

IGT Multi-purpose testers

Amsterdam, Global Standard Tester en AIC2-5



The IGT supplies three ranges of multi-purpose printability testers: Amsterdam, Global Standard Tester and AIC2-5T2000 series. They are used to carry out a wide range of tests on paper, cardboard, foils of other substrates with offset, gravure or flexo inks. Fields of application are quality control and research. Models are available with constant or increasing speeds and the combination of both. There is a wide range of accessories available including dispensing systems to suit specific test requirements.

- Test small quantities of ink and substrate under conditions correlating very well with practice
- Reproducible and repeatable test results
- Large range of test methods to choose from, to test the properties of various substrates including paper, film, cardboard and electronic materials
- Printing properties of flexographic, gravure and offset inks can easily be tested
- Ink and substrates can be tested without the use of valuable press time
- Little training is required to operate the IGT Testers safely and effectively
- Very fast test time when the Multi-Purpose Testers are used in combination with a High Speed Inking Unit 4

The testers are used in the following industries

- Printing ink production and research
- Paper and board production and research
- Printers, security printing
- Metal, plastics and packaging printing
- Resins, lacquers and coatings
- Raw materials
- Electronics research
- Training centers and research institutes

IGT AMSTERDAM

Fully automated



IGT AMSTERDAM 1

The IGT Printability tester Amsterdam 1 is a tester with constant and increasing speed modes operating with only one printing shaft, one doctoring system and a camera.



IGT AMSTERDAM 2

The IGT Printability tester Amsterdam 2 is a tester with constant and increasing speed modes on two printing shafts, one doctoring system and a camera. The tester is able to execute all tests of the models AIC2-5, Global Standard Testers and the Amsterdam 1 and several more.

IGT AMSTERDAM

The Amsterdam series of testers are characterized by a very high degree of automation and integration. All functionality is as much as possible integrated in the basic instrument, so are all Amsterdam models standard equipped with a line-scan camera for the recording of the printed image. The operation is fully automated where possible, and safe stand-alone operation of some long-time tests is implemented. Operation and test set-up is done through a touch screen display where also the results of the analysis are presented. The Amsterdam series of testers offer full flexibility of the testing program: fixed settings in accordance with the standard, free settings for standard test methods or user defined, programmable test methods. All test parameters, test results as far as measured on-line and, if recorded, images are recorded and can be exported.

Applications of all IGT printability testers

- The test strips made on the Amsterdam can be analysed on-line or used for the test of different properties later
- Testing of printability properties of inks for offset, gravure, flexography, intaglio and letterpress such as measurement of colour, density, coverage, flexibility, trapping, gloss, ink transfer (in g/m²), light fastness, abrasion and rub resistance, chemical and weather resistance.
- Testing of printability properties of paper, cardboard and foil, such as printing quality, picking, wet pick and wet repellence, print penetration, absorption, mottle, fluff, linting, missing dots, Heliotest, toner adhesion, hydro expansivity.

IGT AMSTERDAM

Integrated camera and analysis system



IGT AMSTERDAM 5

The IGT Printability tester Amsterdam 5 is a tester with constant and increasing speed modes on five printing shafts, one doctoring system and a camera. The tester is able to perform all tests which can be executed on the AIC2-5, Global Standard Testers and Amsterdam 1 and 2 and several addition test.



IGT AMSTERDAM 6

The IGT Printability tester Amsterdam 6 is a tester with constant and increasing speed modes on six printing shafts, two doctoring systems and camera. This tester is able to execute all tests previous and more inclusive gravure or varnish overprint.

Characteristics

- Very high degree of automation
- Selection of test method, settings and materials is done on a touch screen
- Increasing and constant velocity can be selected separately or combined in one test cycle
- Automatic adjustment for printing on substrates of different thickness
- Automatic rotation of sector and printing discs to starting point
- Tests simulating the full speed of FC web presses possible

General features Amsterdam series

- Individual and combined increasing and constant speed in one test
- Constant speed adjustable from 0,01 to 4,0 m/s
- Increasing speed, adjustable with an end-speed between 0,5 and 4,0 m/s
- Printing force adjustable from 50 to 1000 N
- Interchangeable sector with or without clamps
- Electronic printing force and speed adjustment system
- Equipped with one, two, five or six printing shafts
- Printing width maximum 50 mm
- Printing length 200 mm to 510 mm
- Simple to operate due to modern, intuitive software and touchscreen, standard layout and operation throughout all IGT-testers
- Pre-programmed test conditions, fixed settings according to standards, variable settings with standard procedure
- User defined programs

IGT Global Standard Testers

For many paper and ink tests



IGT GST P (Pick test)

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



IGT GST W (Westvaco)

The model 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 test oil. All tests possible on the Global Standard Tester 1 can also be carried out on this tester.

