

**Investor Day, 23. November 2016**

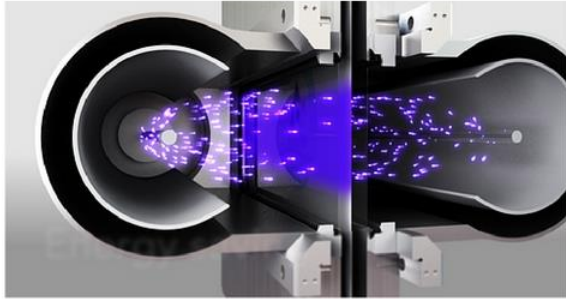


# **Investing in the Future: Food and Digital Printing Applications for Superior Growth**

**ebeam**

A brand of the COMET Group

# Tetra Pak

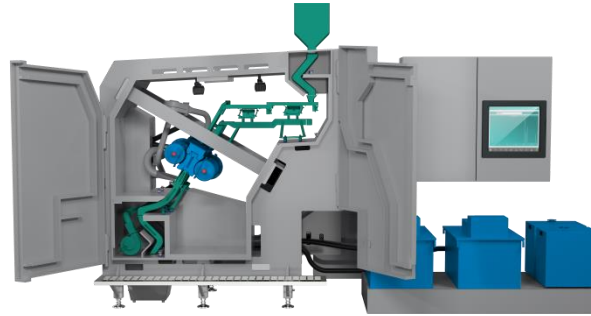


## Fispal Tecnologia 2015: Tetra Pak's new E3 'breakthrough'

Posted By: Sian Griffiths on: July 07, 2015  
In: Dairy, Food, Industries, Manufacturing, Packaging, Technology

[Print](#) [Email](#)

Recently, I was lucky enough to attend the launch of the Tetra Pak E3 electron beam (eBeam) filling machine platform at Fispal Tecnologia in São Paulo, Brazil.



