

Security Printing Solutions

..for tax labels, and other securities



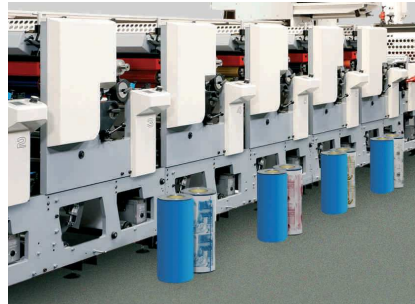
GOEBEL



Processes

All processes in one pass

- ▶ offset printing
 - high resolution print quality for security print
 - fine lines
 - sharp edges
 - micro letters
 - sleeve technology for quick job and format change
- ▶ flexo printing
 - for varnish full cover or spot
- ▶ silk screen printing
 - for printing special effects mainly for high denominations to apply special inks (OVI, OVMI, iridescent inks)
- ▶ turner bar
 - for flexible front- and backside printing
- ▶ inkjet system
 - for digital print (alphanumeric numbering, 1D and 2D codes, graphics, logos, text)



hybrid offset printing machine



turner bar on rail



offset printing unit



inkjet system



flexo printing unit on rail



plate and blanket sleeves



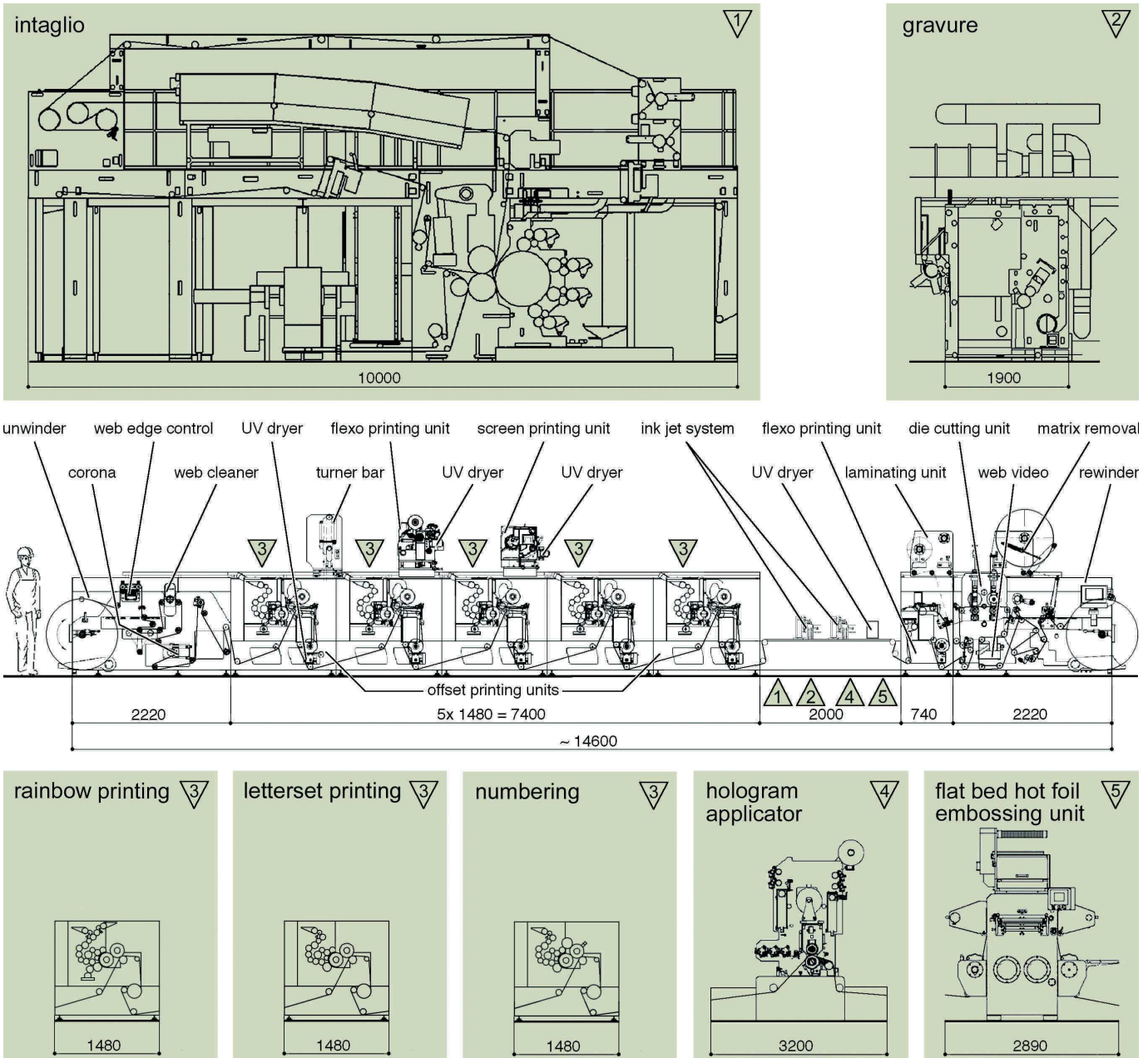
silk screen printing unit on rail



sleeve change



Specifications



Technical Data

print width	410 mm
web width	425 mm
repeat length	18-25" at 1/8 steps
max. mechanical speed	200 m/min
substrate thickness	15-450 my

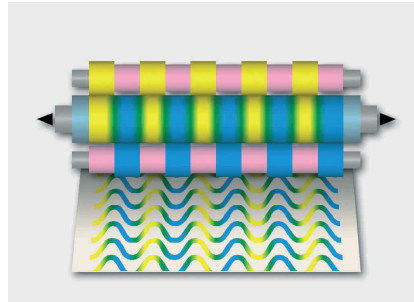
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Options

All processes in one pass

- ▶ offset rainbow printing
 - special security feature
 - back and/or front side printing
