

### The UK's oldest establishes screen printers work with the Rho 160

BTP (British Transfer Printing) Craftsreen has been firmly established on the UK screen printing market for over 125 years. Responding to the changing needs on the market, the highly esteemed company has now installed the Rho 160.

"The screen printing market has changed dramatically over the past ten years. Once regarded as more of a cottage industry, the sector is now highly advanced and technology-oriented. If you want to remain competitive today, you simply have to constantly invest in top equipment," says Mike

Charlton, managing director of BTP Craftsreen, describing the current situation. "Thanks to the Rho 160 - one of our company's most important investments to date - we can now open up new markets and extend our range of services for existing customers. The new computer-to-print

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technology means that for POS in particular we can do short runs without a problem. Long production times and high costs that used to be associated with screen printing are thus a thing of the past."

### Printing quality, sturdiness and upgrades were decisive



"Being able to print straight onto various materials is a great bonus for POS advertising. I saw the Rho both at the IPEX and the FESPA and was impressed by the high printing quality and the sturdiness of the machine. Also the fact that Durst provides various upgrades - the software upgrade for example is included - prolonging the printer's life tipped the scales in its favour," says Mike Charlton. Their prime aim for the future is to offer customers an even better service. And the Rho 160 enables them to meet client needs even faster and more cost-effectively.

*BTP Craftsreen managing director Mike Charlton with a selection of their products.*

## Printing a week after delivery

“We succeeded in integrating the Rho in our workflow extremely quickly. Only a week after we took delivery, we started working with the printer. What primarily speeded up installation was the excellent service on the part of Durst. Their technicians were on hand to answer all of our questions at any time.” Mike Charlton is absolutely delighted that Durst has been a reliable and competent partner.



*The Durst Rho will enable BTP Craftsreen to open up new markets and offer existing customers new options.*

## Versatile Rho 160: new systems for problem-free borderless and textile printing

Edge-to-edge printing with patented system

The Durst RHO 160 flatbed inkjet printer is the only one available on the market today that enables truly problem-free borderless printing. Although other inkjet printers have featured edge-to-edge printing in the past, it always involved time-consuming masking of the machine bed. Equipped with a unique separate printing plate and integral ink-absorbing system, which stops the following plates and printing materials from becoming smeared or contaminated, the Rho prints

perfectly from edge to edge. A menu command (“Borderless printing”) adjusts the required settings for the user.

New accessory for printing textiles

Supporting its claim to have the most versatile flatbed inkjet printer, Durst has produced a separate attachment for textile printing. The demand for fabrics carrying information is constantly rising. However, up to now inkjet printers have only been able to print on textiles of a certain thickness or fabrics with a lining.

Thinner materials, such as artificial silk (e.g. Trevira), could not be printed without a special accessory because they creased or twisted during the process, etc. For this reason Durst has brought out a new, industrially manufactured solution.

In the standard Durst solution, two bars keep the fabric taut over the printing area “ironing” it as it is transported. As a result, the material cannot wrinkle or become twisted distorting the image. A special ink-absorbing device also prevents the machine bed from becoming soiled.

# Rho Ink adhesion

Durst has performed the standard cross hatch test on various materials and thus verified that the ink adheres properly.

## Description of the cross hatch test

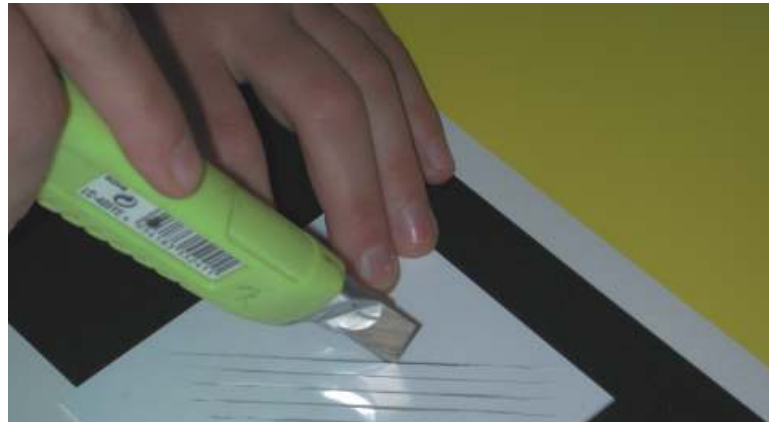
The cross hatch test (EN ISO 2409) - also known as cross cut test - is recognized by the European Committee for Standardisation (CEN) as an appropriate method for sampling and testing paints, varnishes and similar products. Durst uses this test method to check how Rho inks adhere to various substrates.

