

Next level IGT printability testers

Introduction AMSTERDAM FAMILY



PRINTABILITY

IGT stands for printability. Over the years, IGT has developed several test methods with the focus on printability. These test methods have been embraced by manufacturers and research institutes all over the world to ensure the required quality of substrate and ink. The IGT test methods are an important aid to ensure the consistency of the quality of substrate and ink for a specific printing technique, to test any changes in composition of the ink and substrate and to test the influence of these on the printability. These test methods are an essential aid for manufacturers and research institutes, as well as for processing companies, to use as a means of entry control for their incoming materials with respect to printability.

IGT AMSTERDAM MULTIPURPOSE PRINTABILITY TESTER

The IGT Amsterdam printability testers feature a high level of automation. Each action is performed by an internal computer, that controls all components: the correct positioning of the printing disc, the moment of applying pressure of each individual printing shaft, the exact force of the printing disc on the sector, the start of the print, the printing with constant or increasing speed according to a specific speed profile and the activation of the camera that makes a high-resolution scan for the analysis. These settings have been pre-programmed per test method and cannot be altered by the user. Of course, test methods for which options in settings, like (end)speed, are necessary, the possibility to change these settings are given to the operator. Because of this, the IGT Amsterdam is a very user-friendly instrument, which guarantees a uniform way of execution for each specific test method. The operator is prompted to perform certain actions and at the end of each test the results are presented on the display.



Next level IGT printability tester

Integrated camera and analysis system

AMSTERDAM NEXT LEVEL

The extensive, automated test methods prevent the user from making mistakes and variations in results therefore are minimized. Thus the outcome of a test is less dependent on the operator. With 'Next Level' IGT Testing Systems aims to eliminate operator bias when assessing the results. For several test methods algorithms have been developed to evaluate the test result. No ruler is needed anymore to measure the length of the ink stain of the Print Penetration test; the length is simply determined directly after the print has been made. In October 2019 IGT launched the IGT Pick analyser for IGT Pick ISO 3783. The algorithm neatly shows the pick resistance on the screen, considering the type of pick test oil, the speed and the temperature of the surroundings.

Our software engineers will continue to develop new analysers, and these will then be announced on the website.



IGT Pick ISO 3783: the camera is scanning



IGT Pick ISO 3783: the test result

Until now algorithms have been developed for the following test methods: Pick – Heliotest – Mottle – Print penetration - IGT Roughness – Hydro-expansivity. An actual overview can be found on the IGT website.



OVERVIEW IGT TEST METHODS

AMSTERDAM FAMILY

IGT is pleased to offer you configurations that are focused on R&D, with a set of different test methods, as well as instruments intended for Quality Control, where mostly just a single test is performed. The ultimate printability tester is the Amsterdam 6. This unit is equipped with 6 printing shafts, 2 doctoring systems and a high-resolution camera. With this instrument any desired printability test becomes possible. For companies who do not need all test methods, IGT has developed several Amsterdam family varieties.