- ▶ intaglio printing
 - special security feature
 - up to four colors
- ▶ letterset printing
- ▶ numbering
- ▶ gravure printing
 - for metallic inks
 - for high opacity
- ▶ hot foil and hologram application
 - high precision hologram placement of patches and continuous streams
 - high resolution stamping of microstructures
- ▶ flat bed hot foil embossing
 - high relief and brilliant hot foil embossing
 - embossing and hot foil in one step
 - in-line production



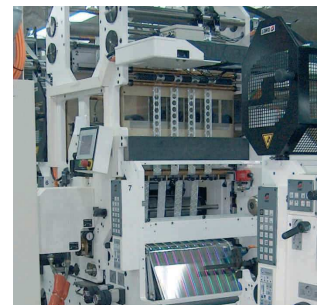
rainbow printing



gravure printing unit



intaglio printing unit



hologram applicator



intaglio cylinder



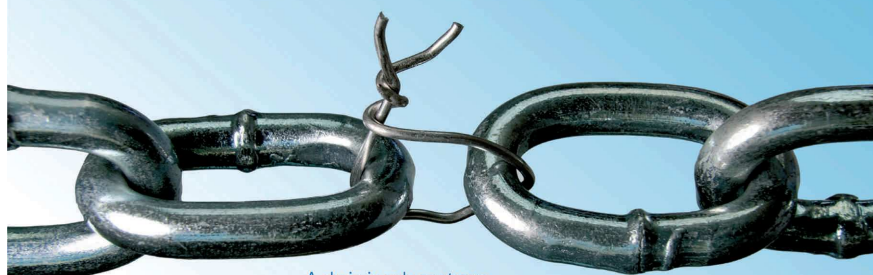
hot foil embossing

Protection

High Security Solutions

- ▶ Lustrepak® II Series
 - The Iridescent High Security Pigment
- ▶ Colorcrypt® D
 - Semitransparent Color-shift Pigment
- ▶ Colorcrypt® OCP
 - Opaque Color-shift Pigment
- ▶ Colorcrypt® Magnetic Gold
 - Magnetic Gold Pigment
- ▶ Colorcrypt® Intaglio Gold
 - Intaglio Gold Pigment
- ▶ Colorcrypt® LC
 - Cholesteric and Nematic Liquid Crystal

Secure your tax labels



A chain is only as strong
as its weakest link

Merck Chemicals offers high security color-shift pigments, IR up converters, intrinsic taggants and detectors to provide protection for your tax labels and security prints.