# Böhler

# Digital Printing



# Summary



# Break Out Session

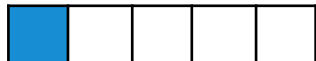
Tetra Pak



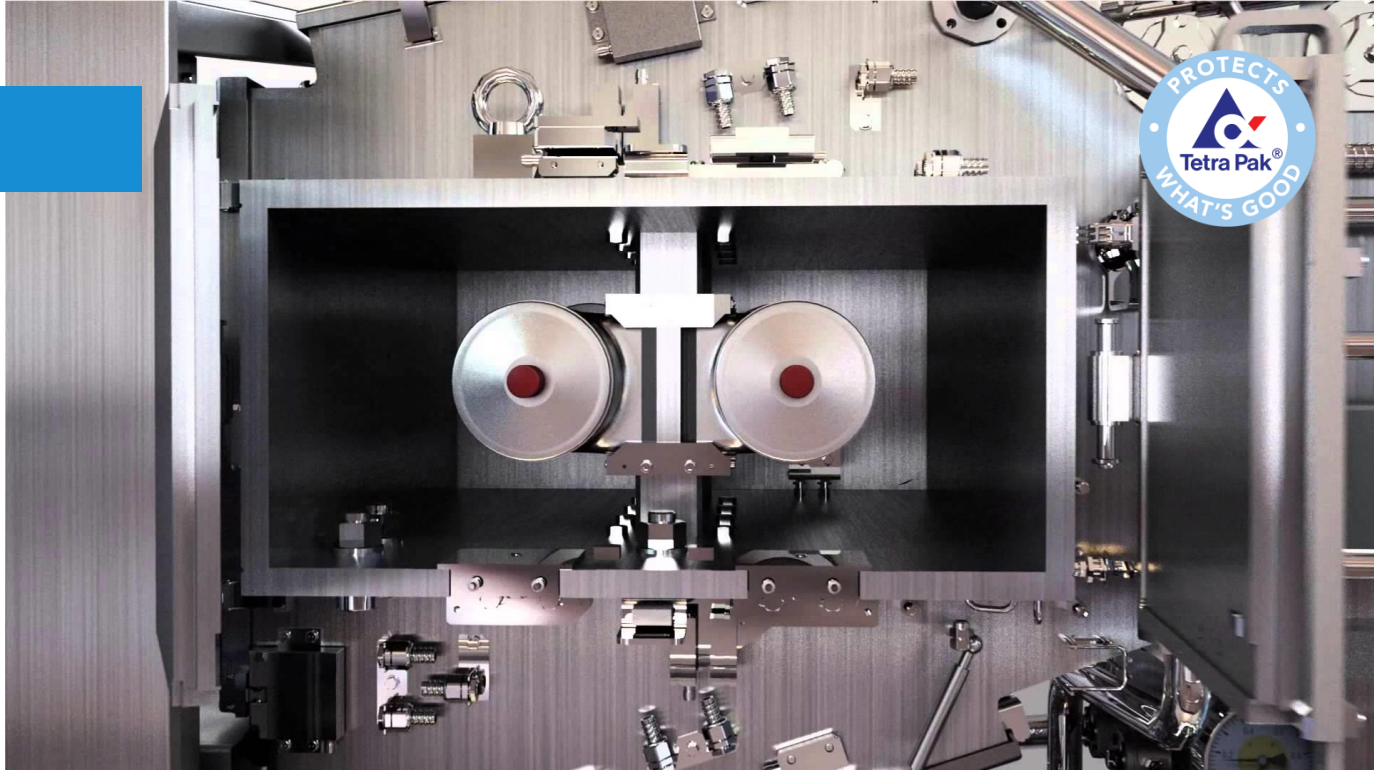
Business Development



Growth Initiative



Ongoing Business



**Market introduction according to plan**

**Great feedback from the market**

## Customer feedback

«This is the best machine from Tetra Pak we have ever seen!  
Arigatou gosaimaz!»

Meiji  
(Japan)



## Customer feedback

«...this is a breakthrough innovation! Tetra Pak and the project can be proud of it!»

Juhayna  
(Egypt)



## Customer feedback

«One of the best Tetra Pak packaging projects ever»

CoRo  
(Denmark)