Cutters for various coating thicknesses and substrate types are available. To carry out the test correctly, a cutter conforming to the standards must be selected. A template may also be used together with the cutter in order to achieve the required cut spacing.

The material specimens have to be smooth and large enough for the cuts to be made in at least three places at least 5mm apart and away from the material edge.

## Material testing at Durst

When Durst carries out the manual cross hatch test, the specimen plate is placed on a firm, flat surface to prevent any deformation. The cuts are then made by hand (six cuts equally spaced in each direction) in accordance with the standard. They have to go all the way down to the substrate to conform. The resultant cross hatching is lightly



*Here the cross hatch test is being performed on Forex Classic from Alcan. The material is a rigid plastic sheet with a thickness of 3 mm.*

cleaned with a soft brush along each diagonal a few times. In the case of hard materials adhesive tape also has to be used that is applied parallel to the direction of the cuts in the middle of the cross hatching and has to be smoothed with the fingers at least 20mm over the edge of it. What is important is good contact between the adhesive tape and the coa-

ting. The adhesive tape must be removed within five minutes of application and then stuck to a transparent film for comparison. In the case of soft materials the results are classified immediately after brushing, and with hard substrates after removing the adhesive tape.

## Classification

Classified as 0:

The edges of the line patterns are completely smooth; none of the lattice squares are detached.

Classified as 1:

Small flakes of the coating are detached at the intersection of the line patterns. Less than 5 % of the cross-hatched area is affected.

Classified as 2:

Small flakes of the coating are detached along the edges and/or at the intersections of the hatching, and/or some squares are completely or partly detached (area affected 5 % to 15 %).

Classified as 3:

The coating has flaked along the edges of the line

patterns in parts or in wide ribbons, and/or some squares are wholly or partly detached. The area affected is considerably larger than 15 %, but not much more than 35 % of the cross hatching.

Classified as 4:

The coating has flaked along the edges of the line patterns in parts or in wide ribbons, and/or some squares are wholly or partly detached. The area affected is considerably larger than 35 %, but not much more than 65 % of the cross hatching.

Classified as 5:

Flaking that can no longer be rated as cross hatch classification 4.

## Durst materials tests

Durst has already tested and printed some 60 materials with the Rho 160. We hope that the results will be useful to customers by showing them what to expect when printing specific materials and providing helpful tips for handling previously unprintable media. The results of the tests are now available to Rho customers at [www.rho-online.com](http://www.rho-online.com).

The materials tested include the categories of paper (inkjet paper, wall paper, etc.), plastics (vinyl, adhesive film, clear film, etc.), textiles (cotton, banner fabrics, etc.), leather, boards (polyurethane, polystyrene, acrylic, foam centre, PVC, etc.), cardboard (corrugated, etc.), metal (aluminium, steel, laminate, etc.) and wood (plywood, veneer, etc.).

## Test focus

Forex Classic from Alcan 

Applications: stage decoration, construction signs, stadium banner advertising, displays, building signs, indoor/outdoor signs, shop fitting and interior design, fair and exhibition stands, etc. Forex Classic was rated very highly in the areas of straightness of edges, surface evenness, colour brilliance, ink adhesion and odour after printing, and highly in the case of edge sharpness and text quality. The rigid plastic sheet can be printed on both sides and does not have to be laminated or undergo antistatic treatment. Durst recommends suction on the printer (fan intensity) of 10 with a minimum fabric to carriage distance of 1.5mm. Forex Classic should be stored horizontally. Tip: wear gloves when loading the printer to prevent fingerprints on the material and printed image.

Country Cotton from 3P Inkjet Textiles 

Designed for indoor applications including banners, flags, exhibition stands, interior signs, shop decorations, shows, stage sets, shop window displays and curtains. Country Cotton proved very good in the areas of straightness of edges, surface evenness, colour brilliance, ink adhesion, edge sharpness and text quality. No banding was found. In addition, the material can be printed on both sides, is crease resistant and relatively odour-free after printing. Durst recommends vertical storage for Country Cotton and setting suction on the printer (fan intensity) to 12.