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Subscriptions

E: subs@labelsandlabeling.com ISSN: 1478-7520

Printed by

Bishops Printers, Portsmouth, United Kingdom

US mailing

Labels & Labeling (USPS No: 002-914) is published bi-monthly by Tarsus Exhibitions and Publishing Ltd and distributed in the US by SPP, 95 Aberdeen Road, Emigsville PA 17318. Periodicals postage paid at Emigsville, PA.

Postmaster: Send address changes to Labels & Labeling, 3175 N. Patrick Blvd. Suite 180, Brookfield, WI 53045

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Andy Thomas-Emans
Director, strategic
development, Labels
& Labeling and
Labelexpo

Editor's Welcome 2019

This year closes with a generally upbeat mood across the global label industry. The geographical area we have the best statistics for – the European pressure-sensitive market – has fully recovered in volume terms from the severe losses suffered in the financial crisis of 2009-11, and is on a growth curve for Q1 2019.

And although the rate of growth has slowed in developing markets, it has remained steady in both Indian and Chinese powerhouses. The materials suppliers have continued to invest in both countries and in the wider Asia-Pacific region in production and distribution facilities.

There are, of course, clouds on the horizon: continued slowdown in the Chinese economy; the unknown disruption Brexit will cause in Europe; the escalating trade war between the US and China. But the label industry has proven remarkably resilient and will continue to reflect growth across multiple market sectors, most particularly e-commerce, household improvement (in developing markets) and supply chain/logistics.

Other threats come from the environmental flank. Liner waste continues to be an issue the industry needs to solve. The major materials suppliers and trade associations are doing their best in putting together schemes which bring together waste processors and end users of PS materials. But up to now this has hardly made a dent on the wider problem.

Then there is the growing war on single-use plastics, which could threaten large swathes of the filmic label market as collateral damage.

Rising raw materials costs translating into higher costs for substrates, inks and coatings presents another threat for hard-pressed label converters.

There are solutions to these problems. Progress is being made in finding commercial uses for recycled liner waste. A good case in point is L'Oreal's 'zero landfill' pledge which most recently saw Avery

ALTHOUGH THE RATE OF GROWTH HAS SLOWED IN DEVELOPING MARKETS, IT HAS REMAINED STEADY IN BOTH INDIAN AND CHINESE POWERHOUSES

Dennison partner with the company in Australia to collect and send the glassine waste to India, where it is turned into industrial paper. And there are a range of technology solutions for cleanly removing labels from plastics containers, allowing them to be recycled (if they can be collected) without contamination of the waste stream.

Rising materials and consumables costs can be mitigated by reduce waste at the converter. Options include better planning to reduce materials changeovers on press; more efficient makereadies; swapping shorter run jobs onto digital presses, and a lot more.

Expect to see more deployment of these technologies in the year ahead.

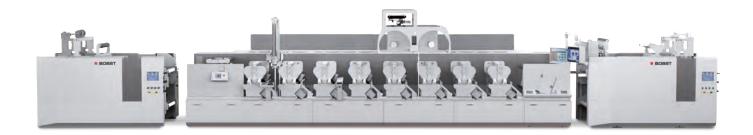
This year has also been a fascinating one in technology terms. We have seen the continued growth in the hybrid press category, not only in terms of flexo press suppliers partnering with digital engine manufacturers, but also a

new class of rail-mounted single or multi-color retrofit units for conventional presses. From the digital side, manufacturers of print engines are increasingly offering the option of fully in-line operation, often partnering with finishing machine manufacturers with skills in in-line converting and web handling.

In developing markets we are seeing increased demands for higher quality packaging on the back of the continued expansion of the organized retail sector. This is pushing local brands to compete with the decoration standards of the multinationals, which in turn is pushing the requirement for higher quality equipment – particularly inspection equipment. This is a trend we saw clearly at the Labelexpo Southeast Asia and India shows and expect it to be repeated at next year's Labelexpo Asia in Shanghai.

Perhaps the most important trend we expect to see in 2019 is the implementation of Industry 4.0. What this means in practice is Big Data and artificial intelligence being deployed to help operators set jobs up and monitor them in real time, as well as machines which set themselves up automatically using data stored in factory-wide MIS systems. Once fully understood and integrated this could lead to a surge in converter productivity, a reduction in wastage more efficient and profitable use of machine assets.

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IT'S ALL ABOUT THE STORY

DURING MERGERS AND ACQUISITIONS. COMMUNICATING YOUR VALUE TO INVESTORS IS CRUCIAL. WRITES BOB CRONIN OF THE OPEN APPROACH

ellers today are in the driver's seat. Lending rates are still low (but rising), multiples have gone up, and a number of areas are garnering significant investor attention. But the process of selling is complicated. There are a number of stages to go through and crucial obstacles to navigate along the way.

Even if you have a hot property in a high-demand segment, your effectiveness at each sell stage is important. Getting through these wisely – with expert and experienced support – will ensure your best outcome. The typical sale process follows six stages: 1) Preparing an offering memorandum; 2) Creating a management presentation; 3) Determining your best acquirers; 4) Selecting your match; 5) Performing due diligence; 6) Closing the deal.

The first stage is critical. Most businesses are shopped with an offering memorandum. And thus, a compelling one is key. An offering memorandum communicates your company's value — and gets it considered. It's all about the story. Your ability to engage and entice investors will determine which opportunities are available to you. This article, thus, focuses on creating an offering memorandum so you can get the best return from your hard work.

Since you lead your company every day and are very close to it, you may think this would be straightforward. But be assured that it's very complex. It can be especially difficult for an investor who may not work in labels or packaging to grasp what it will take to grow to the next level. The most effective way to communicate complex messages is through a story. Your acquirer must clearly understand your key strengths. Moreover, they must be able to grasp what new growth is possible — or your own or in combination with another entity.

Your offering memorandum starts with an executive summary. This is a 3- to 7-page (or so) discussion about the business. It's a synthesis of the entire offering memorandum, highlighting your greatest attributes – as they relate to a potential acquirer. We put these together all the time for our clients and have found certain keys to success. The most effective executive summaries cover the following.

How did you start? Purchasers want to know where you came from. They want to see your initial plan and objectives, and how well they were aligned with the market at that time. They also want to see how you planned and grew over the years, so that they can gauge the validity of your future vision. Accommodating cyclical change can be perceived favorably, while rebrands and larger risk-taking may be seen in a different light. Purchasers will be determining how solid your foundations are to assure them of their investment.

Who helped you build your business? You're selling your business.

"Your ability to engage and entice investors will determine which opportunities are available to you"

Thus, it's not a story about what you did, but rather what your people have accomplished and are prepared to achieve in the future. Great people make a great business. Acquirers want to make sure that a solid team would remain to propel the operation. If you have staffers with unique abilities, call out their experience and potential. Having such assets will yield you greater reward.

Why are you selling? Reasons behind a sale can tell a buyer how much risk is at hand. If you're selling only because of age or retirement, it's a lot different than selling because of an outdated product line or income volatility. Take on this question honestly and openly. Also, show how you've made plans to manage your exit. Any underlying motives and issues will be discovered in due diligence.

What has the business become? Businesses evolve over time, and your original goals are likely not your goals for the present or future. Provide an accurate pinpoint of who you are today. Be specific in describing your company's strengths, weaknesses, assets, and obstacles. And be able to back up any claims.

What can the business be in the future? Working off the previous question will be a discussion of where the company can expand. Think through multiple trajectories, and clearly articulate how each of these can be attained. Growth plans may vary based on whether you sell to a strategic acquirer or private equity investor. Will the business need capital to expand? Can it rapidly grow with entry into a new channel? What does it need to reach its full potential? Explain how you believe new ownership will make the business stronger. This will strengthen your position to sell.

As you work through these questions, remember to stay positive, but realistic. Provide clear details, research, statistics and other evidence to substantiate your assertions. Remember to customize your document to your target investor or acquirer. With a relevant and compelling story, you can get your business noticed. More important, you can maximize interest to enhance value and bring your transaction to a successful and profitable conclusion.



Bob Cronin is managing partner of The Open Approach, an M&A firm focused on the world of print. www.theopenapproach.net

RAPID EXPANSION IN THE LABEL ACADEMY

MIKE FAIRLEY OUTLINES THE TITLES AVAILABLE IN THE LABEL ACADEMY. AND WHICH NEW EDITIONS ARE ON THE HORIZON

One of the major challenges that today's label companies have is how to attract young people into the industry, educate and train them in the latest technologies processes, and then retain them on a longer-term basis. The industry generally has a problem with its outdated image in many schools and colleges. It needs to change this perception. It needs to excite and stimulate the millennial and post millennial generations that are familiar with and use sophisticated communications, media and digital technology on a daily basis — the very things the industry needs for its longer-term future.

At the same time, the industry needs to bring in new people to run existing conventional press technology and retrain and retain its existing workers and bring them up to speed with new and future requirements.

It was a combination of all these factors that lead to the creation of the Label Academy some five years ago. Consisting of a series of self-study modules, combining free access to relevant articles and videos with paid books, the Academy has developed rapidly with some 14 books now available – plus the Encyclopedia of Labels and the History of Labels book – with more in the pipeline. A short summary of all the currently available titles is set out on these pages.

The aim with these books is for each label company to build its own in-house library of titles, all made available for employees to read and study, either individually, or as part of a defined company induction, training and employee development program.

Master classes and workshops have also been introduced as part of the Label Academy program, providing expert information, education and guidance on topics that now include Shrink Sleeve Technology, Management Information Systems and Workflow Automation and Inks, Coatings and Varnishes.



The Label Academy now boasts 14 titles, with more in the pipeline

"The industry needs to excite and stimulate the millennial and post-millennial generations that are familiar with and use sophisticated communication, media and digital technology on a daily basis – the very things the industry needs for its longer-term future"

What comes next?

The next new Label Academy book title to be published – expected to be available by the end of the year – will be Flexible Packaging: Materials, technology, markets and applications.

This will be followed in the Spring of 2019 by a completely revised and updated version of the Encyclopedia of Brand Protection and Security Labeling, while a brand-new title, Label Substrates: Their manufacture, characteristics and performance is in the early stages of research and writing. These new editions will bring the total Label

Academy books up to the 20 titles that were originally conceived some six years ago.

A review of the existing and new titles is currently underway to establish a regular program of the books that require periodic updating and to look at what new titles might be required for the future. Perhaps there is a need for a Careers in the Label Industry book that converters can provide to schools, colleges and for recruitment purposes? Any readers with ideas or suggestions for new titles can email them to Natalie Tamiollo at Labelexpo (ntamiollo@labelexpo.com).

Label Academy books currently available



Digital Label and Package Printing: Terminology, technology, materials, management and performance

Digital Label and Package Printing incorporates much of the combined knowledge of many of the world's leading experts to provide a comprehensive guide to understanding how these technologies work – whether

electrophotographic liquid and dry toner or inkjet. It also explains the enhanced requirements that digital printing brings to color management, origination and pre-press, workflow, demands on substrates, digital analog and laser finishing, and how converters should look to manage and market the digital printing operation.



Management Information Systems and Workflow Automation

To fulfil the needs of modern label and package printing production, a large number of management information systems (MIS), specialized and niche software solutions and evolving hardware have been developed. While their positive impact on profitability

and competitive advantage is undeniable, many have very specific applications. Choosing which is suitable for your operation is a time-consuming and challenging process and getting it wrong can be a costly mistake. Expert guidance can be found in this book.



Inks, Coatings and Varnishes: A guide to manufacture, handling and performance

Inks need to fulfil multiple functions and roles: they must be safe to handle and use by the converter, they must coat a printing plate, yet release easily onto a wide range of different paper and filmic substrates; they must not deform or crack during post-print

converting processes involving heat and pressure, or on shrinkable materials; they must resist damage from rubbing and jostling on high speed filling lines and during transit and stacking; and they must remain robust and readable throughout storage and handling by the final end user, whether consumer or industrial. This book covers all these subjects.



Shrink Sleeve Technology

Technological advances have vastly expanded the market for shrink sleeve labels. Today, full body decoration, 360-degree branding, the potential to decorate complex and intricate shapes, the ability to add tamper evidence, abrasion resistance and waterproof printed images are all possible due to constantly

developing technology. Shrink sleeve label printing uses a variety of different films, with different degrees of shrink capability. Converters need knowledge of each of these films, along with the image distortion processes, and the shrinkability and performance requirements of inks – all explained in the book.



Environmental Performance and Sustainable Labeling: Become a 'greener' label converter and user

This book provides label converters and industry suppliers with information about the environment, sustainability, climate change and waste debate as it affects the label industry, and reviews the legislation,

guidelines, directives, protocols and industry initiatives that have been introduced over the past decade.



Conventional Label Printing Processes: Letterpress, lithography, flexography, screen, gravure and combination printing

A valuable resource for explaining the principles of each of the main conventional printing processes used in the production of labels as well as the types of printing equipment used. Although conventional

printing is under pressure from digital processes, it remains a potent force in the sector. It is therefore important to have a fundamental understanding of each process, the mechanics behind them and how they are evolving and changing.



Label Design and Origination: Repro and pre-press processes

Written to examines the developments that have taken place in the prepress arena and explores in detail the progress of a typical label job from design through to its arrival on the printing press. The design to print process is quite complex and there are many stages to

ensuring that the final printed label meets the expectations of the brand owner. Excellent communication and co-operation between the designer, printer and brand owner are an essential element in delivering a successful result and supply.



Die-cutting and Tooling: A guide to the manufacture and use of cutting, embossing and foiling dies, anvils and cylinders

This book explains the complex and vital role die-cutting and tooling plays. Through a series of detailed explanations, photographs, diagrams and charts, the author provides a detailed look at modern tooling technology – how the

tools are manufactured, their use and applications, how they should be handled and stored. It includes a section on troubleshooting on the production line and a glossary of terms to ensure any unknown phrases are quickly understood within context.



Codes and Coding Technology: A guide to understanding barcode symbology, types of codes, reading and verification equipment and industry standards

An up-to-date guide to understanding current barcode symbology, types of codes, scanning and verification equipment, printing technology, and industry standards. Includes

a useful glossary of barcoding terminology, providing a valuable resource to materials suppliers, printers/converters, and brand owners.



Label Embellishments and Special Applications: Exploring the techniques and processes used for adding decorative finishes and functionality to labels

Written to explain in detail all current methods of label enhancement. It begins with a thorough review of the more traditional methods such as foiling, embossing and novel

printing techniques, and introduces new technologies and innovations including the use of smart and smart active materials, developments in multi-web manufacturing and the introduction of electronics.



Label Dispensing and Application Technology

This book aims to answer key questions around label dispensing and application technology. How is it possible to separate pressure-sensitive face material from the silicone backing? How can labels be placed around corners or into recesses? How

are products moved into the correct position for labeling, held steady or rotated on the label application line? Also included is a comprehensive troubleshooting guide for the applicator line.



Brand Protection, Security Labeling and Packaging: Technologies and strategies for optimum product protection

Hundreds of brand protection and security labeling solutions are detailed and explained in the book, including the latest hi-tech methods, such as RFID, taggants, electronic article surveillance (EAS) techniques and holograms.

Guidance on developing brand protection and security labeling systems and procedures is also provided.



Product Decoration Technologies: Understanding the primary methods for decorating a product

This book explores the wide variety of product decoration technologies in use today, highlighting their unique characteristics and helping in their identification. It enables the reader to gain a comprehensive insight into

the whole decorative process as it relates to consumer packaging









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"The aim with these books is for each label company to build its own in-house library of titles"

- from material selection, print and finishing technology, and to application onto/or integration into the pack itself. The pros and cons of each decoration system are identified, but more importantly, the cost implications underpinning the selection of a particular decoration system are examined.



Label Markets and Applications: A guide to material specifications and regulations for consumer and industrial markets

This title examines each of the main end-user markets in turn. It describes how the label is used to satisfy the consumer, the brand owner and the regulatory authorities in major world markets. It also looks at the changes in label

technology, in particular the impact of digital printing, and the ways in which they affect the various end-user sectors.

BENEFITS FOR EMPLOYERS:

- The ability to implement a more professional recruitment, induction and employee development program
- Sales teams can become more knowledgeable and competent in creating a more consultancy-based selling approach to new business
- The possibility of offering a knowledge based career path and employee growth opportunity to encourage employee retention and reduce staff turnover

BENEFITS FOR EMPLOYEES:

- Professional commitment by an existing or potential employer to an employee's role, education and training
- The possibility of building transferable skills knowledge and competency towards promotion and new job opportunities
- Better understanding of the technology, materials and business processes that they use



All titles can be ordered through the Label Academy website at www.label-academy.com. Special discounts have been agreed for Finat, TLMI and LMAI members



CONVENTIONAL AND DIGITAL PRESS TRENDS

WITH CONVENTIONAL AND DIGITAL PRINT AND COATING TECHNOLOGIES CONVERGING, ANDY THOMAS-EMANS LOOKS AT HOW AUTOMATION AND HYBRID SYSTEMS ARE SHAPING THE FUTURE OF THE NARROW WEB INDUSTRY



Conventional press trends

Current developments in the flexo press sector point to a blurring of the boundaries between conventional and digital, greatly increasing the range of options open to label converters faced with shorter run lengths and the need for greater production flexibility.

Related to these developments, the last Labelexpo shows in Europe and America revealed a new drive to integrate conventional presses into Industry 4.0 workflows. This means repetitive manual operations are taken over by 'intelligent' servo-assisted systems, while press control systems exchange data with factory-wide management information systems (MIS).

Automated pressure setting is a good example of this trend. The technology has moved from wide web CI to narrow/mid-web presses, with Bobst leading the way with its 'Digital Flexo' press lines, where cameras continuously monitored the density of a patch of pixels, feeding information back to servo motors. At Labelexpo Americas 2018, automated pressure setting was seen on most major manufacturers' high-end presses.

Omet announced auto-pressure setting on its XFlex X6 press line, and Nilpeter demonstrated a range of 'Clean Hand' automation technologies on its new FA line, implemented by seven direct drives on each print head. Edale's FL-3 press was demonstrated at the show with a full AiiR automation package which includes automated pressure setting.

At the show Bobst took flexo automation a step further with a demonstration on an M5 press of simultaneous exchange of plate cylinders followed by a 'hands free' makeready with automated pressure and register setting.

Looking forward, we could see other automation technologies make the transition from wide web to the narrow/mid web sector. For example RFID-equipped anilox rolls which allow the press control system to check the correct tooling has been fitted and aid automated inventory management.

Another key Industry 4.0 concept is 'Big Data', analyzed and implemented by artificial intelligence systems. The first area we are seeing this become reality is on-press inspection.

Press cameras linked into cloud-based data networks will learn about common print problems and help operators spot them before they happen and either auto-correct press parameters or alert operators to the probable cause.

Data exchange

The final piece in the automation jigsaw will be two-way data exchange between flexo press and MIS. Up to now press control systems have been based on proprietary operating systems, requiring

information to be double keyed from the MIS into the press console – for example material type and run length.

This is now starting to change. MPS demonstrated its Talk To Me open interface at the Labelexpo Automation Arena, allowing two-way communication with a Cerm MIS. Bobst demonstrated integration of both its high-end M5 and entry-level, shaft-driven M1 presses into a browser-based Internet of Things (IoT) network, where a number of productivity and bench-marking apps are available.

On the digital side, HP continues to develop its PrintOS cloud-based operating system, which now includes a suite of benchmarking and workflow tools including Site Flow for Labels and Packaging, OEE (Overall Equipment Efficiency) monitoring and EPM Analyzer. PrintOS is open to compatible third party applications, and it was notable that just across the aisle at Labelexpo Americas AB Graphic was demonstrating a cloud-based OEE app which monitors its finishing equipment and ties into the Cerm MIS.

Xeikon is developing its own suite of bespoke apps – the aXelerate services program – and at Labelexpo Americas added an OEE component which automatically collects data from presses and peripheral equipment and shows current productivity status.

An end to operator skills?

Do these developments mean that skilled flexo operators will no longer be needed? Absolutely not. Automated systems will get 98 percent of the way towards an in-specification job set-up, but operator skill will always be required to make those final makeready adjustments before ramping the press to full speed and producing sellable labels.

The key phrase in Industry 4.0 is 'cyber assisted'. The skilled operator is helped by the intelligent machine to achieve an optimum result. Once the job is running to specification, the intelligent machine monitors itself using sensors to measure and adjust registration, print pressure, web tension, UV lamp power (measured at the web surface), while cameras and sensors check for developing print faults and measure density and color throughout the run. Once the correct number of in-specification labels have been printed, the press can even ramp down automatically — a system already implemented on digital presses.

So the role of the skilled operator changes. They can now monitor multiple machines from a smart mobile interface from any point in the print plant, accessing a wide range of production status information in real time. This frees up time to concentrate on other value-added activities such as assembling the elements for the next job change.



Converting developments

Automation on the print and web transport sections is being matched by more efficient tooling systems at the converting end of the press. We are now seeing the deployment of semi-rotary die-cut systems able to operate at full press speeds of up to 150m/min. The key advantage of semi-rotary is that the same magnetic cylinder is used for every repeat size, and with semi-automatic die loading and ejection on units such as ABG's Fast Track, there is minimal downtime between jobs. Mark Andy's system allows the die module to be switched between semi- and full rotary operation depending on run length.

Nilpeter is currently developing the semi-rotary die station seen for the first time on its Panorama hybrid press at Labelexpo for the new FA series press. Omet has its own take on the die-cutting format issue. The company's MonoTwin Cut system uses differential pacing between two fixed diameter cylinders to achieve the same result.