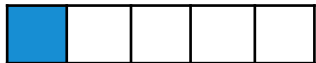
Powerhouse



Business Development



Growth Initiative



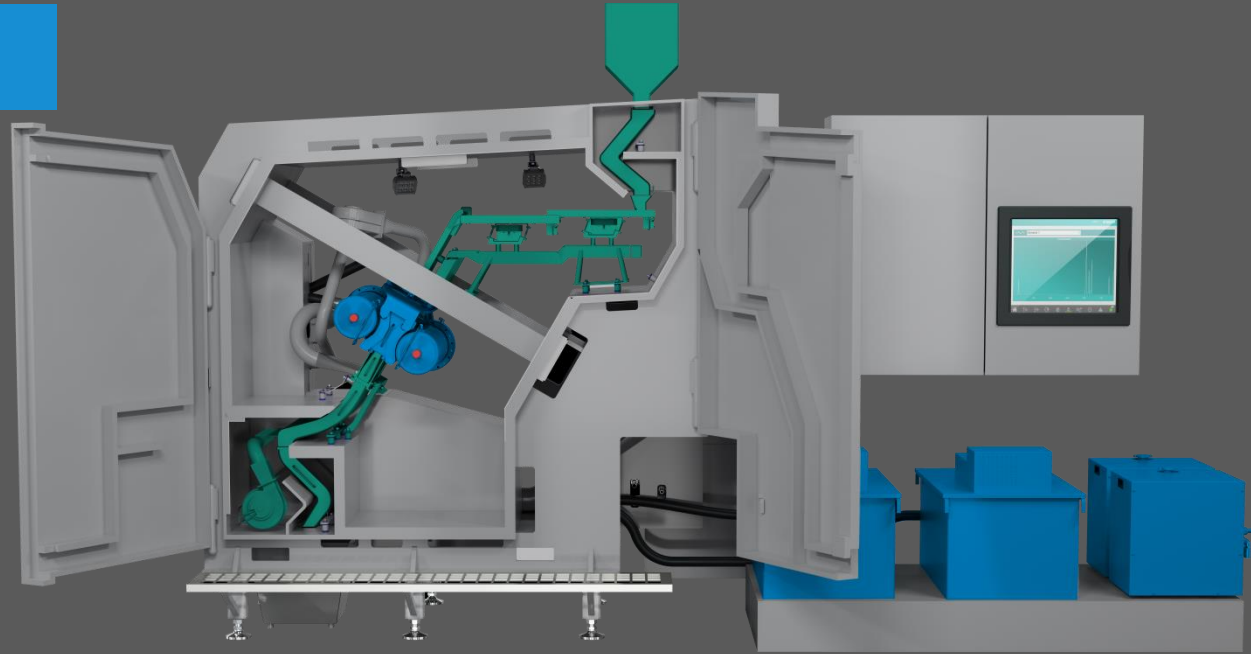
Ongoing Business

We tested over 20 products – it works!

Next steps:

- A) Field test in 2017
- B) Industrialization and market acceptance

# Bühler



ebeam Powerhouse

A) ebeam Lamps = blue

B) ebeam System = grey

C) Bühler Inlet and Outlet = green

Bühler



## Bühler Networking Days

Learnings:

Today's processes can't feed 9 Billion people  
Inactivation of bacteria needed

# Breakout Session

## Team Food



Vincent Ducry  
Project Manager  
ebeam



Nicolas Meneses  
Expert Food & Feed Safety  
Bühler

# Digital Printing



Powerhouse



Business Development



Growth Initiative



Ongoing Business



## Global Trends



# Urbanization

## Global Trends

Share a **Coke**® with



#shareacoke #Clementine

# Individualisation

Global Trends



Food Safety

## Global Packaging: The Situation



Market Size

US\$ 400b



Annual Growth  
Digital Printing

5 – 8 %



Main Packaging  
Material: Plastic Film

37%



Packaging for Food  
and Beverages:

69%

# ebeam for everyone

## Printing Technologies

Analog

Digital

Offset

Flexo

Electrophotography

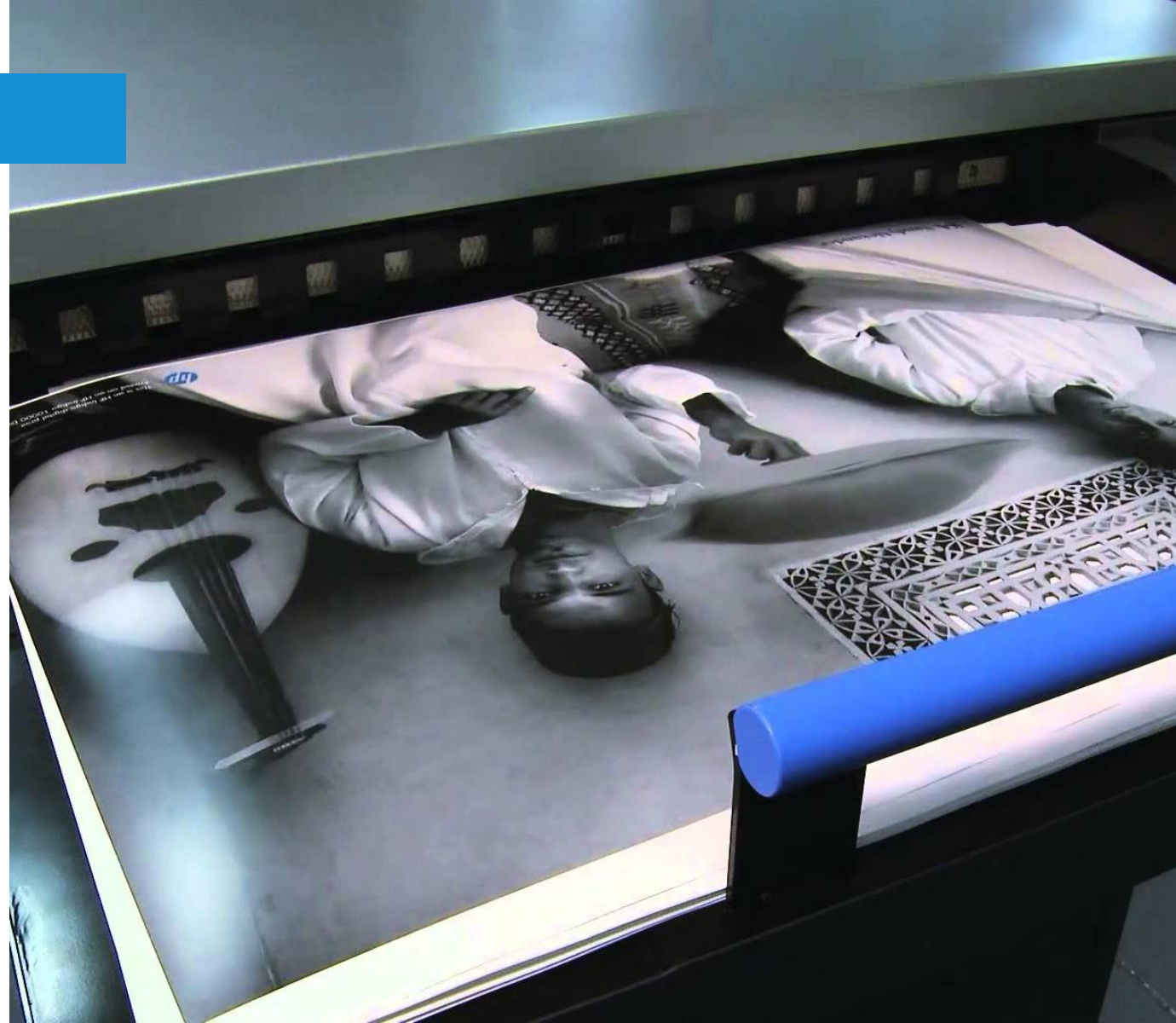
Inkjet



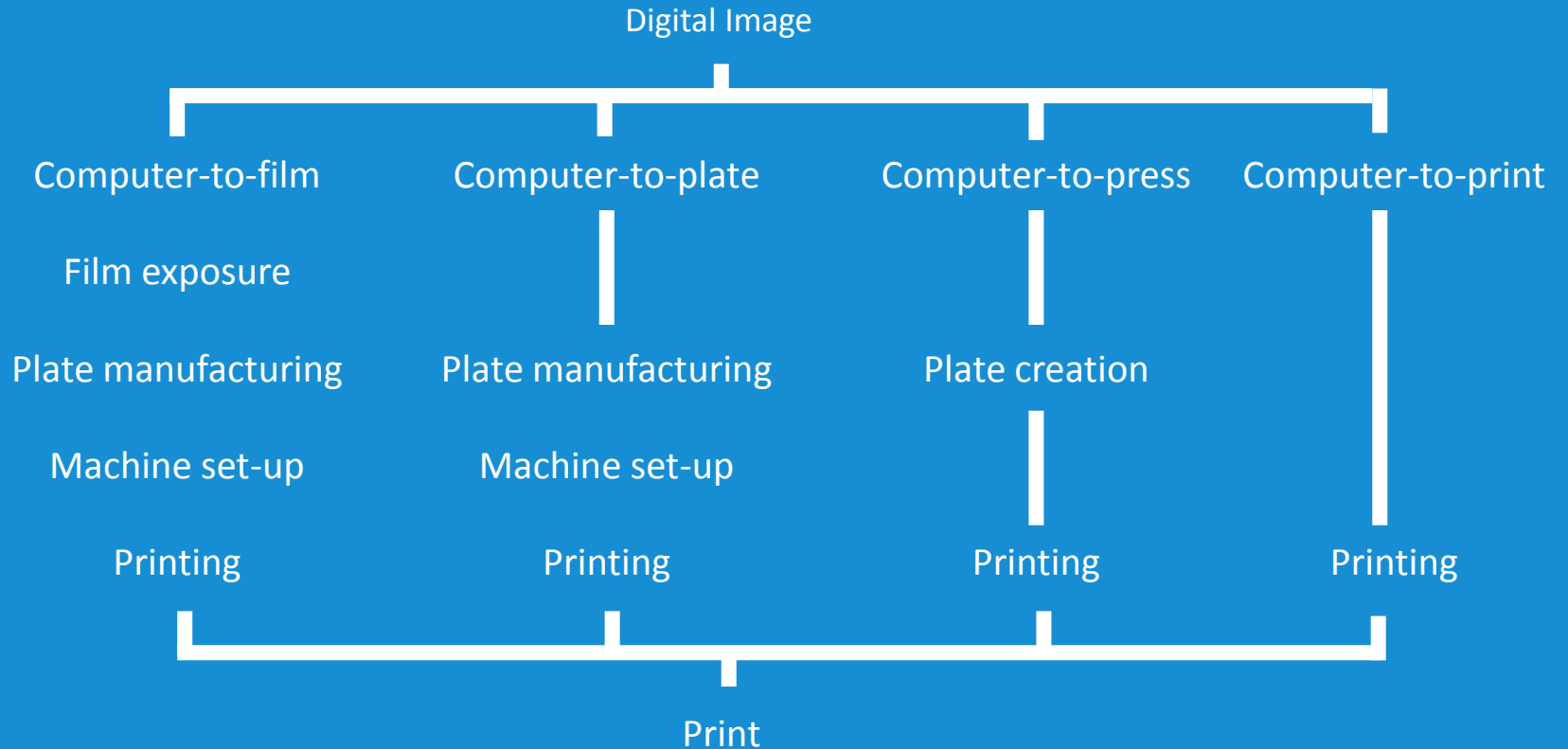
## The Drivers

**HP Indigo**  
can now enter into  
the food packaging market

**Digital Inkjet**  
for  
individualization



# Why is this a Revolution?



## The Benefits of ebeam



High Performance  
Constant in Time



Energy Efficiency  
No Heat



Colour Blind  
Better Adhesion



No Photoinitiators  
No Monomers left  
No Odour

## drupa 2016

- A. Launch of the smallest drying device: EID (= ebeam inkjet dryer)
- B. Introduce concept to the industry
- C. Find strategic partners



## packagingeurope

European packaging news, analysis, discussion and contacts

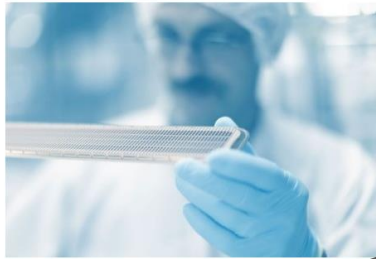
### ebeam Technologies Introduces the Mass Personalization of Food Packaging

Released: 01/06/2016 07:56:00

Read 1593 times

Print Technology & Innovation

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Tweet Like Share

ebeam Technologies, a brand of the Comet Group, has launched the ebeam Inkjet Dryer (EID), a new energy-curing system that enables food brands to mass personalize products via food-safe inkjet printing.

130,000 monthly visits

## digitalprinter

### drupa 2016 in review

04 Jul 2016

Topics: drupa