Type of test	W-Leaflet	Test Method Group	Substrate	Ink	Technology	Shafts
Print penetration	W24	Paper	Paper	IGT Print Penetration liquid		1
IGT Roughness	W28	Paper	Paper	IGT Roughness solution		1
Fluff	W33	Paper	Paper	IGT Pick test oil MV Fluff test ink	Offset, Gravure, Flexo, Inkjet, Toner	1
Strike through	W43	Paper	Paper, Newsprint, Tissue	Paste ink	Offset, Gravure, Flexo Inkjet	1
Hydro-expansivity	W89	Paper	Paper	Water	Inkjet	1
Pick: IGT ISO 3783	W31	Linting, Pick	Paper, Paperboard	IGT Pick test oil LV, MV, HV, EHV	Offset	1
Pick: Westvaco	W38	Linting, Pick	Paper, Paperboard	IGT Pick test oil LV, MV, HV, EHV	Offset	1
Pick: Wet pick / wet repellence	W32, W66	Linting, Pick	Paper, Paperboard	Paste ink	Offset	2
Pick: Offset (Delamination)	W65, W75	Linting, Pick	Coated paper, Paperboard	IGT Pick test oil LV, MV, HV, EHV	Offset	1
Pick: PassesToFail Index & Curve	W86, W87, W88	Linting, Pick	Coated paper, Paperboard	IGT Pick test ink 1, 2, 3	Offset	1
Linting	W44	Linting, Pick	Uncoated paper, Paperboard, Newsprint, Tissue	Paste ink	Offset	1
Linting, pre-wetted	W90	Linting, Pick	Uncoated paper, Paperboard, Newsprint, Tissue	Paste ink	Offset	2
Mottle: Print Curve / Index	W58	Mottle, Paper	Paper, Paperboard	Paste ink	Offset	2
Mottle: Back Trap Curve / Index	W57	Mottle, Paper	Paper, Paperboard	Paste ink	Offset	2
Mottle: Ink Trap Curve / Index	W58	Mottle, Paper	Paper, Paperboard	Paste ink	Offset	2
Mottle: Water interference Curve / Index	W59	Mottle, Paper	Paper, Paperboard	Paste ink	Offset	2
Gravure 180° / 360°	W67	Gravure	Coated paper, Paperboard, Foil, Textil, Metal	Liquid ink	Gravure	1
Heliotest	W41	Gravure, Paper	Paper, Paperboard	IGT Helio test ink		1
Gravure Set-off 4 times		Gravure, Paper, Ink	Coated paper, Paperboard, Foil	Liquid ink	Gravure	2
Print varnish		Offset	Paper, Paperboard, Foil	Varnish	Offset, Gravure, Flexo Inkjet, Toner	2
Ink Trapping (wet on wet) 2C	W46	Offset	Paper	Paste ink	Offset	2
Ink Trapping (wet on wet) 4C	W46	Offset	Paper	Paste ink	Offset	3-5
Colour/density/ink transfer	W50	Offset, Paper	Substrate	Paste ink	Offset	1
Halftone Printing	W45	Offset, Paper	Substrate	Paste ink	Offset	1
Print Gloss	W49	Offset, Paper	Paper	IGT Gloss test ink	Offset	1
Print Smoothness	W77	Offset, Paper	Paper	IGT Density ink	Offset	1
Set-off 2-4-10 fields: ISO TS 19857	W48, W78	Paper, Ink	Paper	Paste ink	Offset	2
Flexo print	W76	Flexo, Paper	Coated paper, Paperboard, Foil, Textile, Metal	Liquid ink	Flexo	2
Toner adhesion (constant speed)	W55	Toner, Paper	Paper	IGT Pick test oil MV	Toner	1
Toner adhesion (increasing speed)	W56	Toner, Paper	Paper	IGT Pick test oil	Toner	1
Intaglio	W85	Intaglio, Paper, Ink	Paper, Polymer	Intaglio	Intaglio	1
Rubber blanket ink absorption	W61	Blanket	Rubber blanket	Paste ink	Offset	1
Rubber blanket roughness	W62	Blanket	Rubber blanket	IGT Roughness solution	Offset	1
Rubber blanket ink transfer	W74	Blanket	Rubber blanket	Paste ink	Offset	2

OVERVIEW AMSTERDAM FAMILY

An Amsterdam multipurpose printability tester with two or more printing shafts, is usually used in a R&D environment, whereas the single purpose ones (Amsterdam-P, Amsterdam-W, Amsterdam-H) are especially developed for QC purposes. In the overview beneath, test methods are paired to the required Amsterdam type.