The increasing efficiency of highly automated flexo presses married to fixed-palette printing – which eliminates the need for washups between jobs – has seen flexo start to encroach on the shorter run territory of digital. This blurring of lines has only increased with the dawn of the age of the hybrid press.

Hybrid comes of age

With digital printing taking an increasing share of the new press market from the early years of the 21st century, manufacturers of conventional presses felt the need to develop their own digital offering while not throwing away the expertise gained over many years of designing high-specification flexo presses.

The route chosen was to ally with UV inkjet press manufacturers and incorporate their print engines into existing flexo press lines. As the chemistries of flexo and digital UV inks are similar, digital has slotted easily into the in-line format of the narrow web industry.

This is not a new phenomenon of course. Nilpeter launched its Caslon program in 2012 with FFEI as its inkjet integration partner. But the first generation of single-pass inkjet systems were not really up to the job of matching flexo in terms of print quality or speed.

Today, print resolutions have increased up to 1,200 DPI and speeds have reached as high as 100m/min, though a more typical speed range is 50-75m/min. Printing white generally entails a reduction in speed to allow the ink to properly whet.

These are certainly speeds and resolutions capable of fully complementing the flexo process, while the scalability of inkjet allows it to handle standard web widths of 13in/330mm. The

UV LED curing raises profile

UV LED is becoming a more mainstream option for narrow web flexo presses because of key advantages over arc: it is an on/off process with no heating up or cooling down period, so no requirement for shutters; it emits less heat directly to the web surface; it is more efficient at curing some colors, such as whites; and has a longer lamp life without progressive degradation.

On the other hand, the inks tend to be more expensive and less widely available from all suppliers in complete sets including varnishes, and there is still heat to remove from the back of the array, either by water or air cooling.

An approach which takes advantage of the strengths and weaknesses of each technology is interchangeable lamp housings, which allow converters to quickly convert a chosen station to UV LED then back to arc without replacing the whole lamp assembly on the press and without changing power supply. Both GEW and IST have demonstrated the technology at successive Labelexpos.

In digital printing UV LED is already used for 'pinning' colors to increase print definition before a final arc UV cure. UV LED as a complete curing solution was first used on the Epson L-6034VW and at Labelexpo Epson launched its successor, the L-6534, which uses Epson's own PrecisionCore head technology. The press prints CMYK+W and includes an in-line UV LED cured digital varnish station. An arc UV final cure can be switched in if required.

We should also mention Electron Beam curing, a technology up to now reserved for wider web packaging presses. At Labelexpo Europe EB curing made an appearance in miniaturized form on the Uteco Gaia inkjet press, developed as a joint project with ebeam Technologies and INX Digital. The key benefit of EB for food packaging applications is there are no photoinitiators to migrate into the product.

opacity of today's UV white inks certainly matches flexo whites and in some cases approaches screen.

Surveying hybrid press sales, it is interesting to note the wide range of configurations — indeed, we can say that there is no standard configuration for a hybrid press. Most presses in the field are equipped with a flexo unit before the digital engine, either for priming the substrate or to put down a first white, and 1-2 flexo units after the digital, allowing a spot color and/or varnishing.

But some converters are ordering configurations which more closely resemble a full scale conventional press with up to eight flexo units and a digital engine inserted in the middle. In these cases the press can be used either as a digital press — bypassing the flexo print units — or as a digital press for shorter run jobs, as well as any combination in between.

Given the higher costs of UV inkjet inks, hybrid printing holds out the possibility to print far longer runs than is economic with digital-only presses. With an appropriate color management system, the dominant color in an image can printed with a UV flexo spot ink, while the digital engine handles variable print and complementary color elements. Similarly, using a flexo applied first down white is more economical than using a digital White on longer runs. The development of faster semi-rotary die-cutting

units which we noted above also helps the efficiency of hybrid presses on both longer and short runs.

Flexo with digital capability

Another way to achieve hybrid capabilities on a flexo press is to rail mount a full web width mono or full color module.

Labelexpo Americas saw a range of mono retrofit units such as the Graphium Printbar. This uses Xaar's latest 1003 heads specified for either fine detail or heavier coatings and capable of operation at a maximum speed of 246ft/min (although high opacity white runs at 40m/min).

Domino showed its established K600i mono unit, while Mark Andy demonstrated its latest Digital Screen Plus model on the new P7E press. FujiFilm introduced the Samba 42000 Printbar at Labelexpo Europe in 2017, imaging at 1,200 DPI at speeds up to 90m/min.

Web-wide mono retrofit modules have a range of possible applications. They can act as a 'digital black plate' providing a variable data capability; can apply a first down white; or act as a variable imaging spot color station. Properly specified inkjet heads capable of handling higher viscosity functional coatings without clogging allow converters to apply variably imaged spot matte or gloss coatings. Jetting UV-curable adhesive will also allow variable cold foiling, replacing the static flexo coating plate.

Inkjet embellishment units can simulate 3D-type tactile effects such as embossing and debossing, although full-specification Braille is not yet possible on single pass systems. A press can now be designed to digitally print, create raised image areas, digitally cold foil and follow the design with spot matt or gloss varnish, all without any plates and with variable imaging possible at each point.

In Chicago we even saw the addition of mono retrofit modules to a hybrid press, demonstrated by Edale and its US partner FujiFilm on the Graphium X hybrid press. At the show Gallus announced that its Digital Embellishment Unit, now undergoing beta testing as part of the Gallus LabelFire hybrid press, could be made available as a module on an ECS or Labelmaster flexo press at some point.

Digital presses

The debate about whether off-line or in-line finishing is more efficient continues in the digital press market. From recent Labelexpo shows we see a clear trend for digital press manufacturers to offer in-line operation as an option. Examples include the HP Indigo GEM inkjet embellishment unit, seen in-line with a 6900 press at Labelexpo Americas, and now also incorporating digital cold foiling.

Xeikon has long been an advocate of in-line processing and at Labelexpo Americas demonstrated both in-line laser in the Automation Arena and an all-in-one entry level print and converting system called Label Discovery combining a Xeikon 3000 press and entryCoat finisher – which can also be used as a near line finisher. Colordyne's compact 2800 Series Mini Laser Pro launched at Labelexpo Americas includes full color print, lamination and laser die-cutting in one line.

Konica Minolta demonstrated its AccurioLabel 190 dry-toner electrophotographic digital press at Labelexpo with a near-line GM finishing unit, but is also looking at options for fully integrated finishing.

Special requirements

With half of all PS label volume in industrial labels, mostly using variable print, digital press suppliers have pushed hard the robustness of their print processes for harsh environment applications.

HP Indigo showed at Labelexpo Americas its Pack Ready for Labels program, using a new primer which gives added robustness

Wider webs

The last forty years of narrow web development have seen presses get progressively wider, from 165 and 210mm to a standard 330mm, then progressively to 430 and 520mm. 430mm is widely considered to be the maximum practical width for pressure-sensitive labels because of the weight of the die-cutting cylinder.

But the rapid development of filmic labels – particularly shrink sleeves – and an emerging market in short run flexible packaging have driven the development of wider machines capable of handling these larger format products. This emerging 'mid web' market centers on the 670mm/26in width up to a maximum of around 900mm.

Examples of this approach include the Bobst M6, Omet Varyflex and MPS EXL packaging press. At Labelexpo Americas Mark Andy showed a print unit from its new P9E press, a 26in (670mm) machine designed for efficient converting of shrink sleeves and flexible packaging. The press does not use sleeves, but rather traditional – albeit especially light-weighted – cylinders. Pressure settings can be stored for future retrieval. This press clearly builds on Mark Andy's Comco heritage in a format pioneered by Mark Hermann's company in the late 1990s.

On the digital side, HP Indigo's mid web 20000 press has revolutionized the short run flexible packaging market and is



now gaining serious traction with multi-plant installations. US-based digital-only converter ePac, for example, is building an entire business around digital printing of flexible packaging at locations across the US with multiple 20000 presses. HP's Pack Ready ecosystem includes all elements required for a flexible packaging workflow, including primers, lamination, dedicated opaque white station and finishing units. At Labelexpo Americas the company demonstrated an in-line shrink sleeve label line based around a 20000 press and the ILC760, a new 30in integrated top coating, slitting and rewinding unit developed by AB Graphic, capable of using industry standard water-based and UV coatings.



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Do you want to know more about our UV LED products? Scan the QR code and get directed to flintgrp.com to labels printed on the 6900 press. Flint announced at the show UL certification, in partnership with Flexcon, for the Panther UV inkjet technology which drives its PX press series.

Another area of active development for UV inkjet is low migration. This has taken a major R&D effort since LM formulations require larger particle sizes and it is critical these do not clog the fine jetting nozzles. An example is Screen's Truepress Jet L350UVLM press seen at Labelexpo Americas, which uses the company's LM inkset combined with nitrogen inerting to flush oxygen from the curing chamber.

Water-based developments

Not all inkjet developments have involved UV. Memjet has made strides in water-based technology for its OEM partners resulting in a new pigment-based aqueous ink system called Duralink.

The technology was first run out with a Chinese OEM partner, but Colordyne also announced plans at Labelexpo Americas for a second-generation 3600 Series AQ retrofit module using Duralink technology to be rolled out in the second half of 2019.

(Colordyne is not abandoning development of its UV retrofit systems. At the show it also announced a partnership with UV ink developer Kao Collins to offer bespoke formulations to users of the 3600 Series UV-Retrofit unit which will increase printhead life, improve durability and give a wider color gamut).

Konica Minolta has partnered with Memjet and at Labelexpo displayed equipment developed by the two companies which

Konica Minolta will sell to label converters. The Precision Label Series 475i – shown with the matching PKG-675L laminator – uses Memjet technology to produce finished corrugated materials, including folding cartons, displays and traditional cardboard boxes. It allows short-run, customized and personalized packaging production for label converters looking to diversify.

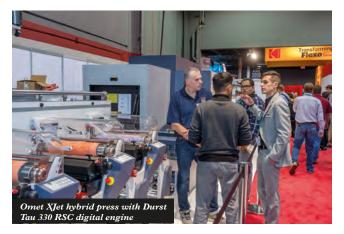
Epson has its own take on aqueous technology with its popular L-4033AW, now superseded by the L-4533AW, which was launched at Labelexpo Americas. The show machine included a beta version of an in-line spectrophotometer and a robotic automated head cleaning system. Currently, spectrophotometric calibration is carried out off-line. The new system will allow fully closed loop color management.

New players

A significant trend is the addition of new players to the digital label press sector. Wide web CI specialist Uteco has made a major foray into the narrow web market in partnership with ebeam Technologies and INX Digital, demonstrating the modular Gaia electron beam inkjet printer. The press offers food compliant short run print capability for the food and pharma markets and prints on a wide range of substrates including aluminum, paper and films at speeds up to 320ft/min. It can be configured up to 36 inches wide.

Uteco has also collaborated with Kodak to bring to market the 650mm-wide Sapphire Evo digital press for labels and flexible packaging. The press uses water-based inks to print on films and





paper at speeds up to 900ft/min.

Another key wide web player, Bobst, has stepped into the narrow digital web arena through its acquisition of Mouvent. Mouvent's key technology is the 3D-printed 'Cluster' which brings together imaging units, ink supply and alignment systems, and provide the basis for a wide range of possible system configurations including sheet-fed (under development) and web-fed press systems for applications ranging from textiles to labels and folding cartons. Its label-specific machines are the L701 (170mm-wide) and 702 presses (340mm) using either UV or water-based inks and available in six colors plus white. Mouvent is now working with Bobst on developing in-line finishing. These presses will soon be joined by

the LB705 for flexible packaging.

And 2018 saw another major player from the commercial print digital sector launch a dedicated label system, as Canon entered the market with its Océ LabelStream 4000 series 5-color UV inkjet press (CMYK+W) with a print speed of 48m/min. The press is available in print widths of 330mm (13in) or 410mm (16in) with an optional performance mode of 68m/min for less demanding print jobs. The press uses Xaar 2001 UV inkjet printheads, with a resolution of 720 x 600 DPI.

Suppliers from outside Europe and the US are also starting to make an impact. Chinese company Shenzen Handway has launched the LabStar330 drop-on-demand digital press with a print speed of 100m/min and resolution of 1,200 x 1,200 DPI. The press is available in 4-7 colors including optional white and spot color. Print width is up to 50mm (13.7in). The company is currently exploring hybrid options. Another Chinese supplier, Spande – long-time agency for Pantec – is launching a sophisticated hybrid press with automated print pressure setting in partnership with Domino.

Although we have long predicted the impending consolidation of the digital print sector, it seems that hybrid is opening up a range of niche options for new suppliers, suggesting the vibrancy of this fast developing sector still has some way to run.



Read coverage of Labelexpo Americas 2018 in L&L issue 4. Labelexpo Europe returns to Brussels in September 2019. www.labelexpo.com

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AUTOMATION AND ARTIFICIAL INTELLIGENCE

MIKE FAIRLEY OUTLINES THE OPPORTUNITIES AND CHALLENGES FOR AUTOMATION AND ARTIFICIAL INTELLIGENCE IN THE LABEL AND PACKAGE PRINTING INDUSTRY

Almost every day our homes and daily lives are getting smarter, becoming more intelligent and getting ever more automated — to a large degree without us actually understanding or knowing how it is all taking place.

Whether it is the use of smart phones, smart meters, automated payment systems, travel ticketing, navigation, search engines, online assistants (Alexa and Siri), self-driving cars or lawnmowers, smart lighting, social media apps or just ordering an Uber, all are impacted to some degree by artificial or machine intelligence, automated processes and smart technology.

The label and packaging industries are not immune to such advances. Each year sees new evidence of how artificial (machine) intelligence and automation of workflows, processes and systems is changing the way the industry performs, improving efficiencies, reducing lead times and wastage, enhancing quality inspection, and better serving its brand, retail and other customers.

Visitors to Labelexpo Europe 2017 and Labelexpo Americas 2018 cannot fail to have seen how many booths were showing equipment or systems for automating various press operations, unwinding, slitting and rewinding machines and other types of finishing or end operation equipment, the pre-press processes and proofing operations, or workflow automation managed by increasingly sophisticated MIS.

High level of interest in Automation Arena

Indeed, such is the interest by the industry in what is taking place, that over the last two Labelexpo shows some 2,500 visitors have attended the Automation Arena demonstrations of the automated label, shrink sleeve and package printing plants of tomorrow — with a level of automation, machine intelligence, performance and profitability never before attempted.

The overall aim of the Automation Arenas has been to show converters that with the latest integrated workflow technology and machine intelligence it is now easier than ever to automate and process many more jobs in the same throughput time, with fewer errors, with 100 percent quality and barcode inspection, incorporate automated press and finishing set-up, and all with the same number of employees.

At the most recent Labelexpo Americas show there was a unique collaboration between 14 key label industry suppliers, with a Cerm Management Information System (MIS) as the central hub. A global provider of business management and automated software for both traditional and digital label narrow web converters, Cerm teamed with international industry partners to develop end-to-end automation solutions for self-adhesive labels and shrink sleeves that now cover the entire value chain.

During the automation demonstrations, the Cerm MIS was

seen processing and managing the whole automated workflow, integrating with an Esko Software Platform supporting end-to-end label workflow. This platform firstly changed the selected digital label design being produced on Avery Dennison self-adhesive labelstock printed on a Xeikon LDU digital press — and personalized the artwork

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printing plants of tomorrow"

with the customer's name, created rules for inspection, and initiated a proof for customer approval – followed by calling-up the shrink sleeve graphics and plates for printing on an MPS EF-APC UV flexo press.

The Esko Software Platform 18 being demonstrated provided a comprehensive set of software solutions for design and pre-press, workflow automation, color

management, and supply chain collaboration. With a focus on cost control and productivity optimization, the platform supported an end-to-end workflow with hyper realistic 3D viewing, also on mobile devices, web collaboration, PDF editing, content management, and quality assurance tools all providing a sophisticated user experience.

Digital printing, laser cutting and inspection line

Once approval of the label and barcode was received back from an audience selected 'customer,' files were sent from the Esko Software Platform to a Xeikon X-800 digital front end, in turn integrated with a Xeikon LDU laser die-cutting unit that was able to 'needlessly' switch over between two jobs.

The Xeikon LDU applied a Flint Group Digicoat GP gloss varnish, laser die-cut, slit and rewound the labels, enabling frequent job changeovers with limited or no set-up time. Integration with the Xeikon Front-End via the Vectorizer module provided step and repeat and printing, with AVT 100 percent automation inspection files, job identification and die-cutting, and finishing barcodes for the in-line laser die-cutting, slitting and turret rewinding. The finished rolls off the press were barcoded for roll identification of the finished product.

A Matho Cuttobag CB-100.1 waste management system on the Xeikon press was used to cut, transport and collect the production waste into a waste disposal system, while cores for both presses were being cut on a WLE fully automatic core cutter. The cutter read a barcode from a label printed on a label printer close to the cutter. This requested job cutting instructions from the MIS, while the label was reused to identify the cores per job.

Non-stop UV flexo sleeve printing

With the Xeikon press set-up and running, the MPS EF-APC operator was already reading his MIS-generated job ticket on screen, enabling him to check that plates, tools, inks and substrate had been delivered, and changing the unwind roll using a Kocher + Beck UR Precision U440 butt splicer. This highly innovative technology featured a fully servo-driven unit with intelligent Data Link communication features, providing non-stop press operation and increased throughput. Because it was a reprint, the MIS provided the press with the appropriate set-up file stored, avoiding any search time lost by the operator.

Each roll loaded was scanned and became fully traceable throughout the whole process, interacting with the Cerm system

in order to provide real-time production values. A Cerm inspection command was also sent to AVT's automatic 100 percent print inspection system for detection of spots, streaks and color on each print deck — providing fully connective technology ready for Industry 4.0 implementation — which registered any defects during printing,

but at this stage did not act on

Especially designed for labels, sleeves and flexible packaging production, the MPS EF-APC press operated with no gear cylinder connection, intelligent pressuresetting and zero waste roll change, and featured UV, hot-air and LED drying technology, enabling users to print on a wide variety of substrates, including

thin film, paper, carton board, shrink sleeves, in-mold, tubes and flexible packaging. It printed on a Klockner Pentalabel shrink film using Zeller + Gmelin's 32 Series Nuvaflex range of UV flexo inks developed specifically for sleeve production.

Next to 'standard integrated' machine automation, the EF-APC also offers an automation package for further extended (additional) print automation: the APC Package provides automated servo control of all relevant press settings. The package can be configured for the ultimate in print setting control to further increase productivity on the EF press. Automation extends to sleeve seaming and finishing.

Automation extended to sleeve seaming and finishing

Printed rolls coming off the MPS press were identified with an ID barcode generated by the MIS which, when scanned, enabled an electronic instruction file to automatically set-up shear slitting on a Grafotronic H12 high-speed inspection slitter rewinder, as well as providing the location for any bad products according to AVT scanning instructions.

An AVT camera on the Grafotronic automatically stopped the machine whenever a defective label was detected in the printed reel so that any necessary repairs could take place. The final, 'clean' and slit roll was then rewound and a barcoded label applied to the reel. As this roll transferred to an AccraSeam FC fully continuous shrink sleeve forming and seaming machine, equipped with a fully-automatic table with seam positioning, the barcode was scanned and the instruction



file from the code read and used to automatically set-up the forming and seaming operation.

After set-up, forming, seaming and rewinding of the, now, lay-flat shrink sleeve web, the Accraply ASFC wrote a log file and created a barcoded label which was applied to the lay-flat seamed roll coming from the seamer. This barcode was, in turn, then used to identify and provide file information as the seamed roll was transferred to an Accraply DM12 Shrink Sleeve Inspector, a compact vertical seaming inspection machine used for lay-flat quality checking.

The DM12 inspected for seam integrity, solvent presence, lay flat and for any splicing/flag detections, enabling any bad sleeves to be thrown out before rewinding the lay-flat 'clean' web. At the end of the quality check the Accraply system provided a printed report for each roll that gives the customer all the necessary QC information required.

Final rolls carrying barcoded identity information, whether from the Xeikon or the MPS/Accraply production lines, were scanned into a warehouse location, a picking list prepared through the Cerm MIS, a delivery note printed, and e-mail notification sent to the customer and invoicing launched. All of the production data is permanently collected by the MIS and presented in a Smart Business Intelligence system, whether it is about sales, production or profitability.

Ongoing automation developments

While the Automation Arena demonstrations provided an exciting glimpse into tomorrow's automated label plant, other Labelexpo exhibitors were also busily taking further automation steps. Ink logistics provider GSE, for example, showed enhanced ink management software that enables converters to minimize ink-related waste, providing improved ink yields, enhanced reporting and reduced set-up times.

Color management workflow technology from Baldwin also now automates the process of delivering absolute consistency from press-to-press, shift-to-shift, and plant-to-plant. Reporting tools enable quality managers to deliver full production overviews to print buyers and brand owners.

Another interesting development has been the acquisition of Blue Software by Esko. This is targeted at further reducing time-to-market, cost and quality risk in the end-to-end label and packaging chain. Software and hardware systems now digitalize, automate and connect the whole label and packaging and development chain, from virtual 3D design concept all the way to printed, finished and labeled packs and in store displays.

Put together the Automation Arenas, Label Academy 'MIS and workflow automation' text book and Master Classes, plus new industry vendor advances, are rapidly taking the industry into a new level of machine intelligence and automation that offers the possibility of providing new and unprecedented levels of service to brand owners, retailers and other customers.