#### E-beam technology

With the inroads digital print is making into packaging food safety is becoming a crucial consideration, as can be seen with vendors opting for water-based formulations over UV for many inkjet machines targeted at packaging. There is an alternative, E-beam curing, as shown at drupa by ebeam Technologies, with a compact and lower cost e-beam curing system, suitable for mounting on narrow web (up to 40cm) machines. As a technology for curing inks E-beam is not new, and is used in flexo and gravure, however it has previously been too expensive for inkjet applications. This is due to the higher cost and complexity of the curing systems, even though the inks can be 20% cheaper than similar UV inks. With a potential price for a 40 cm system of €100,000 - still three times the price of a UV system - E-beam cannot be called cheap. However, the cost in use is less with lower energy costs and simpler, less expensive inks. The biggest benefits though are the potential of food contact safe output. It has been mooted that E-beam could be a replacement for all UV-curing, including wide format. The high hardware price and the inability to stitch together modules to increase curing width make that impractical.

It might seem strange to focus on a product that does not have mass appeal. There is, however, often as much value in taking time to understand, and then exclude, something that is not relevant to you as there is in focusing on something that is directly relevant. In this case a deeper understanding of E-beam curing quickly dispels the notion that it is the panacea for all UV applications, and highlights that for many applications it will be the most suitable technology.

