Toner adhesion
- Linting
- Print penetration (GST 1 only)
- Roughness (GST 1 only)
- Felt- and wire side (GST 1 only)
- Roughness on rubber blanket (GST 1 only)

FEATURES

- Possibility for installing a pneumatic metering system for the printing penetration and roughness (GST 1 only)
- Increasing speed
- Final speed adjustable from 0.5 to 4 m/s
- Printing force adjustable from 100 to 1000 N
- Pneumatic printing force system
- Equipped with one printing shaft
- Printing width maximum 50 mm, printing length 200 mm
- Computer controlled process
- Pre-programmed test conditions

IGT Global Standard Tester 1W

For many paper and ink tests

IGT Global Standard Tester 1W

IGT Global Standard Tester 1W

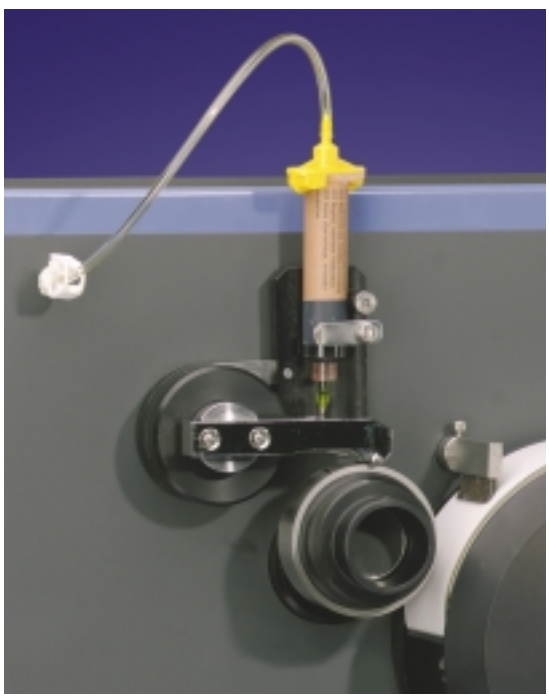
The tester 1 W is especially developed to carry out the pick test according to the Westvaco method. The tester is equipped with a fully integrated Westvaco system with pneumatic metering system for pick oil. All tests that are possible on the Global Standard Tester 1 can also be carried out on this tester.

Standard tests:

- Pick test - Westvaco method
- Pick test with aluminium printing disc (ISO 3783, TAPPI T514 and SCAN P 63.90)
- Pick test with a rubber printing disc
- Toner adhesion
- Linting
- Print penetration
- Roughness
- Felt- and wire side
- Roughness on rubber blanket

FEATURES

- Equipped with a doctor blade system and pneumatic metering system to carry out the pick test according to the Westvaco method
- Possibility for installing a pneumatic metering system for the printing penetration and roughness
- Increasing speed
- Final speed adjustable from 0.5 to 4 m/s
- Printing force adjustable from 100 to 1000 N
- Pneumatic printing force system
- Equipped with one printing shaft
- Printing width maximum 50 mm, printing length 200 mm
- Computer controlled process
- Pre-programmed test conditions



IGT Global Standard Tester 2

Prints all sorts of materials:

Paper, board, plastic film, cellophane, laminate, metal, etc.

IGT Global Standard Tester 2

FEATURES

- Possibility for installing a doctor blade and pneumatic metering system for tests on flexo ink, gravure ink, Heliotest ink and other liquids
- Constant printing speed
- Speed adjustable from 0.2 to 4 m/s
- Printing force adjustable from 100 to 1000 N
- Pneumatic printing force system
- Equipped with two printing shafts
- Interval time adjustable from 0.2 to 120 s between the first and the second printing disc, more stop positions and rotations possible so longer interval times can be realised
- Printing width maximum 50 mm, printing length 200 mm
- Computer controlled process
- Pre-programmed test conditions

IGT Global Standard Tester 2

This tester has constant speed and is equipped with two printing shafts and has an adjustable interval time between these shafts. The tester offers the possibility to install an automatic metering system. With the help of accessories many paper and ink tests can be carried out for offset, flexo and gravure printing.

Standard tests:

- Mottle
- Toner adhesion (EN 12283)
- Colour / density (ISO 2846-1, -2, -3, -5)
- Chemical resistances (ISO 2836)
- Printing smoothness
- Scumming
- Print through
- Fluff
- Wet-in-wet printing
- Wet pick / wet repellence
- Set-off
- Heliotest
- Screened printing
- Gloss (ISO 15995)
- Ink transfer
- Imaging and wipe-ability of carbon and carbonless paper
- Absorption of rubber blanket
- Embossing

Sector with clamps

Sector without clamps

IGT Global Standard Tester 3

Computer controlled process

IGT Global Standard Tester 3M (Mottle)

IGT Global Standard Tester 3H (Heliotest)

IGT Global Standard Tester 3M (Mottle)

This tester is the simplest tester with constant speed and one shaft for a printing disc. The tester is particularly suitable for carrying out mottle tests and other printing tests.