What is now in sight is the ability to take a brand owners materials specifications, label or pack compliance, BRC, ISO and QC requirements, sustainability demands, etc, and bring them all into one automated label production and workflow system that will automatically print and then generate all the necessary compliance or sustainability certification documents to be automatically sent to the customer when the job is shipped.

Such certification might include materials FSC or recyclability, color match and color consistency, printability tests undertaken,



"Almost every day our homes and daily lives are getting smarter, becoming more intelligent and getting ever more automated"

UV ink cure, materials run, ink and substrate wastage, percentage waste sent for recycling, exact finished label count, 100 percent label inspection, and much more.

A need for standards and protocols

However, to get to this stage, more industry vendors will undoubtedly need to be brought into the automation process. There also seems to be a need for a more specific common label industry JDF/JMF language, standards and protocols; a requirement for 'interoperability conformance specification' with 'best practices' between the two parts of the workflow (eg between MIS and pre-press); and maybe a certification process to guarantee the level of the solution supplier (and not having to discuss every time).

Why is this needed? Well, at the moment, not all label industry vendors are CIP4 members and/or do not use a JDF standard. Maybe the label and package printing industry suppliers need to establish their own JDF forum or workgroup to discuss the pros and cons of JMF as it specifically relates to the label and package print sectors, review the new XJDF proposals and how they relate to the industry, and see if they need to be even more simplified, modified or to become more complete.

Yes, there is a standard already for the graphical industry, but if more label and package printing materials, equipment and systems suppliers were to become involved in study and work groups, then the industry can become even more creative in the future.



Read more from Mike Fairley at www.labelsandlabeling.com/contributors/michael-fairley



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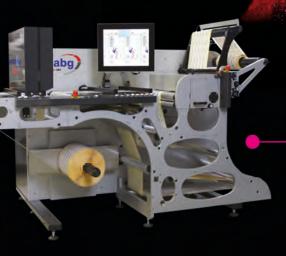
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CIRCULAR ECONOMY AND LABEL MATERIAL SELECTION

WHAT'S HAPPENING IN PLASTICS RECYCLING SHOULD DRIVE MORE RELEVANCE IN SELECTING A LABEL MATERIAL TO BEST SUIT CIRCULAR ECONOMY OBJECTIVES, WRITES DANIELLE JERSCHEFSKE

Increased awareness about plastics pollution, particularly related to our oceans, has catalyzed a renaissance in the demand for a cradle to cradle, or closed-loop, packaging infrastructure. With systems as they currently stand, and products and packaging designed to be thrown away, pollution is inevitable.

Post-consumer plastics must be successfully recoverable through a viable infrastructure and have a valuable end-use in order to move to a closed-loop Circular Economy. Also imperative is a steady supply of post-consumer content with a consistent quality grade.

Current global recycling rates for plastics are low, with 14 percent collected and ten percent effectively recycled, according to the World Economic Forum. In the US, the rate for PET is just over 29 percent in 2017 according to NAPCOR's (National Association for PET Container Resources) most recent data. These rates of collection need to improve, and such is the intention of SPC's on-pack How2Reycle label, informing consumers on how best to dispose of their used single-use containers. Improved quality can be achieved by taking a holistic approach to packaging material selection, including the label construction, understanding what's available on the market and using verified data to guide adoption at concept and design stages.

Proper end-to-end infrastructure with ample capacity, and positive material value, are the most cumbersome barriers to a closed-loop plastics economy. The first step in knocking down these barriers is an agreed, common set of standards and shared definitions across the value chain.

Harmonized definition of plastics recyclability

Plastics Recycling Europe (PRE) and The Association of Plastic Recyclers (APR), two of the leading international organizations representing plastics recyclers, have developed a global definition governing the use of the term 'recyclable' as it relates to plastics packaging and products. PRE and APR consider a product recyclable when it meets the following four conditions:

 The product must be made with a plastic that is collected for recycling, has market value and/or is supported by a legislatively mandated program

- The product must be sorted and aggregated into defined streams for recycling processes
- The product can be processed and reclaimed/recycled with commercial recycling processes
- 4. The recycled plastic becomes a raw material that is used in the production of new products

This definition of recyclability is intended to be the foundation for establishing a Global Plastics Protocol to provide a common target, to overcome existing fragmentation and to enable the creation of effective markets. The Global Plastics Protocol is part of the New Plastics Economy initiative which has grown to include 250 signatories to its Global Commitment across government, NGO and value chain stakeholders. The New Plastics Economy Global Commitment aligns signatories to work towards a broad set of goals to reduce plastics pollution: eliminate problematic or unnecessary plastic packaging, and move from single-use to reuse packaging models; innovate to ensure 100 percent of plastic packaging can be easily and safely reused, recycled, or composted by 2025; circulate the plastic produced by significantly increasing the amount of plastics reused or recycled and made into new packaging or products.

Ton Emans, president of PRE, explains: "We need the appropriate audiences to understand what is necessary to label a product or package "recyclable". We have seen many announcements regarding legislative measures on plastics products and pledges by the industry committing to making products recyclable. We welcome these commitments and encourage others to follow using this harmonized definition has a guide to reach our global objectives."

APR endorses the New Plastics Economy Global Commitment. Steve Alexander, president and CEO of APR, says: 'We look forward to working with the committed companies to create a "new normal" for plastic packaging that embraces recyclability.'

'New normal' material selection

SPC's How2Recycle labeling system directs packaging disposal behavior at a consumer level, and instructs packaging decision

Calvin Frost, founder and chairman of Channeled Resources Group, has been the driving force on sustainability in the label industry since the 1970s. When asked how perception on business and the environment has changed over the years, he says: 'For the first twenty or so years, it was lip service and not a priority. We were crying on deaf ears. In the last 15 years, there has been a shift. The consumer is concerned about recycling, is eager to learn best practices, and wants to reward businesses that support their values; the major brand owners recognize the shareholder value, and are now sincere and committed.

'In order to be truly sustainable, concerned decision makers need to make a commitment, accept the financial implications with driving change and invest to improve. Logistics has always been a real problem when it comes to packaging waste or liners. Better systems need to be established to achieve zero landfill objectives.'



Unilever's Love Beauty and Planet brand used APR Design Guide to select label material

makers on choices that can be made in design and material selection to improve material recovery volume and end value. The SPC is aligned with the APR Design Guide when it comes to plastic recyclability, and where labels can help or hinder the recovery impact of the overall packaging.

APR testing protocols and the APR Design Guide for Plastics Recyclability are tools brand owners can use to help make the best label material selection to improve the quality of post-consumer plastic materials. These resources are referenced in the article What How2Reycle means to our industry published in L&L issue 4.

There are a handful of roll material labelstocks available with an adhesive chemistry that meets APR preferences to deliver the cleanest PET flake, efficiently removing label material from plastic particles in the caustic bath of the recycling process. Currently, the adhesives are available on a few key facestocks and liners, have limited performance parameters, are intended for clear PET only, and typically come at a higher cost – yet there is advancement.

Early adopters, including Unilever's Love Beauty and Planet brand, are using second generation adhesives, while the third iteration is already in development. Roll material manufacturers continue their investment in research and development of recycle-compatible PS material constructions including facestocks that float and advanced adhesives because the market continues to ask for more.

While adoption has been slow thus far, the How2Recycle label is turning into a key influence for CPGs and retailers updating their corporate recyclability goals. More and more SPC member companies are incorporating recyclability into performance reviews which is unlocking motivation inside of decision makers to advance and drive change.

In time, it's anticipated that the labeling scheme will drive recyclability of a PS label adhesive to be just another principle when it comes to material characteristic required, such as performance, durability and application speeds. In this way the label industry is leading the way to drive a 'new normal' in providing a reliable, consistent stream of quality post-consumer recycled (PCR) plastic into the market.

Market value

For decades, China has been the largest importer of packaging waste, collecting more than 45 percent of the world's post-consumer plastics. Other developing nations, too, have historically imported plastic waste from Europe and North America.

Starting on January 1, 2018, the flow of our international waste market was greatly impacted when China enacted its National Sword policy, effectually ceasing to accept millions of tons of used packaging – paper, plastics, metals and more. Other Asian countries have tried to accept the demand overflow, to no avail. Their infrastructures do not have the capacity to meet the volume.

This situation has created what some are considering to be a perfect storm for driving wider development of a Circular Economy for post-consumer plastics. Now that the EU and US have lost its largest importer, there's an influx of PCR plastic in the regions and great need for improved collection and processing infrastructures. Is it possible to hit restart on the existing systems so that products and components are designed to be taken apart and regenerated positively?

The Circular Economy concept is nothing new. Braungart and McDonough published Cradle to cradle (C2C) in 2002, and Life Cycle Analysis as a tool has matured greatly across all realms of manufacturing and product development as a means to shift to a more waste-free, closed-loop trade environment. However, this type of analysis does not include landfill or litter impact, so there's more work to be done.

The idea of growth decoupled from resource constraints sounds promising, but maybe a little too optimistic in application. Would a Circular Economy be able to soften or even offset the slew of raw material price increases our industry has experienced in 2018? Either way, while there's progress, there's still plenty of groundwork involved before it's a viable business solution.

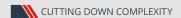
According to research conducted by the World Economic Forum, if improvements were made both to packaging design and to the systems for managing plastic packaging after use, 50 percent of plastic packaging could be profitably recycled. To lead improvement in profitable plastics recycling, the value chain must drive increased demand for post-consumer recycled content material, and APR is working on this. As this happens, the value stream can continue to count on the development of new label materials and continued collaboration towards this common cradle to cradle goal.



What How2Recycle means to our industry, published in L&L issue 4 www.labelsandlabeling.com/opinion/whathow2recycle-means-our-industry

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REGIONAL ROUND-UP: **EUROPE**

THE EUROPEAN LABEL MARKET HAS FULLY BOUNCED BACK FROM THE FINANCIAL CRISIS, AS ANDY THOMAS-EMANS REPORTS



A key indicator of the health of the European label market is provided by Finat's annual labelstock trends report, and the final figures for 2017 and early 2018 paint an encouraging picture of continued growth.

Total consumption of PS label materials in Europe increased by a healthy 4.7 percent in 2017 – the most recent period we have full figures for – representing an average growth of 5.4 percent since 2013.

Filmic rolls continued their growth at the expense of paper, now forming 26 percent of total demand, compared to just 15 percent in 2000. The growth rate of filmics in 2017 was 8.2 percent, double that of paper rolls, while sheet PS materials continued their longer term decline.

Eastern Europe continues to be the European PS powerhouse, accounting for 22 percent of PS volume – almost double the figure for 2003. South and southeastern Europe were the fastest-growing label markets in absolute volume between 2010 and 2017. During this period all European markets added 1.6 billion sqm of annual consumption, amounting to a growth rate of over 28 percent.

The potential for further growth is clear, since the top 15 label markets in Europe still accounted for 95 percent of total consumption in 2017.

Wider trends

Every year Finat also commissions a study into wider European industry trends (the Radar report), and the findings of the full 2017 survey were presented during the Finat congress in June. A key finding is that brand owners remain positive towards PS labels, planning a 3-5 percent increase in spend, although there is a continued migration to shrink sleeve labels in food, personal care and household chemicals. Almost one quarter of the end user sample stated their intention to move to shrink.

Other key end user trends include a preference for more complex labels – mirroring the fact that most new flexo presses are now built to order. Non-prime labels are increasingly functional or 'smart'.

Specific sourcing of digital labels is still not a priority for food and beverage brands, though there are indications this could change, with digital label procurement forecast to grow by over 7 percent.

Eastern Europe remains the preferred region for label sourcing, but Africa has now appeared on the radar for the first time.

The highest growth sectors – at over 5 percent – include automotive, consumer durables and industrial chemicals, while pharma, HABA, food and household chemicals slowed compared to 2016.

Turning to productivity, the report concludes that European label industry employees generate an average of €173,000 turnover per person, and total sales of between €110,000 and €210,000.

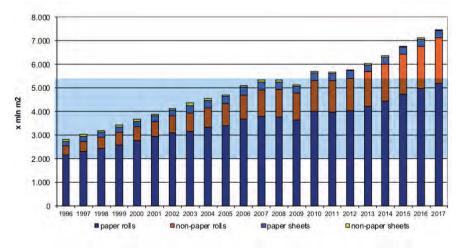
A new category in the Radar report is the amount of running waste produced during a job, excluding matrix waste. The average wastage figure across Europe is 5-10

percent, with the highest figures in southern and eastern Europe (8-9 percent).

The Radar report showed almost one fifth of the converters surveyed were already producing flexible packaging, a 3 percent year-on-year increase. Around one third of the sample were also printing shrink sleeves. In the category of flexible packaging, not including sleeves and stand-up pouches, there was an astonishing 14 percent year-on-year increase to 27 percent, with a further 8 percent 'very interested' in entering the flexpack market.

These figures are confirmed by Labelexpo visitor figures for the last three European shows. Labelexpo asks visitors if they have responsibility for buying flexible packaging-related products, and the number of affirmative answers increased from 37 percent in 2013 to 43 percent in 2017.

European consumer trends all point towards increasing opportunities for label converters in the flexible packaging and shrink sleeve segments: smaller pack sizes for smaller households; single serve and eaton-the-move products; more varieties and pack customization.



Growth of European PS labels industry by material type (source Finat)

Digital trends

Finat has also launched, through the LPC consultancy, a Digital Press Index to track installation trends in Europe in the broad categories of toner and inkjet/hybrid.

According to LPC's figures, digital printing now represents 10.5 percent of new press installations in Europe. Out of the 2,300 digital presses installed in Europe, LPC says 71 percent are currently toner-based and 29 percent inkjet/hybrid. Figures collected by LPC for press installs in 2017 show that 59 percent of the 300 digital presses sold in Europe were inkjet/hybrid.

When Finat surveyed converters' buying intentions for its Radar report, an equal number were aiming to invest in conventional flexo and digital presses. Of those investing in digital, one third intended to buy toner presses and 58 percent inkjet, of which 21 percent chose hybrid.

Looking into what converters intend paying for these digital presses, almost one quarter of the sample will be investing €1m-1.5m – firmly into more advanced flexo press territory.

Turning to European brands' attitudes to digital print, LPC finds that almost one third of its sample are 'true believers' in digital – they have fully integrated digital print into their marketing and logistics operations. Another 20 percent are 'unconvinced users', who have had some success with digital but are held back by higher costs from migrating more products from flexo.

Brands not yet using digital LPC breaks into 'optimistic' and 'pessimistic'. The former represent 35 percent of the sample, and are convinced that at some point digital will work for their organizations; the pessimistic 15 percent simply believe that digital is too disruptive to their working methods and supply chains, despite understanding the technology.

Consolidation

Consolidation continues to affect the European label industry, both among suppliers and converters.

The most significant European consolidation involved leading Italian package printing group Nuceria joining forces with All4Labels to boost the group's global reach. Through the merger with Nuceria, the All4Labels Group hit a total turnover exceeding €500 million from 29 production facilities across the globe, including the former Rako and X-Label

Region	2013	2014	2015	2016	2017	Average 2013-2017
Eastern Europe	7.2%	10.1%	10.5%	10.5%	8.6%	9.4%
Uk/Ireland	5.3%	9.9%	9.8%	13.2%	11.1%	9.9%
All Regions	5.7%	6.7%	8.4%	8.3%	6.5%	7.1%
Central Europe	5.2%	4.0%	9.5%	5.5%	2.5%	5.3%
Southern Europe	4.5%	5.7%	7.6%	8.1%	7.3%	6.6%
Scandinavia	4.2%	8.5%	-1.3%	4.3%	4.5%	4.0%

Sales growth average of European converters (source Finat)

operations in Europe.

Antonio lannone, founder and managing director of Nuceria Group, takes responsibility for the group's Italian operations, while Guido lannone, general manager of Nuceria Group, became a member of the All4Labels global management board and with responsibility for one of the global sales business units.

With its headquarters in Hamburg, Germany, All4Labels was founded in 2016 as a global platform for family owned businesses 'which share the vision to develop sustainable packaging solutions in a global context, while retaining the flexibility and strength of an owner managed business.'

One of the UK's leading label converting groups, Reflex Labels, ramped up its acquisition program, adding Sherwood Packaging, MP Logistics, Barcode Tech and Kingsway.

St-Luc Labels & Packaging, headquartered in Nazareth, Belgium, took over Pharmalabel, a Dutch pharmaceutical label specialist, to enhance its one-stop-shop offering. The takeover means St-Luc Labels & Packaging now has four branches in three countries: St-Luc Labels & Packaging (labels, shrink sleeves and flexible packaging) in Belgium, Microbox (folding carton) in France, and Altrif Label (labels and booklets) and Pharmalabel (pharmaceutical packaging) in the Netherlands.

On the supplier side, the biggest announcement was the Mark Andy acquisition of Presstek. Although not strictly a European transaction, it did involve the integration of Presstek's UK-based headquarters and demo center into Mark Andy's European organization.

Global Graphics, meanwhile, was acquired by Congra Software, the parent of Hybrid

Software. Global Graphics is headquartered in Cambridge, UK, and develops platforms for inkjet print systems. Both companies were already co-operating closely, with Guido Van der Schueren the controlling shareholder of Congra and chairman of the board of Hybrid Software. Since May 2014 he has also acted as chairman of Global Graphics.

Sustainability

A key sustainability development in 2018 was the European Union's adoption of the Circular Economy package, which aims to 'close the loop' of product lifecycles through greater recycling and reuse. Although not targeted the label industry directly, there are clear implications for labeled packaging.

Member states will be required to ensure that, as of 2030, waste suitable for recycling will not be sent to landfill, and that by 2035 the amount of municipal waste disposed of in landfills will be reduced to 10 percent or less of the total amount generated.

The directive includes measures 'to encourage the development, production, marketing and use of products suitable for multiple use that contain recycled materials, and that are, after having become waste, suitable for re-use and recycling.'

An amendment to the Packaging Waste Directive aims to increase packaging waste recycling, including encouraging an increase in the share of reusable packaging placed on the market. By the end of 2025 (and 2030), at least 65 percent (2030: 70 percent) by weight of all packaging waste must be recycled, including 50 percent (2030: 55 percent) of plastic.



For more info about Finat's Radar report, go to: www.finat.com/pages/finat-radar



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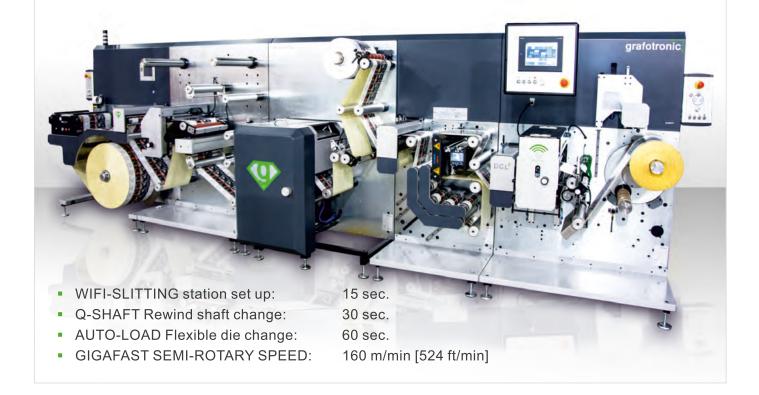
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REGIONAL ROUND-UP:

NORTH AMERICA

CHELSEA MCDOUGALL ANALYZES
THE LATEST TRENDS AFFECTING THE
NORTH AMERICAN LABEL MARKET



Traditionally, the biennial Labelexpo Europe tradeshow is the place for technology innovations to be unveiled to the world. But as we saw at Labelexpo Americas 2018, that's not entirely the case anymore.

TLMI president Dan Muenzer hit it home with his comments about the Americas show in September: 'You can't wait two years to innovate. Innovation happens between Labelexpos.'

Indeed, that was the case at Labelexpo Americas 2018, an event where 487 exhibitors showed their latest developments across the largest show floor space ever. Early indication was that visitors were not just window shopping, but making deals, and they likely would continue to make capital equipment purchases heading into 2019. A Labelexpo attendee survey found that 53 percent of visitors planned to buy equipment seen on the show floor within the next six to 12 months.

What visitors saw at the trade show was booth after booth of technology developments that are moving the industry toward greater automation, hybrid printing and flexible packaging production.

Growth of hybrid, automation

Industry 4.0 technologies are driving the entire label converting supply chain towards greater efficiencies, and that will continue in the coming year.

While digital packaging production continues to grab headlines, the conventional machine manufacturers have upped the ante, building machines that are getting more efficient and smarter.

Michael Lane, CEO of Meyers Printing Company, told L&L: 'Necessity is the mother of invention. A few years ago, we were looking at digital solutions, and today the flexo manufacturers have really upped their game and engaged with digital. Every

one of these press manufacturers that I've seen at the show are offering simpler solutions from an operation standpoint.'

production"

Some conventional press manufacturers have embraced digital, either by adding their own digital engines, as Mark Andy and Nilpeter, or partnering with a digital press manufacturer to add a digital unit to their flexo press line. Omet and Durst, and MPS and Domino were examples seen at Labelexpo. Bobst has opted to focus more on automation and IoT integration, which the company told

L&L can compete with short run digital jobs.

The further development of hybrid presses and interest from the North American market is likely to continue. Some industry experts predict hybrid label production to grow by 13 to 14 percent in the coming years.

A TLMI members survey found that 22 percent planned to buy a hybrid machine between by 2020. By comparison, 69 percent said they would buy a flexo machine, and another 69 percent said they would buy digital.