6,895 print circulation

## LABELS & LABELING

**Ebeam Technologies, a brand of the Comet Group, has launched the ebeam Inkjet Dryer, a new energy-curing system that enables food brands to mass personalize products via food-safe inkjet printing.**

The company says that major consumer brands are recognizing the potential of digital printing for personalizing product packaging to act instantly on consumer trends, but concerns about food contamination by UV photoinitiators have prevented the use of inkjet printers for food packaging.

Ebeam Technologies has not only eliminated the need for UV photoinitiators in inkjet inks, it has miniaturized electron beam hardware so that it can be easily integrated into inkjet printers to cure new, commercially available ebeam-curable inks.

Ian Bland, VP business development, ebeam Technologies commented: 'It has been the dream of leading brands to target their messaging to the individual in real time. Imagine including the name of the local farm the milk came from or your darling's name on a package of Valentine's Day chocolates. Only digital printing offers this flexibility. Unfortunately, brand-owners and their packaging supplier have not implemented this innovation. The main reason has been the availability of food-safe, jettable inks. All this is about to change. As of today, EID-equipped inkjet printers eliminate that barrier to adoption.'

The ebeam Inkjet Dryer is a compact, sealed ebeam lamp that produces a precisely controlled beam of electrons to instantly cure ebeam inks. The EID is being demonstrated for the first time at the drupa, where it is integrated in-line with PPS's DICE inkjet printer using ebeam-curable inks provided by Collins Inkjet.

30,000 print circulation

## ONE to ONE NEW MARKETING

Lebensmittelverpackung

### Ebeam stellt neue Drucktechnologie vor

Ebeam Technologies, eine Marke der Comet-Gruppe hat ein neues Trocknungssystem für die Herstellung von Produktverpackungen vorgestellt. Der ebeam Inkjet Dryer (EID) soll eine lebensmittelsichere Produktion in großen Stückzahlen ermöglichen.

Das enorme Potenzial der Personalisierung von Produktverpackungen ist bereits entdeckt worden, denn so sei es möglich in kürzester Zeit auf aktuelle Verbrauchertrends zu reagieren. Allerdings sind Tintenstrahldrucker für diese Einsatzzwecke häufig nicht geeignet, da nicht ausgeschlossen werden kann, dass toxische Ultraviolett-Fotoinitiatoren in die Lebensmittel eindringen. Bisher kam es bereits zu mehr als 100 Vorfällen, die der EU vom Rapid Alert System for Food and Feed (RASFF) gemeldet wurden, bei denen es durch die Verpackung zu einer Kontaminierung der Lebensmittel kam.

Der EID macht die Verwendung von UV-Fotoinitiatoren überflüssig und miniaturisiert außerdem die Hardware für die Erzeugung. So kann die Hardware einfach in den Tintenstrahldrucker integriert werden... Es ist der Traum führender Konsumgüterhersteller, ihre Botschaften jedem einzelnen Kunden in Echtzeit zu übermitteln. Auf der Milchpackung könnte der Name der örtlichen Firma stehen, von der die Milch stammt, oder auf der Pralinenpackung zum Valentinstag könnte der Name des Empfängers stehen", sagt Ian Bland, VP Business Development, ebeam Technologies. „Diese Flexibilität ist nur mit dem Digitaldruck möglich.“ (pk)

Weiterführende Links  
[ebeam Technologies](#)

22,301 monthly visits  
Brand manager audience

## PFFC PAPER, FILM & FOIL CONVERTER

OMET also had ECG on its electron beam-equipped offset press running flexible film at speed. EB cure has a long history of utility for food contact container and package printing because if the beam is active, the ink is cured. It is the standard for low migration. With the increasing demand for production efficiencies and low environmental footprint of energy cure (UV and EB)—coupled with cost reductions for EB equipment—there is a substantial increase in interest and adoption. The three major suppliers for printing, Energy Sciences, PCT Engineered Systems, and Comet, each had devices at OEM exhibits: PCT at OMET and ESI at KBA. Comet/PCT joined with PPSI, an inkjet integrator, and Collins Inkjet to demonstrate the combined technology on a narrow inkjet press. It was a popular booth and a forebear of future developments for packaging and labels. Several other companies offer EB inks for flexo and offset. [Toyo](#), [Wikoff](#), [INX](#), and [Flint](#) are just a few.



