

IGT Orange Proofer

Printability testers for offset inks



IGT Orange Proofer are low cost, versatile and easy to operate printability testers to reduce costs in printing and quality control. The Orange Proofer are used in the ink laboratories of printing houses and ink manufacturers. With these testers highly reproducible prints are made with offset inks on every desired substrate; consequently the desired properties as e.g. colour, transparency, density, ink transfer, penetration and so on can be tested from these prints. The knowledge of the inks reduces down-time of the printing press and waste of materials.

- The Orange Proofer makes colour strips of offset inks with a known ink layer thickness, which can be used for many purposes
- The Orange Proofer has specially been designed for computerised colour measuring and colour matching systems
- The Orange Proofer saves on costs, because colour testing on the printing press is no longer necessary

APPLICATIONS

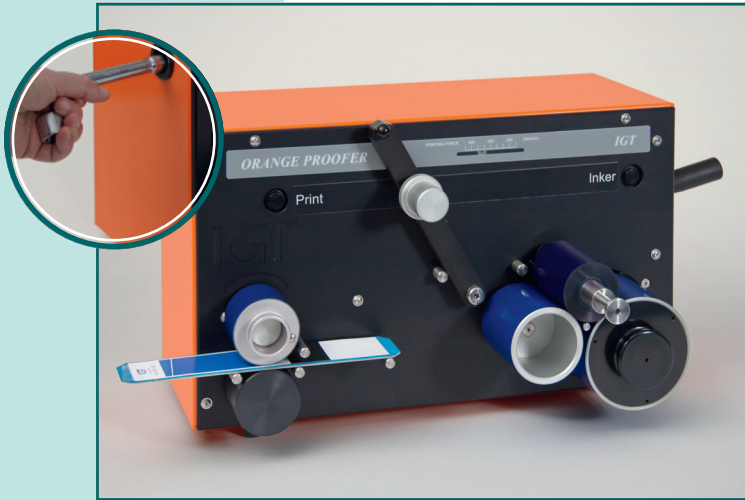
Today many printers have their own ink kitchen. The Orange Proofer can be used to make colour strips, to check the quality of the ink on the substrate before using it on the press. In this way, a quick check of colour matching can be obtained. Also used in the laboratories of pigment and ink manufacturers the Orange Proofer form an important tool to check colour, penetration, drying, density, set off and others.

The Orange Proofer is used in the following industries:

- Offset printing ink and printing houses
- Paper and board
- Metal, plastics and packaging
- Resins, lacquers, varnishes and coatings
- Raw materials

IGT Orange Proofer

Modern design, simple to operate



ORANGE PROOFER

The printing force is applied manually using a special socket wrench. In most cases the force used for the prints is standard within one plant. Reasons to change the force can be a very different substrate, a very different printing form or a different width of the printing form. Normally the force used is 4-12,5 N per mm nip width. If the force is not to be changed regularly the best choice is the Orange Proofer.

PURPOSES

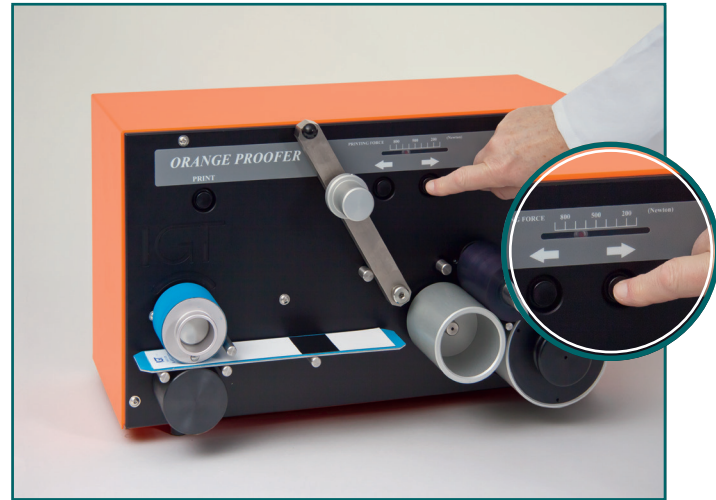
The Orange Proofer printability tester produces colour strips which are suitable for many purposes, such as:

- Measuring colour with colour measuring systems/spectrophotometers
- Visual appraisal

- Density measurement, including establishing colour and density tolerances
- Determination of coverage, transparency, wear resistance, abrasion resistance, flexibility, adhesion, gloss, ink

transfer (in g/m^2), light fastness and resistance to chemicals

- Test printing quality, mottle and set-off
- Test paper properties as scumming, strike through, smoothness



ORANGE PROOFER M

Printing force is applied using a set of push-buttons on the front of the instrument. In cases where the force used for the prints is changed regularly, e.g. when using different types of ink, different substrates a variation in thickness. Normally the force used is 4-12,5 N per mm nip width. If the force is to be changed regularly the best choice is the Orange Proofer M.

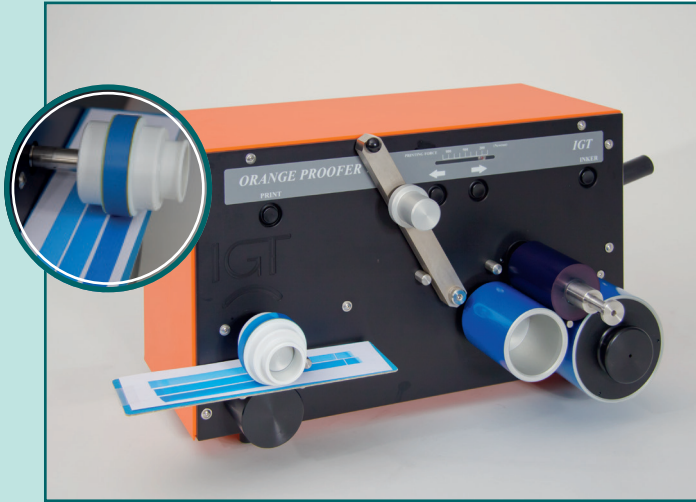
PROPERTIES

- Simple to operate, short training time required
- Minimum amount of variables reducing error sources
- Printing force adjustable
- Fully compliant with ISO 2834, ISO 2846, ISO 12647 and ASTM 7680
- Extensive processing possibilities for various substrates and offset inks
- Substrate, ink and printing form are simple and fast to change
- Excellent reproducibility; high degree of correlation to on-press performance
- Low investment and low operating costs; complies with the latest CE-requirements
- Provided with detailed instructions for use and test methods
- Can print on all types of coated and uncoated materials: paper, board, plastic film, cellophane, laminates, metals, etc.
- Print width max 50 mm (standard) en 70 mm (OP 70)