The rise of flexible packaging

North American label converters are moving into flexible packaging production at a rapid pace. As flexible packaging run lengths decrease, this creates problems for wide web converters who are traditionally manufacturing these packages. That disruption is creating opportunities for label converters, particularly in short run, small size pouch market.

Demographic and lifestyle factors in North America, including shrinking household sizes, rise of dual-income families and the trend of snacking instead of traditional meals, all promote demand for pouches in small, or single-use size packaging. This favors smaller format presses rather than wide web CI flexo and gravure. Those who have already started producing flexible packaging are seeing the benefits of this healthy market.

Compared to other print segments, the North American label market is an incredibly fragmented landscape. The \$13.6bn USD market hosts some 2,350 label companies. By comparison, the

folding carton market is valued at \$12.9bn USD with about 510 companies; and the flexible packaging industry has about 460 players and is worth \$26.7bn USD.

Muenzer, the TLMI president, reported that over the past few years the

make-up of TLMI members has shifted to represent this market change. Previously, 100 percent of converter member profits were from labels or tags. Today, about 85 percent of revenue is from labels and 15 percent of member revenue is from flexible packaging or folding carton.

Workforce challenges

"Visitors to Labelexpo Americas saw

technology developments that are moving

the industry toward greater automation,

hybrid printing and flexible packaging

Another yearbook edition and the same challenges plague the



"Eighteen percent of press operators are at

or approaching retirement age and only 7

percent of the press operator workforce in

the US is under 25 years old"

label industry in North America. Though this industry is not alone in struggling to hire and retain employees, it seems we're short on solutions.

A key talking point for furthering automation is not only increasing efficiencies on press lines, but also the limited human intervention needed. As fewer workers are available to run these

presses, the industry is no doubt looking at automation as a bright spot in an otherwise dim job outlook.

Consider the challenges here: 40 percent of North American flexo converters have difficulty filling jobs, and

more than half say it's impacting the ability to meeting client needs.

Further, the workforce is aging. Eighteen percent of press operators are at or approaching retirement age and only 7 percent of the press operator workforce in the US is under 25 years old, according to the US Bureau of Labor Statistics.

More than 50 percent of the global population is under 30 years old, and by the year 2020, 46 percent of the workforce will be made up millennials. The unfortunate truth is that millennials aren't looking at jobs in manufacturing.

Technology is changing the way companies and employees think and operate, and it's forcing label and packaging converters to get creative with their recruitment strategies. Culture and workforce development is a topic at nearly every industry event, including Labelexpo, and that looks likely to continue.

Government regulation

Tax cuts that have benefited many US label companies have an uncertain future. Passed in late 2017, and taking effect in January 2018, were permanent tax cuts for corporations, and a temporary reduction on taxes for sole proprietorship businesses, better known as s-corporations or pass through entities. Many label companies fall into the latter category of businesses benefitting from a reduction on business income taxes.

However, mid-term elections loomed in the US at the time this issue went to press, so the future of those tax breaks is uncertain. Expect more articles on the government regulation in future issues of I.&I.

The permanent tax breaks awarded to major corporations were more controversial at the time they were passed. What this next Congress will do with that measure remains to be seen. The next Congress could also seek to make permanent the tax benefits afforded to small and medium-sized companies.

Bryan Vickers, TLMI's government affairs liaison, says: 'While there's an appetite to do that, there's a cost associated, and how they're going to pay to extend the tax benefits provided remains a challenge. Everything saved in terms of tax cuts has to be offset

somewhere else.'

Tariffs on Chinese goods are another uncertainty facing many label industry suppliers and converters. The Trump administration used a broad brush to apply tariffs to products. It's creating

the environment for a trade war with China, and uncertainty in the label industry. Products from China subject to tariffs include leuco dye (used in the manufacture of thermal papers), uncoated testliner and paper and paperboard for used by the graphic arts sector, Vickers said. 'Unfortunately there's no indication that the administration is going to back down from that,' he said.

Growing markets: cannabis legalized in Canada

Experts say the legal marijuana market in North America is growing faster than the dot-com era in the early 2000s, and that shows no signs of slowing after Canada legalized recreational marijuana in October.

Many Canadian label companies were quick to see the packaging benefits of this burgeoning industry. Edmonton-based Jet Label purchased an HP Indigo 8000 digital press to help it expand further into the legal cannabis market.

Label companies located in US states where legalization has already come into effect are also playing in this market. Many offer packaging samples on their websites, such as Label Impressions of southern California or Colorado-based Lightening Labels.

Arcview Market Research has studied the legal marijuana market and its growth opportunities. According to its reports, the legal cannabis market is worth \$6.7bn USD in the US, Canada and Mexico. At a 34 percent growth rate the market will reach \$22.6bn USD by 2021, according to the Arcview's most recent 'State of the legal marijuana markets' report.



To watch a video of LPC explaining label industry trends, visit http://tinyurl.com/y8g5q2gu





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REGIONAL ROUND-UP:

AS GROWTH RATES SETTLE TO A 'NEW NORMAL', THE CHINESE LABEL INDUSTRY IS ADAPTING WITH MOVES TO MORE EFFICIENT FLEXO AND DIGITAL PRODUCTION METHODS.

YOLANDA WANG REPORTS

CHINA



According to the Chinese national bureau of statistics, gross GDP in 2017 exceeded 82 trillion Yuan (US&11.8 trillion), up 6.9 percent year-on-year and above the growth rate of 6.7 percent in 2016. It is estimated that GDP will grow by 6.5 percent in 2018, so this range represents the 'new normal' for the Chinese economy.

This year marks the 40th anniversary of China's economic reform program. From the updated data provided by National News Publication Bureau, Chinese printing industry output has risen from less than 5 billion Yuan to 1.21 trillion Yuan in 40 years, meaning today's output is approximately 250 times that of 1979. At the same time the number of printing companies has risen from 12,000 to nearly 100,000 – nine times that of 1979.

In 2017, 7,088 printing companies had their licenses revoked, a year-on-year increase of 31.2 percent, while 4,722 printing companies were newly established, a 40.7 percent increase. The

inefficient companies were progressively eliminated and at the same time the market's vitality was strengthened.

The average output value of the entire Chinese print industry in 2017 was 428,000 Yuan per capita (US\$61,000), approximately 73 times of that in 1979 and up to half that of developed countries.

Now the structure of the Chinese printing industry is

shifting from a focus mainly on quantity and capacity expansion to the simultaneous development of simplified inventory management and efficiency optimization. Innovation and niche development are key values.

Label industry specifics

According to the latest statistics from the Label Printing sub-association of the Printing and Printing Equipment Industries Association of China (PEIAC), the value of industrial-scale label printing in 2017 reached 43.2 billion Yuan (US&6.2bn), up 10 percent from 2016. This year-on-year growth rate was higher than that in 2016 (9 percent) and in 2015 (8 percent) and was above the global average. The output of PS adhesive materials was 5.8 billion sqm, with a year-on-year growth of 12 percent — also higher than the growth rate of 2016 (9 percent) and 2015 (8 percent).

Most label printing enterprises in China are located in the Yangtze River Delta, Pearl River Delta and Bohai Rim areas,

accounting for 47, 26 and 22 percent respectively. Others are spread over central China, the southwest and northwest.

Increasing label demand partly originates from traditional industrial products. Statistics from the China National Light Industry Council (CNLIC) show this sector's main business income in 2017 was 24.25 trillion Yuan, an increase of 8.5 percent over the previous year, with profit up at 1.6 trillion Yuan. Around 80 percent of light industrial products need packaging and labels, so the development of these products will inevitably push significant growth in label demand.

Thanks to the popularization and development of internet technology, 'internet+' brings new opportunities for the label industry. Data from the State Postal Bureau of China shows that express volume across the country grew from 1 billion parcels in 2010 to 40 billion in 2017. And in the first three quarters of 2018

this figure had already reached 34.74 billion parcels, an increase of 26.8 percent from a year earlier.

According to updated data from the National Bureau of Statistics of China, online sales in China increased 27 percent in the first three quarters of 2018. Online sales of physical commodities rose 27.7 percent, 18.4 percent faster than total retail sales of consumer goods,

increasing by 3.5 percent over the same period last year. It is estimated that online sales of physical commodities contributes more than 40 percent to total consumer goods growth.

Logistics labels are growing fast in China's industrial supply chain, and half are 3-layer adhesive labels. Estimated average growth in the next five years is expected to be over 6.52 percent.

RFID

"The rise of digital printing

does not come at the expense of

conventional technologies. On

the contrary, the integration of

a distinct trend"

the two technologies is becoming

Today in China there are two types of automated store checkout systems, one adopting machine vision technology and represented by Amazon and Deep Blue Technology, another adopting vending machines with RFID and variable QR codes and using open shelves for snack items like Blibee, Bingo box and Alibaba Tao Café. An IDTechEx survey predicts that the market value for Chinese RFID applications will reach US\$4.3 billion in 2025. Today there are more than 150 RFID label manufacturers in China and they produce almost 85 percent of the labels used worldwide.



Where Chinese label converters are based

Chinese-style mobile payment methods such as Alipay and WeChat Pay are accelerating the development of unmanned retail sites in China.

Label printing equipment

Today label printing in China is still dominated by letterpress. However, as environment protection policies have become more and more restrictive – particularly with the environmental tax levied in 2018 – and demand from end users has increased for short run, personalized and custom-made products, more and more label printing companies are casting their eyes towards flexo and digital printing methods.

From visitor research at Labelexpo Asia 2017, interest in flexo was highest at 43 percent, followed by digital printing at 30.98 percent, offset 28.9 percent, letterpress 24.2 percent and gravure 16 percent. There were 54 flexo and digital printing machines displayed at the show.

Data from PEIAC's Label Printing sub-association shows that 180 flexo presses were installed in 2017 in mainland China, an increase of 8.9 percent from 2016. To date, the total number of flexo press installed in China stands at 2,197 machines. For comparison, in 2017 35 offset presses were installed, a 15.7 percent increase from 2016. The current installed base of offset presses is 258 machines.

At this stage, digital label printing accounts for less than 5 percent of installations in China. Besides the international brands such as HP Indigo,

Konica Minolta, Domino, Screen, Xeikon, Epson etc, domestic manufacturers have also launched digital label printing equipment, including Shenzhen Handway, Winbosc, Amica, Shenzhen Haotian, Beijing Founder and Lucky HuaGuang.

The rise of digital printing does not come at the expense of conventional technologies. On the contrary, the integration of the two technologies is becoming a distinct trend. For example, Domino and Spande launched together

control and treatment.

Regional governments have already approved VOC emission reduction plans for different industries on a local level, and more than 20 provinces, cities or autonomous regions have started a levy on VOC emissions. Beijing and Shanghai have established the most stringent standards – for example maximum emission concentrations in Beijing cannot be more than 30mg per square meter, and in Shanghai the limit is 1.5kg per hour. In addition, cities such as Shenzhen and Shanghai have introduced online monitoring of pollutant emissions, and as a result a number of small and medium-sized printing companies have been forced to close or relocate to middle or western areas of the country.

Plastic film industry

With small and medium-sized flexible package producers forced to shut down due to gravure VOC emissions, label printers have seized the opportunity to produce flexible packaging products themselves. For example Beijing Deji Label purchased its second Omet Xflex X6 10-color flexo combination press for filmic materials and CymMetrik purchased a Mark Andy Performance Series P9E press. They are all looking at converting shrink sleeve label

"As environment protection policies have become more and more restrictive and demand from end users for short run, personalized and custom-made products has increased, more label converters are casting their eyes towards flexo and digital"

the N610i+ flexo hybrid machine, which will be installed in the Shanghai plant of Hyprint, and Zonten concluded a strategic agreement with Konica Minolta and will launch its new 'digital + flexo' label press in the near future.

Environmental protection storms

The label printing industry has been impacted by environmental protection policies introduced in 2018, especially measures to reduce VOCs. Both the packaging printing industry and ink industry were listed as key fields for VOC pollution

and flexible packaging products.

After many years of rising volumes, however, filmic growth rates have begun to slow. Filmic growth rates reached their peak in 2013 at over 31 percent, but by 2017 had fallen to just 2.47 percent. This dramatic decline was due to a combination of changing industrial standards and stricter environmental protection policies.



For more from Yolanda Wang on the Chinese label market, go to www. labelsandlabeling.com/contributors/yolanda-wang

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REGIONAL ROUND-UP:

SOUTHEAST ASIA

AAKRITI AGARWAL REPORTS ON MARKET TRENDS IN SOUTHEAST ASIA



Southeast Asia is one of the fastest-growing label markets in the world, with a trend towards rising consumption in the booming economies of this heterogeneous region.

The strength of the local market was demonstrated at the inaugural Labelexpo Southeast Asia, held in May in Bangkok. With 7,934 attendees from 62 countries flocking to the three-day show, exhibitor rebookings

for the next edition in 2020 stood at 42 percent at the

"The market here is booming"

Indonesia.' The company has several demonstration centers in Southeast Asia, including two each in Thailand and Indonesia, three in the Philippines, and one each in Singapore and Malaysia.

Armor's Mark Day said: 'The Southeast Asian market is very

HP Indigo's Melvin Lew said: 'The region is growing well with

Thailand being a huge market, and we see growth potential in

price-sensitive, but we bring additional value to ribbons with the inkanto

end of the show – the highest following a Labelexpo event launch to date. The event attracted 174 of the global industry's principal suppliers, who see the region as a booming market.

Suppliers spy opportunity

At the event, Jakob Landberg, Nilpeter's sales and marketing director, described Thailand as 'one of the five fastest-growing label markets in the world'. Eric Blankenstein, sales director at Nilpeter Asia-Pacific, said the country is an hub for the company: 'We have our technology center here and it's a great market for us to further expand into Southeast Asia.' Nilpeter opened a new office in Indonesia last year and is looking at Vietnam next.

Omet's ASEAN manager Dario Urbinati said: 'Thailand is one of the hot spots in the label and packaging industry in Southeast Asia. The wider ASEAN region has one billion consumers with a double-digit growth rate in labels and packaging, so it is a significant part of our business strategy.'

Indicating technology trends, Sean Pullen, sales director Asia Pacific at Mark Andy, said that local printers are upgrading from letterpress and could go the digital or flexo route — or both. 'Also it is very much a flexible packaging market in Thailand that includes pouches and sachets.'

Letterpress machine manufacturers such as Zhejiang Weigang and Zhongte see great demand for letterpress and offset technology in this market. Spring Xu, international sales manager at Zhejiang Weigang, said: 'Similar to China, there are lots of short-run jobs in the Southeast Asian market, and local converters have traditionally used letterpress and offset machines to target this work. But we see a trend of companies moving into flexo technology.'

Brotech's Ramon Lee said: 'It is a good market that has a high concentration of digital, flexo and letterpress technologies. The labor cost, however, is increasing, because of which label printers are shifting to more automated machines. We see growth in Singapore, Malaysia and Thailand.'

product range. We are growing with the market and witnessing double digit growth year-on-year in volume consumption.'

Lintec has manufacturing bases in Thailand and Indonesia and sales/slitting centers in Singapore, Malaysia, Vietnam and the Philippines. 'ASEAN is certainly a growing market for us,' says Masaaki Yoshitake. 'We see big growth for Lintec now in the food, toiletries and cosmetics markets.'

Univacco sees Indonesia as the fastest-developing market in Southeast Asia. Univacco is witnessing a 20 to 30 percent growth in the region, compared to the global growth of 15 percent. It has distributors in Vietnam, Indonesia, Thailand and the Philippines as well as an office in Malaysia.

RotoMetrics is expanding its production facility in Thailand owing to the growing market in Southeast Asia. Paul McKay, general manager, said: 'While Thailand and Singapore are large mature markets, we see potential growth in the Philippines and Indonesia. As volume in these markets will grow, small and medium size label printers will have to switch from flat-bed die-cutting to rotary die-cutting technology. We already see it happening in Indonesia. We see a growth of 20 to 25 percent in rotary dies in the region year-on-year.'

BST eltromat Southeast Asia's managing director Oliver Finkeldey summed it up: 'The market here is booming.'

Converter trends

At the event's conference, a panel discussion of regional converters outlined some of the market's key trends, such as the need to diversify from pressure-sensitive labels to other forms of labeling and package printing in order to maintain competitiveness.

Indonesia-based PT Interflex, for example, was founded in 2008 to produce shrink sleeves, and has now diversified into flexible packaging. Trisan Printing, based in Thailand, was originally a letterpress label converter and has adopted flexo and offset while also diversifying into folding carton production.

Each country in the region has different demands, so it is a

challenge to track consumer profiles in each country and market products to them effectively. Multinational companies are moving into the region to cater to increasingly leaner supply chains.

Adrian Pratiwiharja of PT Interflex Sejahtera Perdana said: 'We have big multi-national converter competitors in Indonesia, and that is a good thing. It is fair competition and makes us want to continuously improve. Certain brands in Indonesia still prefer buying from medium-sized local companies, where we can be more price competitive. They like the quick lead times from a small business.'

Brenton Barrett of Multi-Color Corporation (Asia-Pacific) commented: 'Despite MCC being an international converting group, its ASEAN customers are looking for the company to be local. It is all about speed to market and being local. We can export to a market for perhaps 1-2 years before we have to put down bricks.'

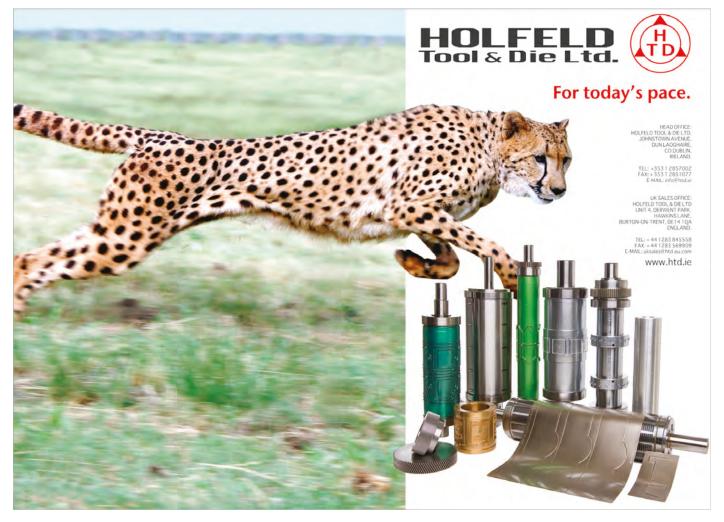
Asian release liner market

Alexander Watson Associates (AWA) organized an event in Bangkok to discuss the Asian release liner market ahead of Labelexpo Southeast Asia's debut show in May. Sharing research data, Corey M Reardon, president and CEO at AWA, said: '50.9 billion sqm of siliconized release liner was consumed in 2017 globally, of which 19.6 billion sqm – 39 percent – was consumed in Asia-Pacific.'

According to research by AWA, consumption of glassine/SCK paper and polyolefin coated paper in Asia-Pacific stands at 28 and 29 percent respectively. 'We see a slight shift to glassine in this market but it is slower than expected,' said Reardon. Global consumption of glassine stands at 36 percent and that of polyolefin coated paper is 17 percent.

Globally, 49 percent of release liner is used for the label segment and 13 percent for the tape segment. Following global trends, the Asian market has also been observed to use 48 percent of release liners for label applications, and 21 percent for the tape segment. In 2017, the global release liner market grew at just under five percent and the primary growth driver was the Asia-Pacific region, growing 6.4 percent. 'It is, however, not a homogeneous market with different sub-regions growing at different rates,' Reardon pointed out.

He further added that 62 billion sqm of label material is estimated to have been used worldwide in 2017, of which 44 percent was consumed in Asia-Pacific. Food and beverages have been identified as the fastest-growing segments in the region, with

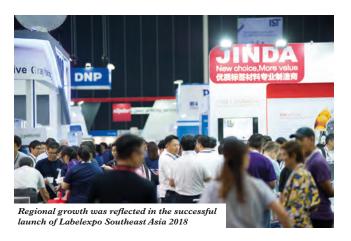


"50.9 billion sqm of siliconized release liner was consumed in 2017 globally, of which 19.6 $billion \ sqm - 39 \ percent - was$ consumed in Asia-Pacific"

growth of 22 and 47 percent respectively. Pressure-sensitive was seen as the fastest-growing label technology in Asia-Pacific last year, at 6.9 percent, with increasing opportunities in the food and beverage segments. This is followed by growth in shrink sleeves at 5.5 percent and glue-applied at 5.2 percent.

Pressure-sensitive labeling represents 24 percent of the global primary product label market; glue-applied stands at 44 percent followed by shrink sleeves at 23 percent. In the Asian market, however, pressure-sensitive represents a larger share of 35 percent, followed by glue-applied labels at 33 percent and shrink sleeves at

One of the key growth trends in shrink sleeve labeling is the food and beverage segments, where competition with pressuresensitive labeling is increasing. 'However, shrink sleeves are now growing at a deaccelerated rate. The other competing technology

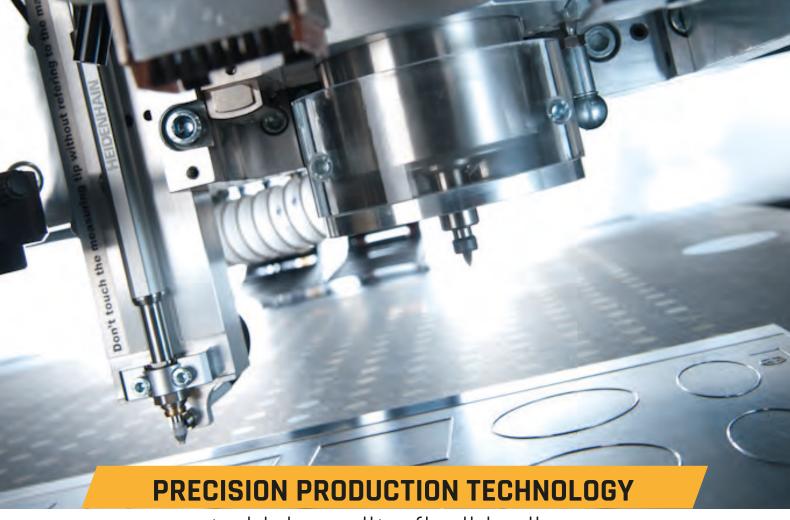


is flexible packaging, which is growing at a fast pace in the region. Track and trace in logistics and transport is also on the rise and not much competition is seen in this market segment. Shrink sleeves and wet-glue are not competing with pressure-sensitive in the variable information printing category. However, direct print is replacing pressure-sensitive labels in some cases, but it can't include value-added features such as RFID, security and anti-counterfeiting that have increased demand in the pressure-sensitive segment,' said Reardon.