Applications

Test strips that are made with the Global Standard Testers can be used for many purposes, not all tests can be done on all instruments, for details see the table

- Testing of many printability features of inks for offset and gravure printing, such as measuring of colour and density, determination of coverage, abrasion and wear resistance, flexibility, trapping, gloss, ink transfer (in g/m²), light fastness, chemical resistance
- Testing of many printability features of paper, cardboard and foil, such as printing quality, picking, wet pick and wet repellence, printing penetration, absorption, mottle, fluff, linting, missing dots, Heliotest, toner adhesion

General features GST testers

- Increasing or continues speed depending on model
- Printing width maximum 50 mm, printing length 200 mm
- End-speed adjustable from 0,5 to 4 m/s
- Printing force adjustable from 100 to 1000 N
- Pneumatic printing force system with automatic compensation for substrate thickness
- Equipped with one or two printing shafts
- Computer controlled procedure
- Pre-programmed test conditions



1. Sector without clamps
2. Sector with clamps

IGT Global Standard Testers

Prints all sorts of materials



IGT GST 2

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



IGT GST 3H (Heliotest)

This tester is equipped with a fully integrated Heliotest doctor blade and pneumatic ink metering system. The tester used constant speed on one printing shaft. Although this tester has been developed to carry out the Heliotest (gravure printing), it is also suitable for many other applications.

Description

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 controlled. The standard test conditions are pre-programmed on all testers. Because of these pre-set tests, the risk of erroneous test condition setting is minimised. It is still possible to use user defined test conditions.

Some versions are equipped with an automated ink doctoring system to reduce the operator influence on tests. A cartridge with the selected ink/oil can be put in this system and then pneumatically an accurate quantity of ink can be applied onto the printing disc. There are cartridges available for pick test oil for the Westvaco pick test, printing penetration liquid, Heliotest ink, liquid for the roughness test and for dampening tests. For tests where the use of the doctoring system cannot be used, we recommend the use of the High Speed Inking Unit 4.

There is a range of printing discs in several widths and surface coverings available for different tests. The printed sample will be assessed directly or used for further processing or measurement after a specified time. By choosing the correct test conditions (speed, printing force, interval time, printing disc, type of ink, ink film 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.

IGT AIC2-5T2000

For quality control and research



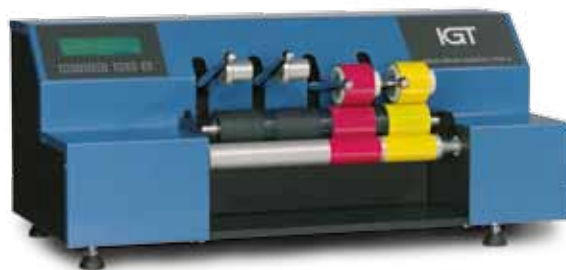
IGT AIC2-5T2000

The AIC2-5 printability tester consists of an impression cylinder and a choice of one or two printing forms (printing discs). The printing forces, speed and interval time between the first and second printing disc are adjustable. When setting the highest speed, interval times of 0.014 s can be achieved. This makes it possible to set practically all the interval times of any printing press.

For the various tests, the impression cylinder can be provided with a range of different coverings. Many accessories are available which can be attached to the printability tester. This enables many different types of tests to be made.

IGT INK PIPETTE

The use of an IGT ink pipette to apply offset ink to the inking unit is strongly recommended because it increases the accuracy of application of ink and therefore the repeatability of the inking, thereby enhancing the performance of the tests. The ink pipette is available in 0,01 and 0,001 ml resolution.