IGT Global Standard Tester 3H (Heliotest)

This tester is equipped with a fully integrated Heliotest doctor blade and pneumatic ink metering system. The tester is supplied with constant speed and one printing shaft. Even though this tester has especially been developed to carry out the Heliotest (gravure printing), it is also possible to install other accessories on the tester, which make many applications possible.

Standard tests:

- Mottle
- Toner adhesion (EN 12283)
- Colour / density (ISO 2846-1, -2, -3, -5)
- Chemical resistances (ISO 2836)
- Printing smoothness
- Scumming
- Print through
- Fluff
- Set-off
- Screened printing
- Gloss (ISO 15995)
- Ink transfer
- Imaging and wipe-ability of carbon and carbonless paper
- Absorption of rubber blanket
- Embossing
- Heliotest (GST 3H only)
- Gravure printing (GST 3H only)

FEATURES

- Equipped with one printing shaft
- Integrated doctor blade and pneumatic metering system for Heliotest and gravure printing (GST 3H only)
- Constant speed
- Speed adjustable from 0.2 to 4 m/s
- Printing force adjustable from 100 to 1000 N
- Pneumatic printing force system
- Printing width maximum 50 mm, printing length 200 mm
- Computer controlled process
- Pre-programmed test conditions

IGT Global Standard Testers

Pre-programmed test conditions

TYPE OF TEST:	GST P	GST 1	GST 1W	GST 2	GST 3M	GST 3H
Pick test -IGT method	•	•	•			
Pick test (rubber disc)	•	•	•			
Pick test -Westvaco method			•			
Print penetration		•	•			
Paper roughness		•	•			
Toner adhesion (accelerated)	•	•	•			
IGT Toner adhesion (EN 12283)				•	•	•
Colour/density				•	•	•
Print smoothness				•	•	•
Scumming				•	•	•
Mottle				•	•	•
Print through				•	•	•
Fluff				•	•	•
Wet on wet				•		
Wet pick / repellence				•		
Water interference mottle				•		
Set-off				•	•	•
Heliotest				•		•
Linting	•	•	•			
Screened printing				•	•	•
Gloss				•	•	•
Ink transfer				•	•	•
Imaging carbon paper				•	•	•
Wipe-ability carbon paper				•	•	•
Imaging carbonless paper				•	•	•
Wipe-ability carbonless paper				•	•	•
Felt-and wire side		•	•			
Blanket absorption				•		
Blanket roughness		•	•			
Embossing				•	•	•
Offset printing				•	•	•
Flexo printing				•		
Gravure printing				•		•
Intaglio printing				•	•	•
Letterpress printing				•	•	•

IGT ink pipette

For applying the offset ink onto the inking unit, we strongly recommend the use of the IGT ink pipette. With this ink pipette the accuracy of applying the ink, and therefore the accuracy of the execution of the test, will be increased. For higher accuracy applications the special high-resolution pipette can be supplied.

IGT Global Standard Testers

Excellent reproducibility

TECHNICAL DATA Global Standard Tester

Type Global Standard Tester	P	1	1-W	2	3	3-H
Printing (final) speed	0.5 - 4.0 m/s (increasing)			0.2 - 4.0 m/s (constant)		
Printing force	100 - 1000 N					
Maximum printing width	50 mm					
Printing length	200 mm					
Number of printing shafts	1			2	1	
Doctor blade system			•	Optional		•
Measuring system		•	•	•		•
Interval times				0.1 - 1000 s.	2 - 1000 s.	
Sector with clamps	•	•	•	Optional	Optional	•

General

- Inking and print area in separate testers
- Very fast ink distribution
- Easy to operate
- Reliable
- Low initial costs
- Possibility to process many substrates and inks
- Detailed instructions

High Speed Inking unit 4

- Top roller 1, 2 or 4 segments
- Inking surface 4 x 328 cm^2 (4 segments)
  2 x 729 cm^2 (2 segments)
  1 x 1537 cm^2 (1 segment)
- Inking speed 0.2 - 1.2 m/s
- Distributing time 5 - 200 s
- Inking time printing discs 5 - 200 s
- Temperature working area 15 - 45°C
- Maximum width printing disc 50 mm

Top rollers

- For conventional inks, 1, 2 or 4 segments
- Rubber for UV-drying inks, 1, 2 or 4 segments

Electrical connection:

Global Standard Tester:
115 - 230 V / 50 - 60 Hz

High Speed Inking Unit 4:
115 - 230 V / 50 - 60 Hz

Global Standard Tester

Weight: 80 kg
Height: 580 mm
Width: 465 mm
Depth: 485 mm

High Speed Inking Unit 4

Weight: 55 kg
Height: 300 mm
Width: 860 mm
Depth: 380 mm

Agent

IGT Testing Systems

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

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