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REGIONAL ROUND-UP:

INDIA

PROFESSIONALIZATION. EFFICIENCY AND QUALITY: THE INDIAN LABEL INDUSTRY IS COMING OF AGE, WRITES AAKRITI **AGARWAL**



India is a growing market with rising disposable income amongst the highly populous middle class. The National Council of Applied Economic Research (NCAER) states that by 2025-26 the middle-class population in the country is estimated to reach 547 million people.

According to India Brand Equity Foundation (IBEF), India's per capita GDP is expected to reach US\$3,273 in 2023, up from US\$1,983 in 2012. The main consumer spending rises are likely to occur in food, housing, consumer goods, transport and communication sectors.

IBEF also states that India's GDP growth is estimated to have reached 6.6 percent in 2017-18 and is expected to grow to 7.3 percent in 2018-19. In April-July quarter of 2018, GDP grew by 8.2 percent.

According to Quora, the Indian retail industry accounts for over 10 percent of the country's GDP and around 8 percent of employment. It is expected to grow to US\$1.3 trillion by 2020, registering a CAGR of 9.7 percent between 2000 and 2020.

All these research reports indicate the strong growth of the Indian economy, which is stimulating similarly rapid growth of the country's label industry.

Labelexpo shows higher-specification presses

Label presses being installed by local converters are increasingly sophisticated: often customized machines with value-adding features such as cold and hot foiling, embossing, Fresnel lens, anticounterfeiting features and so on.

This trend was clear at the recent Labelexpo India 2018 show, with numerous sales announced by not only European and American machine manufacturers but also the Indian suppliers. The

"Strong growth in the Indian

economy and a rising middle

class are stimulating similarly

rapid growth in the country's

label industry"

growing label industry is paving the way for new entrants such as NBG, SnM Enterprises, UV Graphic Technologies and Hyden Packaging, amongst others, which showed presses for the first time at the exhibition.

Not only did they exhibit they were also selling machines. SnM Enterprises sold two presses; UV Graphic sealed

a deal and Hyden Packaging sold a slitter rewinder with Futec inspection camera on the last day of the show.

Multitec, an established Indian machine manufacturer, announced two press sales and finalized a deal with Domino to produce India's first hybrid press - a clear indication of the rising sophistication of technology in the local market.

Other international suppliers such as Lombardi, Nilpeter and Omet, Indian companies Alliance Printech, PGI Technologies, Webtech Engineering, RK Label Printing Machinery, Arrow Digital and Moksha Engineering, and Chinese companies Zonten, Wanjie and Weigang all sold presses from the show floor at the event.

Ajay Mehta, managing director at SMI Coated Products, says: 'Printers are opting for combination presses and are looking at digital technology as well. The industry is becoming very innovative and looking at sustainable solutions.'

The Indian label industry is increasingly investing in digital and UV inkjet technologies. Labelexpo India saw machinery running from several digital suppliers, including Monotech Systems, HP Indigo, Domino, Xeikon, Konica Minolta and others.

Monotech launched its Colornovo UV inkjet press at the show and announced five sales in four days. This is a huge step forward for the Indian label industry, where until just a few years ago local printers were shying away from digital investments.

Most printers are also investing in inspection equipment that was not commonly seen in label factories until recently. Stricter regulations by the government, especially in the pharmaceutical industry, and demand for defect-free and high-quality labels by brand owners has resulted in a surge in installations of sophisticated inspection systems.

Hemant Desai, director of operations, India, at Baldwin Vision Technology, says: 'The label and packaging industry in India is growing at double-digit rates. There is a demand for print quality management, consistency and waste management. The Indian industry is at a stage of transition and customers are in the process of embracing new technologies and making new investments.'

Rising middle class

Ajay Mehta attributes local label industry growth to the rising middle class. 'Our per capita consumption stands at about 0.35sqm. The Indian label industry is growing at a rate of about 15 percent per annum,' he says. 'There will be a period soon when the surge will be

higher than 15 percent, and that's what everyone is looking at. It's not about catching up with Europe, America and China in terms of consumption. I anticipate to reach 3sqm or 4sqm in the next five to seven years, which is ten times the current consumption. The industry is poised to grow ten times in a short span of time.

Yearbook 2019



'Therefore, companies are moving towards more sophisticated machinery. Newer machines are capable of doing registration within 10 minutes, reducing wastage, and have shorter web paths. Pressure-sensitive labels are becoming more cost-effective. The Indian converter is also opening to investing in digital presses. We see growth being driven by end consumers and printers together.'

Ashish Chitale, partner at Mumbai-based label printer Coats & Pack, says: 'Volume has increased but the price has always been an issue. We have started doing variable data printing also. Any value addition on labels gets a decent price and margin. As a result, we are now offering track and trace solutions, as well as redemption labels,'

Pankaj Bhardwaj, senior director and general manager South Asia for Avery Dennison, says: 'The label industry in India has a strong correlation with GDP. PS penetration has improved, and more brands are moving to PS from other decoration technologies, although challenges remain in terms of costs. The segments that are growing include home care, e-commerce and general manufacturing, all sectors which reflect GDP growth.'

'There are elements of industry 4.0 being adopted in the Indian label industry. We see changes towards productivity and efficiency. Therefore, there are more advanced machines are coming in with features to enable value-added decoration on labels. There is a play for digital as well. Compliance is increasing in India too which has led to the need for higher automation so we see more inspection and sophisticated equipment coming in,' says Bhardwaj of the trends seen in the Indian market.

Sustainability is becoming key, with Avery Dennison launching a glassine liner waste recycling program in Australia, India and Thailand. 'We already have several major brand owners engaged, and are trialing this service with Unilever, the first company to officially begin recycling its waste liner through our program. We see great potential and a growing demand in India, which is driven by emerging government legislation and higher global sustainability targets being established by multinational brands,' says Darren Milligan, senior marketing director, Label and Graphic Materials Group, South Asia Pacific and Sub-Saharan Africa at Avery Dennison. The company is also collaborating with The Himalaya



Drug company for a similar project in India.

The label industry, therefore, is growing in tandem with the increasing quality demands of brand owners. Earlier this year at a conference, Barun Banerjee, head of packaging at Nestle South Asia, spoke about the need for sustainable and recyclable labels, green initiatives, new technology, as well as digital print and personalization, and the need of protecting products using anticounterfeiting features on labels.

Rahul Bhargava, vice president, packaging at Sun Pharma, said that more than 70 percent of recalls in the pharmaceutical industry globally occur due to defective labels, thus, stressing on the need of more inspection and automation. Reaction to these trends and requirements, it seems, is now beginning in earnest.

Brand owners, printers and suppliers had an opportunity for a meaningful discussion at Labelexpo India at the inaugural Brand Innovation Day. All parties engaged in discussing ways to take the Indian label industry forward and tap the growth potential.



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REGIONAL ROUND-UP: AFRICA EXCEPTIONAL AFRICAN BRANDS AND TALENT ARE BEATING THE WEST AT ITS OWN GAME, WRITES GILL LOUBSER

According to the World Bank, 2017 saw a modest recovery to 2.6 percent growth in sub-Saharan Africa (up from 1.3 percent in 2016). Though political and economic woes continue to grip African nations, major milestones are being achieved, signifying a new era for citizens across the continent.

It's clear that the stubborn relics of Africa's post-colonial struggles are finally crumbling — in ways that clichéd narratives and labels such as 'Africa Rising' or 'emerging markets' could never quite capture. Unlike the past, where foreign intervention was common, Africa is now liberating itself — the African way.

One example is Kenya's ground-breaking presidential election, which saw Raila Odinga, the main opposition leader, successfully challenging the fairness of the election process. Then there was the end of Robert Mugabe's disastrous 37-year reign in Zimbabwe, and Angola's transition from the entrenched Dos Santos family.

One result of these tumultuous times is that many Africans no longer want products and services that perpetuated the spirit of their colonial forefathers. Instead, they're aspiring to a new African standard that sets superior benchmarks and positively brands Africa on the global stage. At the same time, jaded consumers in the West are now looking towards previously ignored markets, such as Africa, for quirky innovations, fresh inspiration and novel inventions.

Says Bompas & Parr's Imminent Future of Food (December 2017): 'Africa is the next logical flashpoint for inspiration. It's arguably the main remaining world food culture left to be adopted, adapted and commercialized.'

So whether launching products for the domestic market or making waves in the international arena, African magic will fight against global mundanity, competing with and beating established Western incumbents at their own game.

Also set to offer exciting opportunities for Africa is the impact of Industry 4.0. This next phase in the digitalization of the manufacturing sector will be wide and profound. It offers opportunities for African manufacturers — particularly small and medium enterprises — to create new business models and integrate into global value chains. However, benefiting from Industry 4.0 means overcoming a myriad obstacles. Given Africa's particular context, policymakers must ask the right questions to ensure the continent can capitalize on the revolution.

Earlier this year, the Brookings Africa Growth Initiative and UNIDO (United Nations Industrial Development Organization) explored strategies to anticipate and circumvent the challenges generated by Industry 4.0 and ways in which Africa can benefit.

The meeting particularly emphasized that policies for capitalizing on Industry 4.0 must be able to reconcile the tension between

Africa's current low state of industrial development and poor infrastructure with the high requirements of a digitalized economy.

Packaging trends in South Africa

Politics and industrial revolutions aside, according to Euromonitor's latest research, South Africa's challenging economic conditions are a key determinant in the development of packaging trends, as manufacturers seek to keep costs down and consumers pay closer attention to the management of household budgets.

While keeping prices down remains a key factor in packaging in South Africa's food industry, changing consumer attitudes and lifestyles are exerting a growing influence on packaging developments. Most prominent among these are the demand for more convenient packaging options compatible with the increased pace and on-the-go character of modern urban lifestyles and the growing popularity of packaging that appeals to rising health-consciousness.

The non-alcoholic drinks market is seeing a notable trend towards smaller packaging driven by economic factors, including a decline in consumer purchasing power and the introduction of the sugar tax. Even before the tax came into effect, it was already exerting a significant influence on packaging development, as soft drinks manufacturers shifted to smaller packs in anticipation.

Overall, the drinks market is also seeing packaging trends that reflect a demand for value-for-money among budget-conscious consumers — for instance, larger pack sizes, such as one-liter returnable glass beer bottles, 500ml metal beer cans, and one-liter liquid cartons for juice.

Beauty and personal care manufacturers are also finding different answers to the impact of challenging economic conditions and declining purchasing power. In some categories, particularly essential or everyday items, bulk packaging is becoming popular as consumers look for ways to maximize their spending.

As in other categories, difficult economic conditions are exerting an influence on the development of packaging in home care, leading to demand for both less expensive, smaller pack sizes and more economical bulk packaging, such as refill packs, particularly stand-up pouches, 5kg packs of laundry powder and larger sizes of bleach bottles. Above all, the economic climate is favoring the development of 'no frills' packaging that demonstrates value-for-money, now prominently employed by private label products offered by major retailers.



To read more about the African market from Gill Loubser, go to www.labelsandlabeling.com/author/gill-loubser

L9 announces

WORLD LABEL AWARDS CATEGORY WINNERS

Tony White, chairman of the judging panel, rounds up the winners of the 2017 WLA competition This year we saw a whole new group of companies who have impressed the international panel of judges with some really exciting, high quality entries. We are delighted to be able to present the labels which received Category and Honourable Mention awards in the 2017 L9 World Label Awards (WLA) competition.

Getting the judging right in a label competition of this importance is often down to looking at the very fine detail which even the strictest quality control technician might dismiss as insignificant. All entries have passed the first test, which means that they are commercially acceptable, then they pass the second 'filter' by being selected as winners in their associations' annual competitions. Then comes the moment of truth when the representative judging panel examines each entry in great detail, looking for as many positive attributes and taking marks off for obvious technical issues.

The result is a fantastic selection of the best labels submitted from each of the associations. The competition is hotly contested and the winning companies can justifiably be proud of their awards. The final job for the judges is to select the Best of the Best labels in five categories: digital, flexo, offset litho, combination and letterpress printing. These awards were presented at the Label Industry Global Awards evening during Labelexpo Americas 2018.

More details of how the World Label Awards work can be found at www.worldlabelawardsassociation.com.

WINNERS

CLASS #1



SALMA

FLEXO LINE

Rapid Labels, New Zealand, for 'NZ Sunscreen Pure Shade'

Printed on a Gallus EM250 in three colors on an Avery Dennison silver foil at 40m/min. A rotary screen luster coating added to the final effect.

CLASS #2



TLMI

FLEXO LINE/SCREEN

Label Impressions, USA, for 'Deva Curl Buildup Buster'

Printed on a Nilpeter press in four colors on an Avery Dennison silver foil substrate using Siegwerk inks.

CLASS#3



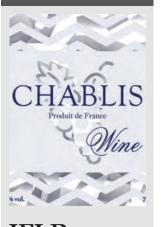
FPLMA

FLEXO COLOR PROCESS

Label Force, Australia, for 'John West Calamari'

Printed on a Mark Andy P5 press in six colors plus lamination at 65m/min using a 150 LPI screen with Paragon inks on 150gsm board.

CLASS #4



FLEXO WINE/SPIRITS

Takara Pac, Japan, for 'Chablis

Wine Label'
Printed on an MPS EC330 in

Printed on an MPS EC330 in five colors front two colors back plus lamination on a Fujiclear 38 film and PP matte substrates

CLASS #6



IFLP

LETTERPRESS LINE/SCREEN

Maru-Sin, Japan, for 'Safety Drive"

Printed on an Onda OPM W250 3S press in two colors using DIC and Toka inks on a PP film substrate.

CLASS #7



IFLP LETTERPRESS COLOR PROCESS

Sato Printing, Japan, for 'Daimyo Futomaki (Sushi

Printed on a Sanjyo P20 rotary press in five colors using Toka UV inks on a Lintec Gloss PW 8R substrate.

CLASS#8



WINE/SPIRITS

Sato Printing, Japan, for 'Apple and Lime Liqueur 'Ringo Hime'

Printed on a Sanki SMP 330 press in four colors using FD Carlton X inks on a Lintec gloss SG 8K substrate.

CLASS#9



SALMA

OFFSET LINE

Panprint, New Zealand, for 'True Honey Co. 300+ MGO'

Printed on an Omet X6 offset/combination press in one color plus flexo varnish and hot foil and a screen Hi Build on a Vintage PE substrate at 40m/min.

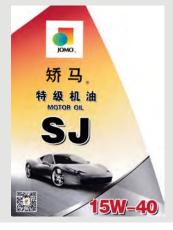
CLASS #11



PEIAC

OFFSET COLOR PROCESS

Beijing Yazhengyuan Colourful Printing, China, for 'JOMO Label' Printed on a Gobo 105UV 6+1 offset press in six colors and a 200 LPI screen.



OFFSET COLOR PROCESS

Shinwa Label Printing, Japan, for 'Yamagata Sakuranbo'

Printed on a Sanki SOF330 press in four colors and cold foiling using UV Toka inks on a Marusao Chemical Pearl BP YN 85 substrate.

CLASS #12

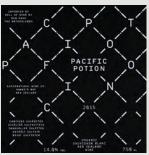
JFLP

OFFSET WINE/SPIRITS

Seieido Printing, Japan, for 'Japanese Sake 'Yamahousi''

Printed on a Sanjyo P 03 270 5CFP FR press in six colors plus debossing using Toka 171 waterless inks on a Lintec FNS Bright 50 substrate.





SALMA

OFFSET WINE/SPIRITS

Panprint, New Zealand, for 'Pacific Potion Sauvignon Blanc'''

Printed on an Omet X6 offset/ flexo combination press in one color plus hot foil on a Vintage PE–Z 3338 BG40 substrate at 40m/min.

CLASS #13



SALMA

COMBINATION LINE

Rapid Labels, New Zealand, for 'Floating Foil Snapper'

Printed on a Gallus EM280 press in one color plus a floating foil on a soft-feel varnish on a Kantac substrate at 30m/min.

CLASS #15



JFLP

COMBINATION COLOR PROCESS

Sunmec, Japan, for 'Denen Fuka Box Label' Printed on a Sanki SMP250 press and an Iwasaki 3HD 250 press in seven colors plus gold foil and embossing.

CLASS #14



TLMI

COMBINATION LINE/SCREEN

McDowell Label & Screen Printing, USA, for 'Performance Nutrition'

Printed on a Gallus press in five colors using Actega WIT inks and a 200 LPI screen on a Fasson substrate using Toka UV 161 inks on a Lintec Pet50 substrate.

CLASS#16



TLMI

COMBINATION WINE/ SPIRITS

Multi-Color Corporation, USA, for 'Octopoda Cabernet Wine'

Printed on an HP Indigo press in two colors using HP Indigo inks plus hot foil, embossing on a Wausau coated substrate.

CLASS #17



TLMI

DIGITAL PRINTING

Digital Label Solutions, USA, for 'KIA –The Extra Mile'

Printed on a HP Indigo press in four colors plus lamination using HP inks on a Wausau Coated substrate.

CLASS #18



TLMI

DIGITAL WINE/SPIRITS

Syracuse Label & Surround Printing, USA, for 'Ryze Vodka'

Printed both sides on a HP Indigo press in four colors using HP inks on a Fasson silver foil substrate.

CLASS#19



LMAI

SCREEN PRINTING

Any Graphics, India, for 'ComAD Designs'

Printed using a flatbed press in four passes in two colors plus a glitter varnish.

CLASS #21



FINAT

BOOKLETS

Stratus Packaging, France, for 'Multipages les recettes Végétales sans gluten'

Printed on a HP Indigo WS6800 press in four colors using HP inks on a Fasson film substrate.

CLASS #20



SALMA

GRAVURE PRINTING

Gravure Packaging, New Zealand, for 'Chobani 170g'

Printed on a Pelican Rotoflex press in six colors on a film base at 50m/min.

CLASS #22





IFLP

INNOVATION

Shibatasesco, Japan, for 'Instant Pocket Label'

Printed on an Iwasaki Tekko VSDP 250 press in two colors plus lamination using Oska ink and a Shibata Sesco denim substrate.

Colgate Deep Cleaning, Yet Gentle CLEANING," WITH LESS PRESSURE

FINAT

INNOVATION

Source Labels, UK, for 'Fortnum and Mason Beluga 000 Fresh Caviar'

Printed on a HP 330 press using HP inks in four colors plus special Swarovski crystal lamination on a Raflatac film substrate at 50m/min.

LMAI

INNOVATION

Mudrika Labels, India, for 'Colgate Deep Cleaning'

HONORABLE MENTIONS



FLEXO COLOR PROCESS

Admark Visual Imaging, New Zealand, for 'Moana'



SALMA FLEXO WINE/SPIRITS

Rapid Labels, New Zealand, for 'Craggy Range Wild Rock Pinot Gris 2016'



FINAT

FLEXO WINE/SPIRITS

Royston Labels, UK, for 'King's Cross'



FINAT

LETTERPRESS LINE

Cabas, Greece, for 'Agro.VI.M. Olive Oil Kalamata PDO 1L'



SALMA LETTERPRESS COLOR PROCESS

Leading Label, New Zealand, for 'Pumpkin Seed Oil'



FINAT

OFFSET WINE/SPIRITS

Multi-Color Corporation North America Wine and Spirits, USA, for 'Fortnight'

2014 NAPA



OFFSET WINE/SPIRITS

Multi-Color Australia for 'D'SAS'



FPLMA

COMBINATION LINE

Label House, Australia, for 'Pale Ale Birra Zonzo'



IFLP COMBINATION WINE/SPIRITS

Maru-Sin, Japan, for 'NEI (Japanese Shochu)'



FINAT **DIGITAL PRINTING**

Çiftsan Etiket Ambalaj San Ve Ticaret, Turkey, for 'Winx Body Lotion 75ml'



FINAT

DIGITAL WINE/SPIRITS

Marzek Etiketten, Austria, for 'Heathland Whisky'

CLASS #18



FPLMA

DIGITAL WINE/SPIRITS

Multi-Color Australia for 'Silken Beastie Shiraz'





JFLP

SCREEN PRINTING

Sibel Industry, Japan, for 'Vronique & Claudette'

CLASS #19



FINAT

SCREEN PRINTING

Stratus Packaging, France, for 'Shampoo Color Lômé Paris'



FINAT

GRAVURE

Multi-Color Wales, UK, for 'Heineken Green Identity'





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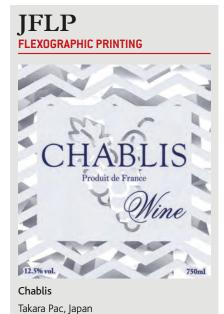




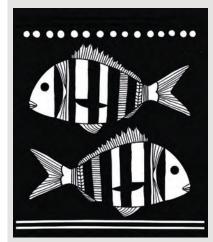
BEST OF THE BEST

This is the sixth year that the L9 World Label Awards judges have selected five additional awards representing the 'Best of the Best' entries from the principal printing technologies used in the label industry: flexo, letterpress, offset litho, combination and digital. The awards were presented at the Label Industry Global Awards held during Labelexpo Americas 2018.