INKING UNIT

For all series of Multi-Purpose testers it is strongly recommended to use the IGT High Speed Inking Unit 4. This unit consists of two metal rollers and one rubber top roller. A well known 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 any of the IGT printability testers, in particular the Amsterdam, the Global Standard Testers and the AIC2-5 models. 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 and the controlled temperature make it possible to use all types of offset and intaglio inks, including fast drying heatset inks.

IGT Multi-purpose testers

Pre-programmed test conditions

	AMS 1	AMS 2	AMS 5	AMS 6	GST P	GST W	GST 2	GST 3H	AIC2-5
Type of test									
Pick test -IGT methods (all)	x	x	x	x	x	x			x
Print penetration	xx	xx	xx	xx		x			x
IGT Paper roughness	xx	xx	xx	xx		x			x
Toner adhesion (accelerated)	x	x	x	x	x	x			x
IGT Toner adhesion (EN 12283)	x	x	x	x			x	x	x
Colour/density/transparency	x	x	x	x			x	x	x
Print smoothness	x	x	x	x			x	x	x
Scumming	x	x	x	x			x	x	x
Mottle	xx	xx	xx	xx			x	x	x
Print through	x	x	x	x			x	x	x
Fluff	x	x	x	x			x	x	x
Wet on wet printing/ink trapping		x	x	x			x		x
Wet pick/wet repellence		x	x	x			x		x
Water interference mottle		xx	xx	xx			x		x
Set-off	x	x	x	x			x	x	x
Heliotest	xx	xx	xx	xx			x	x	x
Linting	x	x	x	x	x	x			x
Halftone printing	x	x	x	x			x	x	x
Gloss	x	x	x	x			x	x	x
Ink transfer	x	x	x	x			x	x	x
Felt-and wire side determination	xx	xx	xx	xx		x			x
Embossing	x	x	x	x			x	x	x
Offset printing	x	x	x	x			x	x	x
Flexo printing		x	x	x			x		
Gravure printing	x	x	x	x			x	x	x
Intaglio printing	x	x	x	x			x	x	x
Letterpress printing	x	x	x	x				x	x
Hydroexpansivity		xx	xx	xx					
Blistering pass-to-fail	x	x	x	x					x

xx = with on-line analysis of results

IGT Multi-purpose testers

Specifications

TECHNICAL DATA

	AMS 1	AMS 2	AMS 5	AMS 6	GST P	GST W	GST 2	GST 3H	AIC2-5
Printing speed/end speed (m/s)	0,02 - 4,0	0,02 - 4,0	0,02 - 4,0	0,02 - 4,0	0,5 - 4,0	0,5 - 4,0	0,2 - 4,0	0,2 - 4,0	0,2 - 5,0/7,0
Printing force (N)	100-1000	50-1000	50-1000	100-1000	100-1000	100-1000	100-1000	100-1000	100-1000
Printing width (mm)	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50	10-50
Print length (mm)	50-500	50-500	50-500	50-500	200	200	200/270	200/270	200/270
Number of printing shafts	1	2	5	6	1	1	2	1	2
Doctor blade system	1	1	1	2		1	1	1	optional
Camera system	yes	yes	yes	yes					
Interval times (s)	>3s	0,02	0,02	0,02			0,02	>3s	0,014 to 60
Sector with clamps	standard, exchangeable								yes
Weight (kg)	90	100	140	150	85	85	90	85	100
Height (mm)	640	640	740	740	580	580	580	580	500
Width (mm)	495	495	495	495	485	485	485	485	440
Depth (mm)	580	580	700	700	465	465	465	465	500

High Speed Inking unit 4

- Top roller 1, 2 or 4 segments
- Inking surface 1, 2 or 4 segments
- 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
- Weight : 55 kg
- Height : 300 mm
- Width : 760 mm
- Depth : 380 mm

Top rollers

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

Electrical ratings:

- Amsterdam 1/2: 115 - 230 V / 50 - 60 Hz
- Amsterdam 5/6: 115 - 230 V / 50 - 60 Hz
- Global Standard Tester: 115 - 230 V / 50 - 60 Hz
- AIC2-5: 115 - 230 V / 50 - 60 Hz
- High Speed Inking Unit 4: 115 - 230 V / 50 - 60 Hz

Agent

IGT Testing Systems

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

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