Type of test	AMS-6	AMS-5	AMS-2	AMS-2 BASIC	AMS-1	AMS-1 BASIC	AMS-P	AMS-P BASIC	AMS-W	AMS-W BASIC	AMS-H	AMS-H BASIC	INTAGLIO/ WESTVACO INKER	HSIU-4
Print penetration	•	•	•		•									
IGT Roughness	•	•	•		•		•		•		•			
Fluff														
Strike through														
Hydro-expansivity	•	•	•		•						•			
Pick: IGT ISO 3783	•	•	•		•		•		•		•			
Pick: Westvaco	•	•	•		•		•		○	○	•			
Pick: Wet pick / wet repellence														
Pick: Offset (Delamination)	•	•	•		•		•		•		•			
Pick: PassesToFail Index & Curve														
Linting														
Linting, pre-wetted														
Mottle: Print Curve / Index	•	•	•											
Mottle: Back Trap Curve / Index	•	•	•											
Mottle: Ink Trap Curve / Index	•	•												
Mottle: Water interference Curve / Index	•	•	•											
Gravure 180° / 360°														
Heliotest	•	•	•		•						•			
Gravure Set-off 4 times														
Print varnish														
Ink Trapping (wet on wet) 2C														
Ink Trapping (wet on wet) 4C														
Colour/density/ink transfer														
Halftone Printing														
Print Gloss														
Print Smoothness														
Set-off 2-4-10 fields: ISO TS 19857														
Flexo print														
Toner adhesion (constant speed)														
Toner adhesion (increasing speed)														
Intaglio									○	○				
Rubber blanket ink absorption														
Rubber blanket roughness														
Rubber blanket ink transfer														

• - Analysis ○ - Integrated inking system - Possible

Next level IGT printability testers

Fully automated

AMSTERDAM FAMILY SOME SPECIFIC FEATURES

Printing techniques

The Amsterdam Multipurpose Printability tester can perform multiple printing techniques on one tester e.g. offset, flexo and gravure.

Substrates

A large variety of substrates can be tested, among which are paper, cardboard, film, foil and electronic materials.

Testing simplified

Testing of a substrate, ink and the influence the combination thereof may have on printability is simplified by the use of an Amsterdam printability tester.

Analysis

Analysis based on high resolution images, made directly after the test with an advanced assessment algorithm.

Speed

The constant or increasing speed, or a combination of both, can be set per test method up to 4 m/s, according to an accurate speed profile.

Printing discs

Self aligning printing discs, automatically in the right starting position with perfectly accurate printing forces.

Software

The Amsterdam operation software prevents the user from incorrect settings or incorrectly performing a test.

Data-export

Simple data export with a memory stick to your own data system in a structured format, including scanned images.

The Amsterdam 6

The Amsterdam 6 is the ultimate printability tester.



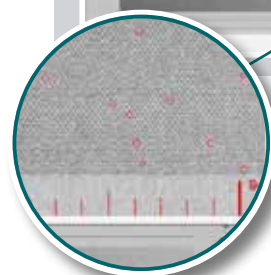
Helio test: execution



Helio test: print



Helio test: the test result



Next level IGT printability testers

For quality control and research

TECHNICAL DATA

	AMS 6	AMS 5	AMS 2	AMS 2 BASIC	AMS 1	AMS 1 BASIC	AMS P	AMS P BASIC	AMS W	AMS W BASIC	AMS H	AMS H BASIC
Standard Test Method							Picking ISO 3783	Picking ISO 3783	Picking Westvaco	Picking Westvaco	Heliotest	Heliotest
Printing shafts	6	5	2	2	1	1	1	1	1	1	1	1
Camera	1	1	1		1		1		1		1	
Doctoring system	2	1	1	1	1	1					1	1
Weight	150 kg		110 kg									
Dimensions (H x W x D)	73 x 63 x 60 cm		64 x 50 x 60 cm									
Forces	100 - 1000 N in steps of 10 N (some tests 50 - 1000 N)											
Interval times	0,2 - 600 s in steps of 0,1 s											
Power supply requirements	100 - 240 Vac, 50/60 Hz, 16 AT											
Constant speed	0,1 - 4,0 m/s in steps of 0,1 m/s											
Accelerating end speed	4,0 m/s in steps of 0,1 m/s											



Agent

IGT Testing Systems

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

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