WINNERS







Floating Foil Snapper Rapid Labels, New Zealand

LETTERPRESS PRINTING

Yamagata Sakuranbo Shinwa Label Printing, Japan

TLMI DIGITAL PRINTING



Ryze Vodka Syracuse Label & Surround Printing, USA





Daimyo Futomaki (Sushi Roll) Sato Printing, Japan



Passion for Precision







Rotary Tools



Rotary Machines

Ever since 1963 Spilker has developed and manufactured tools for die cutting, printing and embossing, always flexible and innovative.



Global label associations

Association Members of the L9



LATIN AMERICA

ABIEA

ASSOCIAÇÃO BRASILEIRA DAS INDÚSTRIAS DE ETIQUETAS ADESIVAS

President: Umberto Giannobile

ABIEA, founded in 1986, aims to organize and promote events such as meetings, congresses, courses, seminars and prize competitions for the benefit of its members. ABIEA publishes the online magazine 'O Auto Adesivo', the official communication vehicle for the country's label sector, read by converters, suppliers, end users, publicity agencies and other companies.

LATIN AMERICA

2 AMETIO

LA ASOCIACIÓN MEXICANA DE **ETIQUETEROS**

President: Council of six founding members

The Mexican Association of Label Companies (La Asociación Mexicana de Etiqueteros), AMETIQ, was created in 2008 by six label manufacturers. Representatives from these companies sit on the association's council, which runs its operations. The association's main objective is to strengthen the flexographic printing and converting industry through active collaboration of each of its members and seeks to integrate more partners – converters and industry suppliers who are interested in participating in this goal.

NORTH AMERICA

3 TLMI

THE TAG & LABEL MANUFACTURERS INSTITUTE

Chairman: Michael Ritter

TLMI, founded in 1933, positions itself as an industry resource for its converter and supplier members and for the greater North American narrow web industry. TLMI is comprised of more than 350 members. The TLMI Label Initiative for the Environment (LIFE) certification process is a tool that association members are using to differentiate themselves and to demonstrate their commitment to environmental best practices.

EUROPE

FINAT

THE ASSOCIATION FOR THE EUROPEAN SELF-ADHESIVE LABELLING AND ADJACENT NARROW WEB CONVERTING **INDUSTRIES**

President: Chris Ellison

FINAT was founded in 1958 in Paris. With more than 500 member companies in over 50 countries, FINAT provides not just a European but a global platform for self-adhesive label printers and suppliers to meet, network, exchange and enhance collective knowledge and expertise, develop and maintain standards and tests, provide the facilities for management development and education, and to promote the industry as a dynamic, creative and innovative workspace.

ASIA

5 LMAI

THE LABEL MANUFACTURERS **ASSOCIATION OF INDIA**

President: Kuldeep Goel

The LMAI is the central body incorporated by label manufacturing members, founded in 2002. It currently boasts at least 336 members across India. The LMAI has organized multiple conferences and awards and has participated in many international exhibitions. It publishes quarterly newsletters and hosts meetings to share information about the latest IT systems related to marketing and supply chain management. The bi-annual LMAI conference is becoming a must-attend event for the label fraternity in India.

ASIA

6 PEIAC

PRINTING AND PRINTING EQUIPMENT INDUSTRIES ASSOCIATION OF CHINA

President: Xu Jian Guo

The Label Printing Sub-Association of PEIAC was founded on June 16, 2008. Its major tasks are to assist the government in shaping the label printing industry's development strategy; to make proposals to the government on macro policy decisions and industrial policies; to adjust import and export tariffs of label equipment; to set national standards for label printing products and materials, and to organize quality evaluation activities for new printing products.

OCEANIA

FLPMA

FLEXIBLE PACKAGING AND LABEL MANUFACTURERS ASSOCIATION

President: Mark Easton

The FPLMA represents the new association name following the merger of ANZFTA and LATMA. Officially launched on July 1, 2016, the FPLMA represents the flexible packaging and label converters across the Australia and New Zealand region. The main aim of the association is to impart technical knowledge to the wide market it represents and to foster educational initiatives for younger entrants to the industry. The efforts of the industry are recognized at its annual awards and technical forum held each year in Melbourne.

OCEANIA

8 SALMA

SELF-ADHESIVE LABEL MANUFACTURERS ASSOCIATION

President: Mark Jackson

SALMA is the mouthpiece of the label, ticket and tag sector of the New Zealand printing industry. The association focuses on ensuring members are kept abreast of changes relevant to their business and on promoting its membership's products and services to print purchasers. SALMA's membership represents some 90 percent of the New Zealand label

Industry suppliers by category

3D technologies: imaging, prototyping and printing

Athena Graphics AV Flexologic CGS Publishing Technologies International, LLC CHILI Publish DALIM SOFTWARE GmbH Dilli DPL Industri A/S **DPS Innovations LLC** El Empaque+Conversion Four Pees Hybrid Software Hybrid Soft§ Jackys Business Solutions LLC Lucky Huaguang Graphics Co Ltd Mimaki Europe BV Mutoh Belgium n.v. Nakata USA One Box Vision uv-technik meyer gmbh

Active and intelligent packaging Avery Dennison, Fastener &

Labeling Systems Collano Adhesives AG Complete Inspection Systems Inc. El Empaque+Conversion Gemini TRAZE RFID Pvt Ltd Graphi Mecc srl Grillstone Electronics Technology Kwang Dah Enterprises Co Ltd Lana Papiers Spéciaux II One Box Vision Pap'Argus Paxar Emea HQ PolyIC GmbH & Co. KG Sew Access (Far East) Ltd Shandong Taibao Anti-Counterfeiting Technology Products Co., Ltd Southern Lamps Inc Sun Chemical (Germany) Weifang Donghang Graphic Technology Inc. WRH Global Americas

Adhesives

Maan Engineering BV 3M ACTEGA. Adesivos e Papéis Especiais RR Ltda. Adesivos Ltd Adhesive Technical Services Ltd Advanced Polymers Air Products Polymers, L.P. AM-PG Group Angstrom Technologies Inc API Foils Arets de Mexico artimelt Ashland ATP Adhesive Systems AG Avatack Co Ltd Avery Dennison Bar Graphic Machinery Ltd Basic Adhesives, Inc. BeardowAdams, Inc. Beijing Zodngoc Automatic Technology co.,Ltd Bella Kagit Best Label Enterprise Co Ltd Bluestar Siliconas Bostik Braga Comercio Industria Ltda. Brother Tape Technology Co Ltd CCT (Coating and Converting Technologies) CMC Klebetechnik GmbH Collano Adhesives AG Cork Industries Cromogenia-Units S.A. Crown Van Gelder B.V. Cytec D&K Coating Technologies, Inc. Da Shen Printing Machine Co Ltd Datum Colour Print (Hatfield) Ltd Dow Corning Drytac Dyna-Tech Adhesives, Inc. Dynaloy, Inc ECO Industry USA ECOSYNTHÉTIX Edson International Edward Graphic Emax Label Solutions **EPS Materials** Etiquetas Brasil Ltda Etiquettes Plus Eukalin Spezial Klebstoff Fabrik **GMBH** Expert Stephan Heuser GmbH & Fangda Packaging Co., Ltd. (Hebei, China) Finjetchemical Industries Ltd Flint Group Fluid Ink Technology, Inc. Folex AG Forbo Bonding Systems Franklin Adhesives & Polymers Frimpeks A.S. Fujifilm UK Ltd Fuller, H.B. Company Golden Hontec Laser (Donnguan Hontec Machinery)

H.B. Fuller Europe GmbH Halltech Inc. Henkel Huadi Machinery Co.,Ltd Hurkimsa Kimya San. Icap-Sira Chemicals And Polymers Spa Ichemco s.r.l. IdeOn LLC Innovative Adhesives **Interflex Laser Engravers** International Surface **Technologies** INX International Ink Co. ITW Dynatec Japan Pulp & Paper GmbH Jiaxing Haoneng Packing Co. Ltd K Laser Technology (USA) Co., KCC Corporation Korea Branch of Bluestar Silicones HK Trading Co., Ltd Kyoto International Corporation Lombardi Converting Machinery Mactac MAX International Converters Inc Metagalaxy Industries Co., Ltd. Minus Nine Technologies Mirage Inks Ltd MoistTech Corp. Momentive Performance Materials Nakata USA Nastrificio di Cassano SpA Natural Ink Neptune Tape Co., Ltd. Nicoat Nordson (UK) Ltd Novamelt Novamelt China Nukote International, Inc. Omnova Solutions Inc. Packaging Pro Paragon Inks Ltd Polyonics Precision Die Systems Corp. Premier Coating & Converters Prime UV Systems, Inc. Printech Machinery Trading Canada Printgraph SpA Printum UV Pulse Roll Label Products Ltd Rohm and Haas Rotolificio Pugliese Srl Rowat Inks BV Royal Adhesives and Sealants SaatiPrint S.p.A. Saiden Technologies SATO

Counterfeiting Technology Products Co., Ltd Shanghai Jaour Hot Melt Adhesive Shanghai Jinda Plastic Co., Ltd. Shenzhen Moma Technology Co., Ltd Sojitz Europe Plc Solutia Singapore Pte Ltd Spandex Group Specialty Tapes LLC Spring Coating Systems Squid Inks AG (Ltd.) Strata-Tac Taiwan Regional Association of Adhesive Tape Manufacturers Tech-Melt Adhesives Ltd. Tekra Corporation

tesa

Tex Year Industries Inc. Toyo Ink Arets NV uv-technik meyer gmbh Uvitec Printing Ink, Inc. V. Himark Technology Co Ltd Valco Melton UK VanDerEng BV VPF GmbH & Co. KG Wacker Chemie AG Weifang Donghang Graphic Technology Inc. Wenzhou OuHua Stationery Co Worthen Coated Fabrics Zeller+Gmelin Corp. Zhejiang Hexiang Printing Machinery Co Ltd Zhongshan Shuguan Self-Adhesive Products Co., Ltd

Air-water treatment systems

Ahlbrandt System GmbH CONVERPACK Benelux B.V. DRAABE Humidification ECO Industry USA El Empaque+Conversion Flexo Wash LLC Gerhard Bartling GmbH Co KG Husson Inc. I.S.T. Italia Sistemi Tecnologici S.p.A. International Surface Technologies IRAC Srl Island Clean Air Inc NexGen Enviro Systems Inc Quartz Link Ltd Toc Maquinas Industriales SA uv-technik meyer gmbh



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GROUPE MBC

GSB-Wahl GmbH



Shandong Taibao Anti-



Anilox rolls

Access Printing Solution Agfa Graphics Alphasonics Anilox Laser Technology LTD - ALT Apex International Applied Laser Engineering Ltd. ARC International **BAT Graphics** Benton Graphics Inc. Beta Industries - The Qualilty Control Company BSB Rollers Ltd C.T. Graphic Arts

Cheshire Anilox Technology Ltd Conversource Inc. Convertech Equipment Pvt Ltd

CTS Industries

Daetwyler SwissTec AG (Print) **Dantex**

DELTAPAK B.V. Dynaloy, Inc Edward Graphic El Empaque+Conversion Esterlam International Ltd Eurograv Limited FCT Corporation Flexo Steel Industrial Ltda. **FLXON**

Fuji Shoko Co. Ltd. Harper Corporation of America Harper Graphics GmbH Harris & Bruno International **INOMETA GmbH** Interflex Laser Engravers Laserlife Australia

Mark Andy Max Daetwyler Corporation

Mona Equipments Pamarco Global Graphics

Polygraphica Equipment Ltd Praxair

PrimeBlade Sweden AB Print Systems Printco Industries, LLC

Printech Tools & Technology **Provident**

Quality Discount Press Parts &

Equipment Ràdobla RBCOR, LLC Recyl SAS Rossini

Rotary Technology (Guangzhou)

Co Ltd Rotometal RotoTechnix Sandon Global Sibress Simec Group S.r.l. Swedev AB Tech Sleeves Tech-Cell Ltd TKM Meyer GmbH

TLS Anilox GmbH Tower Products Inc. Troika Systems Ltd Ungricht UV Graphic Technologies Pvt. Ltd. (formerly GTI) Weldon Celloplast Limited Zecher GmbH

Anilox rolls-press cleaning systems

Access Printing Solution Agfa Graphics Alphasonics Anilox Laser Technology LTD - ALT Apex International ARC International Archem S.R.L **BAT Graphics** Beta Industries - The Qualilty Control Company BioBlast Bradley Systems Cheshire Anilox Technology Ltd Conversource Inc. Convertech Equipment Pvt Ltd CTS Industries

D.W. Renzmann Apparatebau GmbH **Dantex** Deco Chem Inc. DELTAPAK B.V. DIP Co. Distribuidora Gráfica Novaro, SA de CV. Doyle Systems (formerlyJE Doyle Co.) Dynaloy, Inc Eaglewood Technologies/Sani-ECO Industry USA Edward Graphic FCT Corporation Flexo Concepts Flexo Wash Flexoclean Engineering **FLEXOCLEANERS** Flexomaid **FNV Machinery** Graphbury Smart Solutions, LLC Gritco Equipment BV Harper Harris & Bruno International

I.S.T. Italia Sistemi Tecnologici

S.p.A. Impregion Cellramic Inglese S.r.l INOMETA GmbH

International Surface Technologies IRAC Srl

Laser Eco Clean Laserclean BV

LBL Enterprises LPP Ltd

Max Daetwyler Corporation Nanovis GmbH

Pamarco Global Graphics

PolymagTek Inc. Printech Tools & Technology ProFlexo Recyl SAS

RGK Video Systems Sandon Global Simec Group S.r.l. Solutions Graphiques Sonic Solutions LLC **Spring Coating Systems** Tech Sleeves

Tech-Cell Ltd TEG TECHNOLOGIES, RESEARCH AND DEVELOPMENT, S.L.

Titan Laboratories TKM Meyer GmbH TLS Anilox GmbH Tower Products Inc. Troika Systems Ltd

Ungricht Weldon Celloplast Limited Zecher GmbH

Archival and filing systems

El Empague+Conversion Graphbury Smart Solutions, LLC Gulf Commercial Group Jalema Filing Systems Railex (Filing) Ltd Sixtrue Srl

Barcode systems

ADVENT AEBO Science Technology Co Ltd Albertina Trading S.R.O. ALS Engineering GmbH ALTECH Srl Altrapack Hungary Kft.

Arca Etichette Spa **ARMOR**

AstroNova ProductIdentification QuickLabel

Atlantic Zeiser Automatic Identification Systems UK Ltd

Autopack Pte Ltd Avery Dennison Axicon Auto ID LLC Barcodeandlabeling.com Best Label Enterprise Co Ltd

Bitek Technology Inc. (anytron) Bluhm Brady

BUSKRO USA Ltd cab Produkttechnik GmbH & Co KG

Canon Finetech Inc.

Carl Ostermann Erben GmbH (COE) CleaningCard.com

CleanTech Cleaning Cards Colordyne Technologies, LLC Complete Inspection Systems Inc.

Computype Currie Group

D Squared Technology Ptd Ltd D.P.R. Labeling, LLC Dakota Integrated Services

Datum Colour Print (Hatfield) Ltd

Digital Print Ltd Dilli

DJM variable data printing

DOMINO Domino Printing Sciences

Doranix **DPS Innovations LLC**

Dropjet Makina Kimya San. Ltd.

EASYLABEL Europa Edwards Label El Empaque+Conversion EMERY WILLED SLU **EMWI Group**

Episcan Etilux Etipack Etisoft Eurocoding EyeC GmbH Felins USA

FFFI Formyflex FRANCIS BUEHLER AG Gainscha International Co LTD General Labels & Labeling (M)

Sdn Bhd Global Vision Inc GODEX

Graphi Mecc srl Graphtech

GSE Dispensing Gulf Commercial Group Gulton Inc.

Hangzhou Todaytec Digital Co., Itd.

Hapa AG

Hu Zhou HengXin Label manufacture Co Ltd Image Computer Systems Impression Technology Americas dba Rapid Label Systems

ImTech Inc. **Inkjet Solutions Limited**

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Herzog + Heymann Konica Minolta Business Solutiona U.S.A. Inc. KPG

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ProFlexo International - Chile
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ROTOCONTROL
Universal Print Partners
VAN ZALINGE Benelux B.V.
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Dynic Féron GmbH & Co. KG Flexcon Europe Ltd FUJIAN TAIXING SPECIAL PAPER CO, LTD GIC (GRAPHIC INTERFACE CONCEPT) GIETZ AG Gombau Group Granwell Products / Polylith Graphi Mecc srl Greenstik Limited Henkel Electronic Materials LLC Hollingsworth & Vose Company Hurkimsa Kimya San. Hutchison Miller Sales Co HuZhou Hengxin Trademark Making Bringing Co Ltd Impresstik Pty Ltd Italstick Self Adhesive Materials & Coatings ITL Group Kimberly-Clark, Technical Paper

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Masterpiece Graphix
Matthias Paper Corporation
Mitsubishi HiTec Paper
Optimum Metallising
Pap'Argus
Papertec Inc
Papeteries du Pont de Claix

Papeteries du Pont de Claix Perez Trading Company Phoenix Packaging/Premier Cuts ProFlexo International Ricoh ROCHEUX INTERNATIONAL Sappi Seibert - PFV

Seibert - PFV
Shenzhen Moma Technology Co.,
Ltd
Shuanglin Texlabel Production Ltd

Sidaplax Smith & McLaurin Ltd Tech Folien Ltd TraceTag International Ltd TRENCILO, S.L. UBIQUE.TAG Universal Print Partners

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Euroto Limited Ferrarini & Benelli srl Fraser Anti Static Techniques Ltd Hamamatsu Photonics Hurletron Inc. KAMMANN Maschinenbau GmbH Kar Ming Industrial Supplies Co I td KERSTEN Elektrostatik GmbH Meech MKS, Ion Industrial Pillar Technologies - An ITW Company Simco (Nederland) B.V. Spengler Electronic AG Svecom

Coating-laminating machines

Tantec A/S

Maan Engineering BV 3M Europe A&M Kinzel Siebdruckmaschinen AB Graphic International Ltd ABBA Roller Adhesive Technical Services Ltd Advanced Machinery NV Afinia Label Alpha Lasertek India Ltd American Ultraviolet Aradiant Beijing Zodngoc Automatic Technology co.,Ltd bielomatik Leuze GmbH + Co. KG **Bobst Manchester Limited** Bostik (Shanghai) Management Co. Ltd Bostik, Inc. Brother Tape Technology Co Ltd C. A. Litzler Co., Inc. Catbridge Machinery ChemInstruments Chemsultants Coatema Coating Machinery GmbH Contiweb CONVERPACK Benelux B.V.

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E-Max Ehret Control GmbH Esterlam International Ltd ETI Converting Equipment



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Eurograv Limited FAES AG Faustel, Inc. Ferrostaal AG Fuji Shoko Co. Ltd. Futec Europe GmbH Global Graphic Equipment Ltd Graphtec Corporation Hannecard NV Heat Technologies Inc. HIP-Mitsu s.r.l. Hunkeler AG Hurkimsa Kimya San. INOMETA GmbH Interactive Inks & Coatings Interface Srl ITW Dynatec Karlville Development LLC Kompac Technologies Kongskilde Industries A/S KROENERT Kwang Dah Enterprises Co Ltd Label Industry Consultants (& Machinery) Ltd Lohmann GmbH & Co KG Maan Engineering B.V. MacDermid Graphics Solutions Markem-Imaje CSAT GmbH Megtec Systems Metagalaxy Industries Co., Ltd. Mühlbauer Nakata USA NDC Spray Coating System Fabricating Co., Ltd. Nordmeccanica Nordson Engineering GmbH Novaflex Inc / DCM Group Nukote International, Inc. Pagendarm BTT GmbH Pasquini & Kromer GmbH PCM Image-Tek Pelikan Hardcopy Scotland Ltd Perez Trading Company Pillar Technologies - An ITW Company Polytype America Corp Precision Die Systems Corp. Preco, Inc. Printco Industries, LLC Printum **Process Sensors Corporation** ProFlexo International Ravenwood Packaging Ltd Rayven, Inc Retroflex Inc. RK Siebdrucktechnik GmBH Rotomec - Bobst Group Italia S.p.A. (Bobst Group) SaatiPrint S.p.A. Shantou Yiming Holotech Machine Co Ltd Sijoal - Sociedade de Representacoes e Comercio Soma Engineering Southern Lamps Inc. Spandex Group Summa Tec Lighting, Inc. thelamco, inc.

TKM Meyer GmbH Tresu A/S TRESU Group Trojan Color Systems Ungricht UniNet UTECO NORTH AMERICA INC. UV Graphic Technologies Pvt. Ltd. (formerly GTI) Uvitec Printing Ink, Inc. V. Himark Technology Vacmet Packagings (India) Pvt Ltd Valco Melton ÜK VAN ZALINGE Benelux B.V. Werosys ApS Zeller+Gmelin UK

Coatings and varnishes

Applied Rigaku Technologies, Inc. Ashland Braden Sutphin Ink Dunmore Dyna-Tech Adhesives, Inc. Edson International Frimpeks A.S. GCC Europe BV Harper Corporation of America Interflex Laser Engravers Kompac Technologies Konica Minolta Business Solutiona U.S.A. Inc.