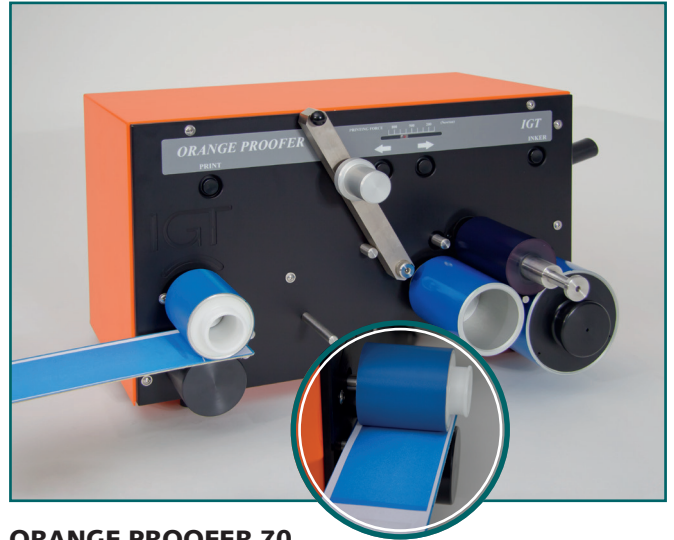
IGT Orange Proofer

Prints coated and uncoated materials



ORANGE PROOFER X3

Printing force is applied using a set of push-buttons on the front of the instrument. In case of the Orange Proofer x3 it is common that different printing discs with different width are used. The device can print three prints adjacent to each other on the same substrate in three subsequent prints. This is needed in case density or colour tolerances are to be determined on the same substrate, e.g. strips of paper, board, plastic, metal plate, cans (diameter 63-68 mm). If there is a regular need for a number of prints on the same substrate the best choice is the Orange Proofer x3.



ORANGE PROOFER 70

Printing force is applied using a set of push-buttons on the front of the instrument. With the Orange Proofer 70 it is possible to use printing discs with different width. The device is specially designed to print directly on e.g. credit cards or on substrates used for abrasion tests with a maximum print width of 70 mm. Normally the force used is 4-12,5 N per mm nip width. If there is a regular need for a wider print the best choice is the Orange Proofer 70.



Inking the printing disc

OPERATION

The IGT Orange Proofer consists of an inking unit and a printing unit with removable printing disc (printing form). The inking unit consists of two aluminium drums and a top roller. For different types of ink different types of top rollers are available: for conventional inks, a standard elastomer and for UV-curing inks, a top roller with a rubber resistant to these inks and their solvents. To apply the ink as accurately as possible, the use of an IGT ink pipette with fixed or adjustable volume is strongly recommended. The printing form is placed on the shaft of a movable arm and then inked on the inking unit.

The printing unit consists of a printing

form and an impression cylinder. For conventional and UV-inks different printing forms are available. The substrate is attached to a substrate carrier. The substrate carrier with the substrate is placed on the impression cylinder. The printing disc is taken from the inking arm and placed on the shaft of the printing unit. After the printing force has been applied, the print is made. The printed substrate is removed for appraisal and the printing disc is cleaned. The printing speed is fixed at 0,3 m/s. The printing force can be set between 100 and 900 N.

See instruction video on www.igt.nl.

IGT Orange Proofer

Variably printing forms and top rollers



Printing discs

The standard printing form (disc) is covered with rubber blanket for conventional (offset) inks. Also printing discs with rubber for conventional inks are available. For UV-curing inks printing discs with rubber blanket or rubber which is resistant to these inks and their solvents are available. There are printing discs with a weight of less than 200 g as well; these discs can be weighed on analytical balances with an accuracy of 0,1 mg.

To print in half tone there is a wide choice in special discs with a screened photopolymer. On request these ones can also be customized.



Holder for printing discs and top rollers

The Orange Proofer can be equipped with an accessory to store the printing discs and top rollers during the tests. This accessory is mounted at the back-top of the instrument. With this accessory flat sides at the printing discs and top rollers as a result of a wrong storage can be avoided; the rollers and printing discs are free to the air for optimum evaporation of solvents after cleaning. Overnight storage still has to be done on the regular top roller and printing disc carrier which has to be stored on a dark, clean and cool place.



The IGT ink pipettes



The IGT fixed volume ink pipettes

IGT Ink pipette

The use of an IGT ink pipette is strongly recommended. It increases the accuracy of application of ink and therefore the ink transfer and ink film thickness, thereby enhancing the accuracy and repeatability of the tests. There are different types of ink pipettes:

- Ink pipettes with which the applied volume can be adjusted to the need of each individual test (maximum volume 2 ml) available in a resolution of 0,01 ml or 0,001 ml.
- Ink pipettes with a fixed volume of 0,16, 0,24 or 0,40 ml.