Merck Chemicals for Security. Our strong R&D commitment to new products, targeted application services and consistent quality assurance make us a reliable and esteemed partner to customers in the high security business. Based on its technical expertise in color-shift pigments and liquid crystal technologies, Merck KGaA offers specially designed high security products, which are dedicated exclusively to the high security business.

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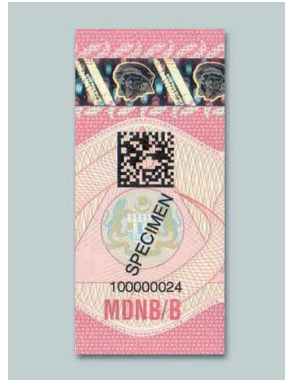
Giesecke & Devrient

Creating Confidence.

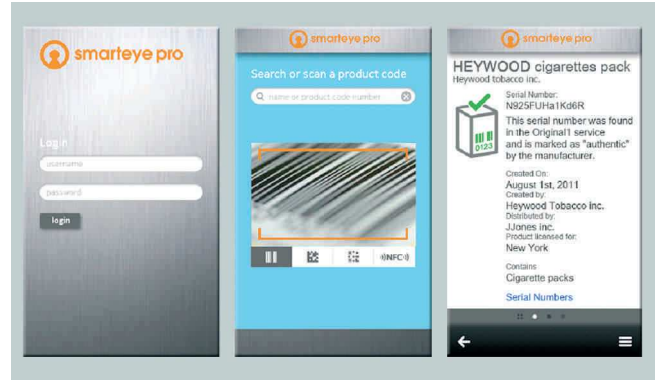
Track and Trace



A new tax stamp technology applies individual digital codes to create new value

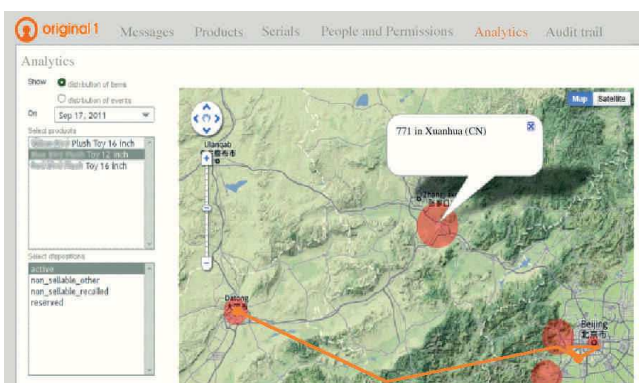
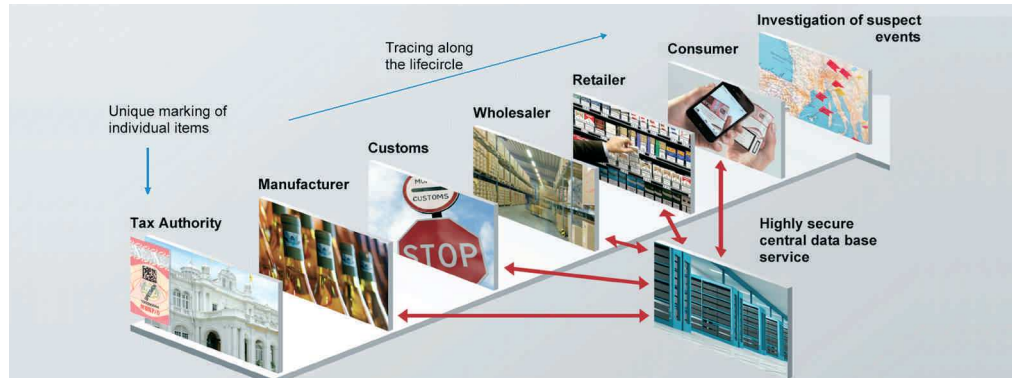


Necessary is printing of e.g. individual data matrix codes on each tax stamp



Employment of mobile applications allows secure, convenient and versatile verification

The unique codes allows tracing of individual products along the life cycle



The database opens new dimensions of evaluation, investigation and forecasting