Michelman

Natural Ink Nazdar Ink Techologies Nicoat Precision Die Systems Corp. Premier Coating & Converters Prime UV Systems, Inc. Pulse Roll Label Products Ltd Siegwerk Environmental Inks Wikoff Color Corporation Zecher GmbH Zhejiang Ouli Digital Inkjet Materials Co Ltd

Coding and marking

MLT - Micro Laser Technology GmbH A&M Kinzel Siebdruckmaschinen AEBO Science Technology Co Ltd Amica Systems (Europe) B.V. ARMOR AstroNova ProductIdentification QuickLabel

Axicon Auto ID LLC Berkeley Machinery bielomátik Leuze GmbH + Co. KG cab Produkttechnik GmbH & Co KG Computype Datacon Technology Digital Print, Inc. DOMINO Domino Printing Sciences DPS Innovations LLC Dropjet Makina Kimya San. Ltd.

Erhardt & Leimer, Inc. FRANCIS BUEHLER AG Graphi Mecc srl Hapa AG IIMAK **Inkjet Solutions Limited** Interactive Coding Equipment **İTW** Foils BV Jiaozuo Zhuorim Digital Material Coltd Kasha Ribbon KBA-MePrint AG Kirk-Rudy, Inc. Lemmaco Kft m print morlock gmbh co. kg Markem-Imaje CSAT GmbH Mimaki Europe BV Multifeeder Technology Inc Mutoh Belgium n.v. Nazdar Ink Techologies Novation, Inc. Palmetto Imaging Technology, HC PDC International Corporation Printing Technology Services, Inc. Prototype & Production Systems, Inc./ DICE Graphic Technologies Provident

Rea Jet REA JET GmbH Reconcile Engineering Ltd. Ricoh Ryeco Sermar Machines Srl Shandong New Beiyang Information Technology Co., Ltd. Shanghai Realtac Trading

Sixtrue Srl StarTrack Europe v.o.f.

Company Ltd

tesa

DSE

Dynic UK Ltd

Test Supplier | Enhanced Thermal Printer Support Ltd Thermal Transfer Solutions Ltd Thiele Technologies Transfer Trade s.r.l. TTR Euroworks BV Typerite Union Chemicar Europe VAN DEN BERGH Consulting bvba VanDerEng BV Vellerino Sdi VIP Color Voyantic Ltd Xinxiang Fineray Technology Ltd

Cold foiling

API Foils Bar Graphic Machinery Ltd Continental Datalabel Currie Group Da Shen Printing Machine Co Ltd DG Press **DIAVY SRL**

Digital Print, Inc. DOMINO Domino Printing Sciences Dragon Foils Limited Edson International Far East Yu La Industry Limited FUJIAN TAIXING SPECIAL PAPER CO, LTD Griff Paper and Film Heidelberger Druckmaschinen AG Infinity Foils, Inc- UEI Group Company ITW Foils K Laser Technology (USA) Co., Ltd. KBA Latina KURZ, LEONHARD, Stiftung & Co. KG I C Trade Label Industry Consultants (& Machinery) Ltd Lemmaco Kft MGI Minus Nine Technologies MPS Systems B.V. Multitec Aids Pvt Ltd Nicoat Pack Vision BV Shandong Taibao Anti-Counterfeiting Technology Products Co., Ltd Starfoil Technology Netherlands hν Tangshan Wanjie Europe Telstar Engineering Inc. Test Supplier | Enhanced

Toyo Ink Arets NV TTR Euroworks BV Typerite **UEI** Falcontec Univacco Foils Corporation VAN DEN BERGH Consulting byba

Werosys ApS Zhejiang Zhongjia Technology Co Ltd

Color management and control

All Printing Resources Amica Systems (Europe) B.V. Anilox Laser Technology LTD - ALT Athena Graphics Beta Industries - The Qualilty Control Company Bitek Technology Inc. (anytron) Braden Sutphin Ink

BST eltromat International

CC1, INC CGS Publishing Technologies International, LLC Color Management Group (CMG) Color Resolutions International, LLC Color-Logic Inc Color-Tec

Continental Datalabel CT Graphic Arts DALIM SOFTWARE GmbH





Comercial Arque







www.daco-solutions.com

Titan Laboratories

Datum Colour Print (Hatfield) Ltd Decosystem SRL DELTAPAK B.V. Distribuidora Gráfica Novaro, SA de CV. Dropjet Makina Kimya San. Ltd. **DVS Quality Solutions Limited** FFI eltromat GmbH Fag Graphic Systems SA FFFI Flexoclean Engineering Flint Group Four Pees Fuiifilm Global Graphics Software **GMG** Americas Goss International management and control All Printing Resources Amica Systems (Europe) B.V. Anilox Laser Technology LTD - ALT Athena Graphics **AVT** Beta Industries - The Qualilty Control Company Bitek Technology Inc. (anytron) Braden Sutphin Ink **BST eltromat International** CC1. INC CGS Publishing Technologies International, LLC Color Management Group (CMG) Color Resolutions International, II C Color-Logic Inc Color-Tec Continental Datalabel CT Graphic Arts DALIM SOFTWARE GmbH Datum Colour Print (Hatfield) Ltd Decosystem SRL DELTAPAK B.V. Distribuidora Gráfica Novaro, SA de CV Dropjet Makina Kimya San. Ltd. DVS Quality Solutions Limited FFI eltromat GmbH Esko

Hamamatsu Photonics Hamillroad Software Ltd Harper Corporation of America Heidelberger Druckmaschinen AG Hybrid Software **IGT** Testing Systems Innolutions, Inc Interactive Inks & Coatings INX International Ink Co. ISRA Vision AG JUST Normlicht GmbH Konica Minolta Business Solutiona U.S.A. Inc. Lake Image Systems Ltd Luminite Products Corp. Memjet Labels Mimaki Europe BV Monarch Color Corp. Nicewear International, LLC Nikka Research Deutschland **GmbH** Norcote Paragon Inks Ltd PC Industries Perfecto Web-Control Pvt Ltd Print Proof Solutions B.V. **Print Systems** Printum UV Q.I. Press Controls QIPC-EAE Americas OuadTech Rena, a Neopost Brand **RK Print Coat Instruments Ltd** Roland DG Sandon Global Selectra Srl Sibress Siegwerk Environmental Inks Siegwerk USA Co SPEC, Inc

Techkon GmbH Techkon USA Tecmec Iberica Tectonic International Ltd Test Supplier | Enhanced Tresu A/S TRESU Group Trinity Graphic USA Inc Trojan Color Systems Trojanlabel Vale-Tech Ltd Wasatch Computer Technology, LLC Wikoff Color Corporation X-Rite Xeikon

Sun Chemical

Color proofing equipment

Zeller+Gmelin UK

Agfa Graphics Anilox Laser Technology LTD - ALT Beta Industries - The Quality Control Company CGS Publishing Technologies International, LLC Collomix GmbH

CT Graphic Arts DALIM SOFTWARE GmbH Dantex

Datum Colour Print (Hatfield) Ltd Distribuidora Gráfica Novaro, SA **Douthitt Corporation** Eastman Kodak Company eltromat GmbH

Episcan Epson Europe EyeC GmbH Fag Graphic Systems SA

FFFI

Foster Manufacturing Company Fujifilm North America Corporation

Fujifilm UK Ltd Global Graphics Software Global Vision Inc Grafikontrol North America GretagMacbeth AG GSE Dispensing

GTI GmbH Hamillroad Software Ltd Harper Corporation of America Harper Graphics GmbH

HP Indigo **IGT Testing Systems** ISRA Vision Parsytec JM Heaford Ltd JUST Normlicht GmbH Kodak SA/NV Lake Image Systems Ltd

Laserlife Australia Mimaki Europe BV Mutoh Belgium n.v. One Box Vision **PC Industries**

Perfect Proofer by Integrity Engineering Print Proof Solutions B.V. Proveedora Flexografica

Q.I. Press Controls **QIPC-EAE** Americas QuadTech RBCOR, LLC

RK Print Coat Instruments Ltd

Sigrist Engineering AG Techkon GmbH Testing Machines Inc.. Thwing Albert Instrument Company Vale-Tech Ltd X-Rite Xante **Xpedx**

Cores and core cutters

Adolf Brodbeck Maschinenbau GmbH &Co. KG Aghili Drucktechnik Apexrototech Industries Appleton MFG Div., Productive Solutions, Inc. Appleton Mfg. Division Blower Application Company Buycores.com by The Newark

Core Systems International Dienes Werke für Maschinenteile GmbH & Co. KG DI's Core Double E Company Double H Plastics DSF FM2 **EMT** International Formyflex Grafisk Maskinfabrik Grafotronic AB GRINCOURT Guidolin Girotto S.R.L. Han Yang Industries Heartland Products Group Holtby Williams International Jurmet Sp. z.o.o. Sp.K. Label Industry Consultants (&

Machinery) Ltd Lemu Talleres SA

Lemorau

Nagel Paper Ox Paper Tube & Core Inc Parkland International PGI TECHNOLOGIES PVT. LTD Precision AirConvey Corp Schlumpf AG SRC Systems Limited Starfoil Technology Netherlands bν

TGW International Inc. Wasberger Label Equipment Western Container Corporation Yazoo Mills, Inc.

Corona and flame treaters

Advanced Machinery NV AFS Entwicklungs und Vertriebs Ahlbrandt System GmbH Arcotec GmbH **Boussey Control Europe** Corona Supplies Ltd Corotec Corporation DELTAPAK B.V. Dyne Technology Ltd **Enercon Industries Corporation** Engineered Metals Corporation Ferrarini & Benelli srl Grafikontrol North America Graphbury Smart Solutions, LLC Hamamatsu Photonics IEEC - PBJ Industrial Electronic Pvt Ltd IEEC POWER ELECTRONICS PVT. LTD Jemmco, LLC Kar Ming Industrial Supplies Co Ltd Kompac Technologies



Compose System Ltd



Fag Graphic Systems SA

Flexoclean Engineering

Global Graphics Software

Grafikontrol North America Graphbury Smart Solutions, LLC Graphics Microsystems Inc

GTI Graphic Technology, Inc.

FFĚI

Flint Group

Four Pees

GMG Americas

Goss International

GretagMacbeth AG

GSB-Wahl GmbH

GSE Dispensing

GTI GmbH

Fujifilm



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Martignoni Elettrotecnica Srl

Pillar Technologies - An ITW

Proact Converting Equipment

Pillar Technologies - A Division of

Nakata USA

ITW, Inc.

Company

www.bobst.com

www.durst-group.com

Rycobel NV Sherman Treaters SOA INTERNATIONAL, LLC SOFTAL Corona & Plasma GmbH Sohnrey Industrietechnik SPDI Inc Tantec A/S Tantec Inc. Union Chemicar Europe UV Process Supply, Inc. Vetaphone Weldon Celloplast Limited

Cutting/stamping machines MLT - Micro Laser Technology

A&M Kinzel Siebdruckmaschinen AB Graphic Affordable Automation Afinia Aghili Drucktechnik Allen Datagraph Systems, Inc. ALS Engineering GmbH Arpeco Beijing Zodngoc Automatic Technology co.,Ltd

Blumer Maschinenbau AG **BOGRAMA AG** Carltek Industries (Taiwan) Corp. Cartes S.r.l. Catbridge Machinery CMC Klebetechnik GmbH Comercial Arquè, S.A.

Contech

Berhalter AG

GmbH

Contiweb Creative Machinery & Technologies Ents. **Daco Solutions Ltd** Datum Colour Print (Hatfield) Ltd **DCM USIMECA**

Delta ModTech DG Press Dienes Werke für Maschinenteile GmbH & Co. KG **Dorey Converting Systems** E.C.H. Will Gmbh Edale Ltd

Emmendinger Maschinenbau GmbH **EMT** International **Epilog Laser**

Esko Expert Stephan Heuser GmbH &

Co. KG **FAES AG**

FLEXOR (EMIS) Ltd FRESCHI ITALIÁ S.R.L. Future Pack / KOREA Gannicott Limited GIC (GRAPHIC INTERFACE CONCEPT) **GIETZ AG**

Gold Fai Machinery Golden Hontec Laser (Donnguan Hontec Machinery) Grafotronic AB

Graphtec Corporation Guidolin Girotto S.R.L. Hans-Gronhi Graphic Technology Company Limited Helios Elio Cavagna srl

Herzog + Heymann Holtby Williams International Holweg-Weber

Huadi Machinery Co.,Ltd Hunkeler AG

Infinity Foils, Inc- UEI Group Company

Jiaozuo Žhuorim Digital Material Co Ltd

Jurmet Sp. z.o.o. Sp.K. Karlville Development KBA Latina Kocher + Beck GmbH + Co.

Rotationsstanztechnik KG Komori-Chambon Kugler-Womako GmbH

Kumar Labels Label Industry Consultants (& Machinery) Ltd

Lieben Dies Link Label Machinery Co Ltd Lombardi Converting Machinery

Lutz GmbH & Co. KG m print morlock gmbh co. kg MBO America

Meccanica Maggiore

MELZER maschinenbau GmbH

Mühlbauer New Solution S.A. Newart Ltd Packers

PCM Image-Tek PGI TECHNOLOGIES PVT. LTD

Polar-Mohr

Precise Graphic India Pvt Ltd Preco, Inc.

Printum GmbH Prisma Srl ProFlexo International Rapid Label Systems Rietstack

Rollem USA Rosas GmbH ROTOCONTROL Rotoflex

Ruian Jingda Printing Machinery Co Ltd

Sam Meccanica Srl SANJO Semi-rotary Presses Schober USA, Inc.

Schobertechnologies GmbH

SEI Laser Serame

Shantou Yiming Holotech Machine Co Ltd SMAG (SRAMAG SAS)

Sohn Mfg Soma Engineering Spartanics

Spilker GmbH

SRC Systems Limited Starfoil Technology Netherlands

STOMA GmbH Summa Summa, Inc.

Suntech & Ko LLC Tangshan Wanjie Europe Thomson National Press Co Trojan Color Systems Trojanlabel

Unigraphica AG Universal Engraving, Inc.- UEI Group Company VAN ZALINGE Benelux B.V. WEIGANG Machinery

Werosys ApS Wink Stanzwerkzeuge GmbH & Co. KG

Xiamen Delish Automation Equipment Co., Ltd Zhongshan Shuguan Self-Adhesive Products Co., Ltd

Cylinders, printing and magnetic

Action Rotary Die, Inc. Anilox Laser Technology LTD - ALT Apple Die Applied Laser Engineering Ltd. **BAT** Graphics Bunting Magnetics Co. Conversource Inc. DELTAPAK B.V. Electro Optic

ESON CZ s.r.o. Form-und Stanztechnik GmbH Gallus Ferd, Rüesch AG Gardall Manufacturing

Corporation General Metal Engraving Hell Gravure Systems GmbH & Co. KG

Holfeld Tool & Die Ltd Interflex Laser Engravers Kocher + Beck Kris Flexipacks PVt Ltd LARTEC - Flexible Dies Lederle Machine Company Luminite Products Corp. New Solution S.A. Nu Tech Coatings, LLC PGI TECHNOLOGIES PVT. LTD Platingtech Beschichtung GmbH Precise Graphic India Pvt Ltd ProFlexo International Reel To Reel International Ltd Rollem USA Rossini UK Ltd Rotary Die Company Sp. z o.o. Rotary Technology (Guangzhou) Co Ltd

Rotometal RotoMetrics RotoTechnix

Sinkotech Spilker GmbH

Suron A.C.A. Ltd. Svecom Synthogra TD Wright Inc Tech Sleeves TKM Meyer GmbH Universal Engraving, Inc.- UEI Group Company

UV Graphic Technologies Pvt. Ltd. (formerly GTI) Weldon Celloplast Limited Wilson Manufacturing Co. Wink Stanzwerkzeuge GmbH & Co. KG Zecher GmbH

Data processing services

Athena Graphics **BEL Computer Systems**

Bitek Technology Inc. (anytron) CHILI Publish

Hybrid Software ISRA Vision Parsytec Nikka Research Deutschland GmbH

One Box Vision SoftSolutions. Inc. theurer.com TLS Anilox GmbH X-Rite Europe GmbH

Desktop printers

A&M Kinzel Siebdruckmaschinen **ADVENT** AEBO Science Technology Co Ltd

Afinia AstroNova ProductIdentification

QuickLabel Atlantic Zeiser

Atwell Self-Adhesive Labellers Automatic Identification Systems UK Ltd

Bitek Technology Inc. (anytron) Brady

cab Karlsruhe GmbH & Co KG Canon Finetech Inc.

CleaningCard.com CleanTech Cleaning Cards Colordyne Technologies, LLC

Computype Crest Solutions D.P.R. Labeling, LLC Dakota Integrated Services Digital Print Ltd

DJM variable data printing Dropjet Makina Kimya San. Ltd. Sti

DuraFast Label Company **Durafos Inc EMERY WILLED SLU**

EMWI Group Epson Fujifilm North America

Corporation Gainscha International Co LTD **GODEX**

Godex International Americas **Graphic Marking Systems** Graphtec Corporation

Gulf Commercial Group Gulton Inc. Hu Zhou HengXin Label

manufacture Co Ltd **Image Computer Systems**

Impression Technology Europe



www.silicones.elkem.com



www.focuslabel.com





ImTech Inc.

Inkjet Solutions Limited

ITL Group ITW Thermal Films UK Iwatsu Electric Co Ltd

KICTeam

Leadman Technology (Astro-Med-QLS System, Asia)

M Print LLC MainStream LLC Mastercorp Group Matan Digital Printers

Memjet Labels Microplex Mimaki

Modi Paper & Label Systems Mutoh Belgium n.v.

NeuraLabel Printing Solutions OKI Europe Ltd

Palmetto Imaging Technology,

Paul Leibinger GmbH & Co. KG Paxar/Avery Dennison Positive ID Labelling Systems

Primera Technology, Inc. Print On Labels PRISYM ID Limited

Prototype & Production Systems, Inc./ DICE Graphic Technologies

QuickLabel Systems Rebo Bv

Rena, a Neopost Brand

Roland DG Rti Digital S.S.I, Inc Screen USA Seagull Scientific

Shandong New Beiyang Information Technology Co., Ltd. Simple Solutions and Innovations Inc

Sovereign Labelling Systems Ltd Spandex Group

Stratix Corporation

Summa Summa, Inc.

Systems Print Media Ltd Tanto Labels

Test Supplier | Enhanced Tharo Systems, Inc.

Thermal Printer Services Ltd Thermal Transfer Solutions Ltd Transfer Trade s.r.l.

Union Chemicar Europe VIP Color

Zebra Technologies Europe

Dies and tooling (rotary and flatbed)

Action Rotary Die, Inc. Affordable Automation Anderson Europe GmbH Apple Die Atlas Die Atlas Die LLC Berhalter AG

Best Cutting Die



www.icapsira.com

Blumer Maschinenbau AG Brenna Srl Bunting Magnetics Co.

Central Ink Corporation CONVERPACK Benelux B.V. David K. Hart Company De Rossi Vittoriano S.r.l.

DELTAPAK B.V. Diehard Dies Pvt Ltd

Dienes Werke für Maschinenteile GmbH & Co. KG

DMS, INC.

Drohmann GmbH Easycut DSF

Durafos Inc

Ehret Control GmbH Electro Optic (Asia) Pvt. Ltd. Electro Optic US

Electro Optic Werkzeugtechnik

GmbH Emmendinger Maschinenbau

GmbH EMT International ESON CZ s.r.o.

Flexo Label Advantage Group LLC

Form-und Stanztechnik GmbH FST GmbH

Gannicott Limited Gardall Manufacturing Corporation

General Metal Engraving Glunz & Jensen GRINCOURT

Holfeld Tool & Die Ltd

Kar Ming Industrial Supplies Co Ltd

Karl Marbach GmbH & Co. KG Kocher + Beck GmbH + Co. Rotationsstanztechnik KG

Kocher+Beck USA, L.P. Komori-Chambon

KURZ, LEONHARD, Stiftung & Co. KG LARTEC - Flexible Dies

Lederle Machine Company Lemu Talleres SA

Lieben Dies

Madern Meaden Precision Machined **Products**

Midway Rotary Die Solutions

Neryos SAS Newart Ltd **Packers**

Polar-Mohr

Precise Graphic India Pvt Ltd Printing Machinery Company (PMC)

Printum UV Pro-Cut Dies Ltd ProFlexo International Quadrel Labeling Systems RM (Rotary) Services Ltd Rold Gmbh

Rollem USA Rotary Die Company Sp. z o.o. Rotary Technology (Guangzhou) Co Ltd

Rotometal Focus Label Machinery Ltd FRANCIS BUEHLER AG RotoMetrics RotoTechnix Fujifilm North America

Schober Simonds/Notting Steel Rule Division

Sinkotech

Sohn Mfg Specialised Perforating Services

Spilker GmbH

Stamfag STOMA GmbH Suron A.C.A. Ltd. TD Wright Inc TECHNI FORM

Techniform

Tools & Production Inc. UFI Falcontec

UEI Falcontec - Switzerland

Universal Engraving, Inc.- UEI Group Company

UV Graphic Technologies Pvt. Ltd. (formerly GTI) W&D Machinery Co., Inc.