OMET press with electron beam curing

25,700 monthly visits

## Flexo Gravure Global

### Dispatches from drupa – Day three

June 3, 2016

When talking to seasoned veterans of drupa, many of them say the first day or two of the trade fair are calmer than the following few. They weren't kidding. Day three of the fair saw bigger crowds in the halls, longer waits to chat with vendors and longer lines for food. Everything was bigger, including the excitement from exhibitors and visitors alike.

Our editors attended press conferences with Dupont, Omet and a forum on sustainable packaging printing with BASF and Sun Chemical. In addition, they visited the Esko booth, the Uteco booth and talked to Ebeam technologies as well as made exciting connections with the European Rotogravure Association. More on all of this will come in our special drupa reports issue, published one month after the event is finished.

But the highlight of the third day would have to be the FTA Europe Diamond Awards. Held at the Hyatt Regency, the event was a grand affair, with decadent food and great conversation. People dressed their best to honour the best of the best in flexographic printing. (Read more about the FTA Europe in the latest issue of Flexo & Gravure Global.)



Leading Flexo title



Druckfarbentrockner jetzt auch für die individuelle Gestaltung von Lebensmittelverpackungen

5,380 Subscribers in DACH and Eastern Europe



16 DRUPA REVIEW

## Big and digital and clever – the greatest (print) show on earth

Wow! Welcome large digital, to the packaging drupa. Just as label makers have done, high volume packaging converters must wake up to a new reality. Digital systems are drawing up their (metaphorical) tanks on your lavans. Sean Smyth reflects on drupa 2016.

The first EB curing narrow web inkjet lines were shown, promising thinner ink films eliminating photoinitiators that should result in food-safe print. Collins Inkjet has the inks: It is a compact drying unit that makes the technology a valid alternative to UV curing. This was demonstrated on the EBI stand, where a PPSi's DICE inkjet line printed EB curing inks. The curing unit is some €200,000, with the payback from lower cost inks and reduced energy use.

5,000 print subscribers, mostly Digital packaging printers

## New EB curing for inkjet

A new energy-curing system for food-safe inkjet printing was launched by ebeam Technologies at drupa. The company, a brand of the Swiss Comet Group, has eliminated the need for UV photoinitiators in inkjet inks and also miniaturised electron beam hardware for easier integration into inkjet presses. The ebeam Inkjet Dryer (EID) is a compact, sealed ebeam lamp that uses a precision electron beam to cure inks. It stands on a small footprint and fits into the footprint of a standard inkjet printer. The EID was demonstrated for the first time at the show integrated inline with PPSi's DICE inkjet printer using inks provided by Collins Inkjet.



**Inkjet dryer to prevent digital printing contamination**

7 June 2016

Comments

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An energy curing system that enables food brands to mass-personalise products via food-safe inkjet printing has been launched.

Ebeam Technologies, a brand of Swiss technology company The Comet Group, launched the Ebeam Inkjet Dryer (EID) in response to demand for digital printing which personalises packaging.

The company said concerns about food contamination by toxic ultraviolet (UV) photoinitiators had previously prevented the use of inkjet printers for food packaging.

"Previous printing technologies have resulted in more than 100 incidents being reported by the EU's Rapid Alert System for Food and Feed (RASFF), where UV photoinitiators have contaminated food after migrating from the packaging into the food," said Ebeam's Ian Bland.

"Ebeam has eliminated the need for UV photoinitiators in inkjet inks by using an electron beam curing system so that it can be easily integrated into existing inkjet presses to cure new, commercially available ebeam-curable inks.

The EID is a compact, sealed ebeam lamp that uses a precision electron beam to cure inks. It stands on a small footprint and fits into the footprint of a standard inkjet printer.

It is being demonstrated for the first time at the show integrated inline with PPSi's DICE inkjet printer using inks provided by Collins Inkjet.

Packaging News (PKN) Australia's packaging magazine

# Breakout Session

## Team Printing



Elsa Callini  
Business Development Manager Printing  
ebeam



Willard Raymond  
CEO  
PPSI

## Outlook

**Guidance 2020**  
on track

**Focus Strategy**  
Food & Printing

**Our Approach**

Demonstrator  
+  
Strategic Partner  
+  
Marketing