Applying ink with the IGT ink pipette

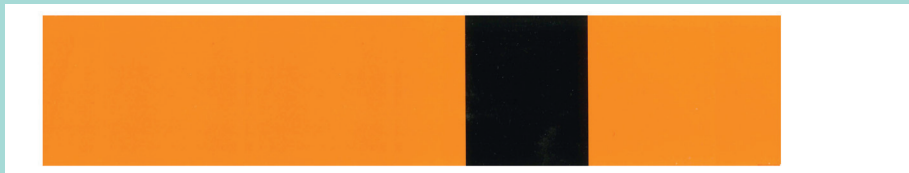
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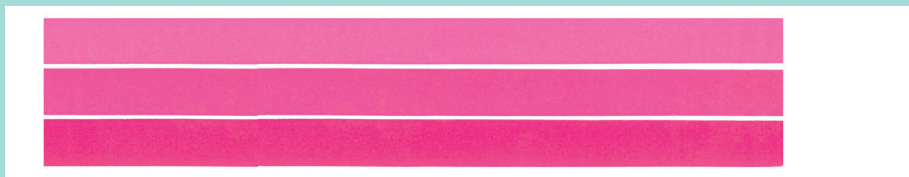
Used for many testing methods

Type >	OP	OP M	OP 70	OP x3
Technical data				
Printing disc width				
15 mm	○	○	○	●
50 mm	●	●	●	●
70 mm	-	-	●	-
Printing force	Manually	Motorized	Motorized	Motorized
Inking unit speed	0,3 m/s	0,3 m/s	0,3 m/s	0,3 m/s
Print area	200 mm x 50 mm	200 mm x 50 mm	200 mm x 70 mm	max 200 mm x 50 mm
General				
Testing methods inks	Colour, density, ink transfer, dry properties as coverage, transparency, wear resistance, abrasion resistance, flexibility, adhesion, gloss, high fastness, chemical resistance and so on			
Testing methods paper/board	Scumming, striking through, half tone, printing, back trap mottle, print mottle, print smoothness, set off en so on			
Compliance	ISO 2834, ISO 2846, ISO 12647 and ASTM 7680			
Substrates	Paper, board, metal, plastic			

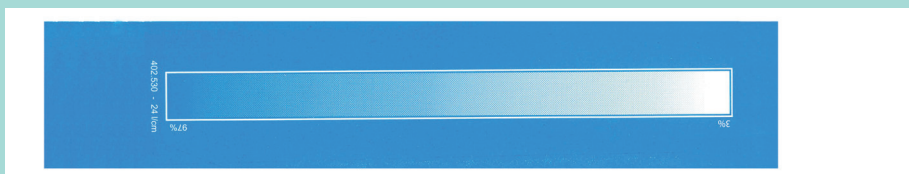
- = good
- = excellent
- = not possible



Print on reference paper with black band for coverage, transparency, colour, density and so on



Three prints adjacent to each other for colour and density tolerances and so on



One of the half tone prints

IGT Orange Proofer

Excellent reproducibility

TECHNICAL DATA

Inking unit

- Two aluminium drums with top roller
- One aluminium drum driven
- Short inking time: inking unit 30 s and printing disc 30 s

Printing unit

- Printing speed: 0,3 m/s
- Printing force: 100 – 900 N
- Max. substrate thickness: 4 mm
- Independent drive

Printing discs

- Standard print width :
 - 50 mm for Orange Proofer
 - 70 mm for Orange Proofer 70
 - 3x15 mm for Orange Proofer x3
- Print length: 200 mm
- Standard covering: rubber blanket for conventional or UV-curing inks
- Specials: half tone photopolymers

Other discs available on request

Top rollers

- Elastomer for conventional inks
- Rubber for UV-curing inks

General

- Complies with CE directives
- Inking unit and printing unit in a single appliance
- Simple operation
- Low initial cost
- Possible to use many substrates and inks
- Detailed instructions for use and test methods

Weight:	25 kg
Width:	620 mm
Height:	320 mm
Depth:	350 mm

Electrical connection:

90 - 245 V / 50 - 60 Hz

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IGT Testing Systems

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

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