Wilson Manufacturing Co. Wink Stanzwerkzeuge GmbH & Co. KG

Digital converting

equipment AB Graphic

Afinia Allen Datagraph Systems, Inc. ALS Engineering GmbH

Ashe Converting Equipment

AzTech Converting Systems B. Bunch Company, Inc. Bar Graphic Machinery Ltd BOGRAMA AG Brady Brotech Graphics Co., Ltd

Carl Ostermann Erben GmbH (COE) Cartes S.r.l.

Colordyne Technologies, LLC COMPONEX INC Continental Datalabel

Contiweb

CONVERPACK Benelux B.V. Converting Equipment International inc Converting Equipment Intl. Corona Supplies Ltd

CSAT Currie Group D.P.R. Labeling, LLC D.P.R. S.r.L.

Daco Solutions Ltd

DALIM SOFTWARE GmbH Delta ModTech DG Press Dilli Distribuidora Gráfica Novaro, SA

de CV. **Dorey Converting Systems** EMT International

www.industrialij.com

Episcan FFEI

FlexoExport Ltd FLEXOR (EMIS) Ltd

Corporation GIC (GRAPHIC INTERFACE

CONCEPT) Golden Hontec Laser (Donnguan

Hontec Machinery) Gonderflex International Inc Graficon Maschinenbau AG

Grafisk Maskinfabrik Grafotronic AB Heraeus Noblelight LLC

Herzog + Heymann

HP Indigo Hybrid Software

Impression Technology Europe International Financial Services J&J Converting Machinery Karlville Development LLC

Konica Minolta Business Solutiona U.S.A. Inc.

Kumar Labels Label Industry Consultants (&

Machinery) Ltd Labeltech LasX Industries, Inc.

l emorau LeoMat GmbH LPP Ltd

LTHD

Maxcess International MBO America Mida Maquinaria Monotech Systems Ltd

MPS Systems B.V.

Neryos SAS **Newfoil Machines Limited**

OKI Europe Ltd ORTHOTEC, WAN AN PRECISE MACHINERY WORKS CO., LTD.

Perez Trading Company PGI TECHNÖLOGIES PVT. LTD

Preco, Inc. Printum GmbH ProFlexo International Rapid Label Systems Rapid Machinery Company Reel To Reel International Ltd

Rietstack Rollem USA Rosas GmbH **ROTOCONTROL** Rotoflex

SEI Laser Sigrist Engineering AG SMAG (SRAMAG SAS)

Sohn Mfg Spartanics Sunbelt Sales & Marketing Associates, Inc.

Tec Lighting, Inc. Telstar Engineering Inc. Test Supplier | Enhanced Trojan Color Systems

UV Ray S.r.l VALLOY/ANYTRON

VAN DEN BERGH Consulting

VAN ZALINGE Benelux B.V.



www.inkjetsolutions.co.uk

Werosys ApS Xeikon

Digital presses

A&M Kinzel Siebdruckmaschinen AAA Press International, Inc. adphos Digital Printing GmbH Afinia All Printing Resources

Allen Datagraph Systems, Inc. ALS Engineering GmbH Amica Systems (Europe) B.V. Anderson & Vreeland, Inc.

AstroNova ProductIdentification QuickLabel

Atlantic Zeiser Atlantic Zeiser Inc. BE-MA Editrice Srl

Bitek Technology Inc. (anytron) Bluhm

Brady BTS Industries (S) Pte Ltd BUSKRO USA Ltd Canon Finetech Inc. Carl Ostermann Erben GmbH Cerm Business Management

Software Chromos AG

Color-Logic Inc Colordyne Technologies, LLC COMPONEX INC

Continental Datalabel Convertec Graphic Technics AB **CSAT**

Currie Group DPR

Daco Solutions Ltd

Dantex

Data Label Datum Colour Print (Hatfield) Ltd DG Press

Digital Print DIĽLI

Dimuken (GB) Ltd Discount Labels

Distribuidora Gráfica Novaro, SA de CV.

DJM variable data printing DOMINO

Domino Printing Sciences DPL Industri A/S **DPS Innovations LLC**

Dropjet Makina Kimya San. Ltd.

DuraFast Label Company **Durafos Inc**

Durst

Edale Ltd EFI

Electro Optic Werkzeugtechnik **GmbH**

Epson

Excelerate® by Lumen Dynamics Fellinger Industrieelektronik GmbH

Ferrostaal AG **FFEI**

Flexo Label Advantage Group LLC (FLAG)

FlexoExport Ltd

Focus Label Machinery Ltd

Fuji Copian (UK) Ltd Fujifilm North Ámerica

Corporation Division

Fusion UV Systems Inc. Futec Europe GmbH

Gallus Ferd. Rüesch AG

GB Flexo Equipment GCC Europe BV GIC (GRAPHIC INTERFACE

CONCEPT) Golden Hontec Laser (Donnguan Hontec Machinery)

Graficon Maschinenbau AG

Graphi Mecc srl Graphic Marking Systems

Graphic Sciences Inc. Graphtec Corporation Greenstik

GTI Graphic Technology, Inc. Gulf Commercial Group

Hapa AG HC Miller Press

Heidelberger Druckmaschinen AG

Hewlett Packard HLT bv

Hoya Candeo Optronics Corp. HP Indigo

Impika Impress BV

Impression Technology Americas dba Rapid Label Systems Impression Technology Europe

ImTech Inc. Industrial Inkjet

Inglese S.r.l

Inkjet Solutions Limited

Intec Printing Solutions International Financial Services INX International Ink Co.

IPT Digital iSys Label ITL Group

Iwatsu Electric Co Ltd J. F. Machines Ltd. JH Davenport and Sons Ltd.

Kammann Machines Inc.

KBA Latina Kodak Konica Minolta

KPG Label Industry Consultants (& Machinery) Ltd

Label Pack Leadman Technology (Astro-Med-QLS System, Asia)

LINTEC Corporation Lucky Huaguang Graphics Co Ltd M Print LLC

m print morlock gmbh co. kg MainStream LLC

Mark Andy

Markem-Imaje CSAT GmbH Matan Digital Printers MCS. Inc.

Memjet Labels

Mercian Labels Ltd

MGI

Michelman Mimaki

Miyakoshi Printing Machinery.,

Co. Ltd.

Modi Paper & Label Systems Monotech Systems Ltd

MPS Systems B.V.

Mutoh Belgium n.v. Nadco Tapes & Labels, Inc

Neryos SAS New Solution S.A.

Newfoil Machines Limited

Nilpeter NuCoat Inc OKI

Omet Srl One Solution SA

Paul Leibinger GmbH & Co. KG

PCM Image-Tek

Pillar Technologies - An ITW

Company Primera .

Printing Technology Services, Inc. Printum GmbH

Propyplast Punch Graphix QuickLabel Systems Rapid Label Systems

Rapid Machinery Company Rena, a Neopost Brand Repacorp, Inc.

Rochester Institute of Technology Roland

Rti Digital S&K LABEL spol. s r.o.

Sanjo Machine Works Ltd Screen Europe

Screen USA

Sensient Imaging Technologies SA Shandong Taibao Anti-

Counterfeiting Technology Products Co., Ltd SHIKI MACHINE SUPPLY CORP.

Spandex Group **SPGPrints**

Stork Prints America, Inc. Styers Equipment Company Summa

Sun Chemical Suntech & Ko LLC Super Web Digital Suron A.C.A. Ltd. TCS Technologies

Tec Lighting, Inc. TEC-IT Datenverarbeitung GmbH

Test Supplier | Enhanced Tollgate Labels Toshiba Tec Corporation

Trojan Color Systems Trojanlabel

UniNet Universal Print Partners UTECO NORTH AMERICA INC.

VAN ZALINGE Benelux B.V. **VIP Color**

Weber

Weifang Donghang Graphic Technology Inc.

Werosys ApS Xaar Americas Xaar PI C Xante Corporation Xeikon

YINHUA Printing Technology Co..Ltd

Doctor blades

Agfa Graphics Allison Systems Corporation Conversource Inc. CT Graphic Arts Flexo Concepts FI XON **HC Miller Press** JV Imaging Solutions, Inc PrimeBlade Sweden AB Provident Quality Discount Press Parts & Equipment Retroflex Inc.

Dome labeling-doming machines

A&M Kinzel Siebdruckmaschinen Chemque, Inc. Color-Dec Cytec Industries Inc. Demak Development Associates Inc. DomeLabels Dometag Euro Drop S.A.S. Hydome Inc Morgan Design Group RDS/Acuflow Inc Sheepscot Machine Works Sonachim

Drive and control systems

A&M Kinzel Siebdruckmaschinen Altec Vision Equipment Baumüller Benelux BV Bosch Rexroth

BST

CC1, INC Cleveland Motion Controls

CMC Controls Comptrol, Inc. Davis-Standard, LLC

DieQua Corp.
Dover Flexo Electronics, Inc. eltromat GmbH FMS USA, Inc.

Focus Label Machinery Lake Image Systems, Inc. Mach III Clutch Inc MAGPOWR

Mainplate Controls MERÖBEL

Parkland International Pillar Technologies - An ITW Company

Polytype America Corp Process Sensors (Europe) Limited Q.I. Press Controls









QIPC-EAE Americas

Re S.p.a. Controlli Industriali

S-two GmbH Selectra Srl SensoTec GmbH SRC Systems Limited Tandler Zahnrad und Getriebefabrik GmbH & Co. KG Test Supplier | Enhanced Valmet

Engraving machinery

Anderson Europe GmbH

D.P.R. Epilog Laser Flexoclean Engineering GCC Europe BV Hans-Gronhi Graphic Technology Company Limited Hell Gravure Systems GmbH & Co. KG Inglese S.r.l LANG GmbH & Co. KG **SPGPrints** Stork Prints America, Inc. Trotec Universal Engraving, Inc.- UEI Group Company Universal Laser Systems, Inc.

Fabric label materials

AstroNova ProductIdentification QuickLabel Avery Dennison B-Core Incorporation Best Label Enterprise Co Ltd Budaval AG

Colour Ribbons Ltd Comercial Arquè, S.A. Dunmore DuPont México, S. A. de C.V. Dynic **Emax Label Solutions** Etiquetas Adesivas Ltd FFFI Folien Fischer AG Hollingsworth & Vose Company HuZhou Hengxin Trademark Making Bringing Co Ltd Huzhou Kingdom Coating Industry Co.,Ltd. Huzhou Siny Label material Co., Ltd

Icap-Sira Chemicals And Polymers Spa

Italstick Self Adhesive Materials & Coatings ITD S.r.l ITL Group Itochu Deutschland GmbH ITW Foils BV Kasha Ribbon Leviteks Ltd. Sti. Manuli Film Spa Metagalaxy Industries Co., Ltd. Mimaki Europe BV MultiSTiQ International Coating

B.V. NAM SING RIBBON (H.K.) LTD.

Nastrificio di Cassano SpÁ Nukote International, Inc. Paper Resources, Inc. Paxar/Avery Dennison Premier Coating & Converters Ritrama Roll Cover Italiana S.r.L Rolling Optics Rotolificio Pugliese Srl Rotulo Ltd Ruian Jingda Printing Machinery Coltd Sanyo Corporation of America Shanghai Realtac Trading Company Ltd Shuanglin Texlabel Production Ltd Thermo Code System Thiollier

Fabric label presses

Worthen Coated Fabrics

Transfer Trade s.r.l.

TTR Euroworks BV

VanDerEng BV

A&M Kinzel Siebdruckmaschinen Carlisle Bros Esterlam International Ltd Focus Label Machinery Ltd Grafische Systeme Volker Schischke GRAPHIMAT -LABELPACKMACHINE Huzhou Unifull Label Fabric Co., Iakob Müller AG Label Pack Label Planet Pvt. Ltd. MALBATE MELZER maschinenbau GmbH

NAM SING RIBBON (H.K.) LTD. Pillar Technologies - An ITW

Company ProFlexo International Ruian Jingda Printing Machinery Co Ltd

Shun Hing Trade Mark Fty. Ltd. Topack Maquinaria S.L.

Finishing equipment, slitters and rewinders

A&M Kinzel Siebdruckmaschinen AB Graphic

Accraply

Advance Graphics Equipment Afinia Afinia Label Aghili Drucktechnik ALS Engineering GmbH Apexrototech Industries Ashe Converting Equipment AzTech Converting Systems B. Bunch Co Bandall International

Bar Graphic Machinery Ltd

Beijing Zodngoc Automatic Technology co.,Ltd Berkeley Machinery Berra s.r.l bielomatik Bitek Technology Inc. (anytron)

Blower Application Company Blumer Maschinenbau AG **BOGRAMA AG** Brotech Graphics Co., Ltd

BW Bielomatik C. A. Litzler Co., Inc. Carltek Industries (Taiwan) Corp. Catbridge Machinery

Colordyne Technologies, LLC COMPONEX INC Contech

Contiweb

Controls Engineering CONVERPACK Benelux B.V. Converting Equipment International Creative Machinery & Technologies Ents. CTC International, Inc. D&K Coating Technologies, Inc D.P.R.

Daco Solutions Ltd Dantex

Datacon Technology Daven Industries

DCM

De Rossi Vittoriano S.r.l. Deacro Industries Ltd. Delta ModTech DG Press Dienes Werke für Maschinenteile GmbH & Co. KG Dorey Converting Systems DRI-TEC UNLIMITED LLC DSE

DuraFast Label Company E.C.H. Will Gmbh Ehret Control GmbH Electro Optic Werkzeugtechnik GmbH

EMT International

Enprom Esko

ETI Converting Equipment Etlon Corporation **EUROMAC**

Expert Stephan Heuser GmbH &

Co. KG FAES AG Faustel, Inc. Fellinger Industrieelektronik

Flexo-Printing Equipment Corp. Focus Label Machinery Ltd

Fortisblades G&K-Vijuk Intern. Corp. GIC (GRAPHIC INTERFACE CONCEPT) **GN Flexo** Golden Hontec Laser (Donnguan

Hontec Machinery) Gonderflex International Inc Graficon Maschinenbau AG

Grafische Systeme Volker Schischke Grafisk Maskinfabrik Grafotronic AB

Graphtec Corporation GSM Graphic Supplies & Machinery Ltd H.C. Miller Press

Han Yang Industries Heidelberger Druckmaschinen AG Holtby Williams International

Holweg-Weber Hunkeler AG

Hyden Packaging Pvt Ltd Impression Technology Europe Infinity Foils, Inc- UEI Group Company

International Surface Technologies J&J Converting Machinery Jakob Müller AG

Jurmet Sp. z.o.o. Sp.K. Kampf Schneid- und Wickeltechnik GmbH & Co. KG

Karl Menzel Maschinenfabrik Karlville Kompac Technologies

KOR Engineering Inc. KTI- A Quantum Design Company

Kugler-Womako GmbH

Kumar Labels Labelmate Labeltech Laem Systems Srl

Larson/Burton Inc. LasX Industries, Inc. Lemorau

Lemu Talleres SA

LeoMat GmbH

Lombardi Converting Machinery

Longford International Ltd LPP Ltd

Lutz GmbH & Co. KG Mainplate Controls Markem-Imaje CSAT GmbH Matik, Inc.

Maxcess International

MBO America MELZER maschinenbau GmbH

Mid American Rubber Mida Maquinaria Monotech Systems Ltd NEPATA GmbH Neryos SAS

New Solution S.A. Nicely Machinery Development Co. Ltd

Nikka Research Deutschland

GmbH Nordson OKI Europe Ltd Omegher Srl

Packers Pap'Argus

Parkland International Pasquato SNC

Pinewood Label Systems Limited Polar-Mohr

Polygraphica Equipment Ltd







PRINTING PRODUCTIVITY



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Yearbook 2019

Polytype America Corp Prati s.r.l. Precise Graphic India Pvt Ltd Preco. Inc. Primera Technology, Inc Print On Labels Printum GmbH Profama North America ProFlexo International raantec GmbH & Co. KG Reconcile Engineering Ltd. Reel To Reel International Ltd Rietstack RM (Rotary) Services Ltd Rollem USA Rosas GmbH Rotatek Printing Machinery, S.L. ROTOCONTROL Rotoflex Rotoflex UK Ryback & Ryback Inc. Sam Meccanica Srl Scantech Automation Inc. Serame Sermar Machines Srl Sigrist Engineering AG SMAG (SRAMAG SAS) Soma Engineering Spartanics SRC Systems Limited Starfoil Technology Netherlands bν Styers Equipment Company Tamarack Products Inc Tangshan Wanjie Europe Tectonic International Ltd TGW International Inc. Tidland Tidland

Trojan Color Systems Trojanlabel

Totani America

Tools & Production Inc.

Tilt Lock

UniNet Universal Print Partners UV Graphic Technologies Pvt. Ltd. (formerly GTI) VAN DEN BERGH Consulting byba

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Wasberger Label Equipment Web Techniques, Inc. Webex

WEIGANG Machinery Weldon Celloplast Limited Werosys ApS

WyndRyte Rewind Tables

Xeikon

Xiamen Delish Automation Equipment Co., Ltd Zhongshan Shuguan Self-Adhesive Products Co., Ltd

Flexo presses

Activa Label Industries Ltd Advanced Machinery NV Allied Gear & Machine (A G Manufacturing, Inc.) Alltrade Recycling Équipment Alpha-Cure Ltd American Water Graphics, Inc. Anderson & Vreeland, Inc. Anilox Laser Technology LTD - ALT Aquaflex Autoprint Machinery Mfrs.Pvt. Ltd AzTech Converting Systems Bar Graphic Machinery Ltd Belfar Ltd

AAA Press International, Inc.

Bobst

Brenna Srl Carl Ostermann Erben GmbH (COE) Carlisle Bros Catchpoint Ltd Champion Creaton Industries Co Ltd. Chromos AG Color-Logic Inc - European Office Comco CONVERPACK Benelux B.V.

Cooper Printing Machinery Ltd DCM USIMECA De Rossi Vittoriano S.r.l. DIP Co. Discount Labels Dowell Printing Equipment Co Ltd DPL Industri A/S

Convertech Equipment Pvt Ltd

DRI-TEC UNLIMITED LLC DSE Edale Ltd Edwards Label Episcan ERREPI S.r.l.

Esterlam International Ltd ETI Converting Equipment Etirama

Eurograv Limited

Fischer & Krecke GmbH (Bobst

FlexAir

Flexo-Printing Equipment Corp. FlexoArt Graphic Systems Flexoclean Engineering FlexoExport Ltd FLXON

Focus Label Machinery Ltd

Formyflex Fox Valley Technical College Fuji Shoko Co. Ltd. Futec Europe GmbH Future Pack / KOREA Gallus GB Flexo Equipment GIC (GRAPHIĊ INTERFACE CONCEPT) Globe-Tek Corporation GN Flexo

Gonderflex International Inc, Goss International Graficon Maschinenbau AG

Grafische Systeme Volker Schischke Grafitec Web Ltd GRAPHIMAT -LABELPACKMACHINE

GraphixOne Corp. GSM Graphic Supplies & Machinery Ltd H.C. Miller Press

Hamillroad Software Ltd Hapa AG

HC Miller Press Heat Technologies Inc. Heidelberg

Holweg-Weber Hontec Machineries Hoya Candeo Optronics Corp.

Industrial Inkjet Ltd INOMETA GmbH

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Komori-Chambon KPG Kris Flexipacks PVt Ltd

Kyoto International Corporation Label Industry Consultants (& Machinery) Ltd Label Pack

Labelform Graphics Ltd Larson/Burton Inc. Lemu Talleres SA

Lombardi Converting Machinery

Srl LPP Ltd LS-Int.com Ltd Lucky Huaguang Graphics Co Ltd MALBATE MAM - Machines & More

Mark Andy Matik, Inc. MCS, Inc. Memiet Labels MGE OCC

Mid American Rubber Mona Equipments

Multitec Aids Pvt Ltd Nilpeter A/S Nim-Cor Nuova GIDUE S.r.l

Omet Srl OnLine Energy UV Systems Pacom Europe

PCMC - Paper Converting Machine Company PIASC

Pillar Technologies - An ITW Company Polygraphica Equipment Ltd

Polymount Int Bv Printco Industries, LLC

Printech Machinery Trading Canada

ProFlexo International Propheteer International, LLC Propyplast

R.C. Lamps S.n.c. / VTI RayPress Corporation Reel To Reel International Ltd

Repacorp, Inc. Retroflex Inc.

Rochester Institute of Technology Rotary Die Company Sp. z o.o. Rotary Systems Ltd.

Rotatek Printing Machinery, S.L Ruttiman Trade AG

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Tectonic International Ltd Telstar Engineering Inc. TETAS IC VE DIS TICARET A.S.

Timsons Ltd TKM Meyer GmbH Tower Products Inc. Tresu A/S

TRESU Group Troika Systems Ltd Tungsman and Company Inc Universal Print Partners **Uteco Converting**

UTECO NORTH AMERICA INC. UV Graphic Technologies Pvt. Ltd. (formerly GTI)

. VAN ZAĹINGÉ Benelux B.V.

Weifang Donghang Graphic Technology Inc.
WeiFang DongHang Precision

Machine Co., Ltd. WEIGANG Machinery Weldon Celloplast Limited Zhejiang Hexiang Printing Machinery Co Ltd ZHEJIANG ZHONGTE MACHINERY

Zhongshan Shuguan Self-Adhesive Products Co., Ltd **Zhongtian Machinery Works**

Gravure presses

ABBA Roller Brenna Srl **CAMIS SRL**







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DNP Singapore Pte. Ltd. Dowell Printing Equipment Co Ltd ETI Converting Equipment Eurograv Limited FlexAir FI XON FRESCHI ITALIA S.R.L. Fuji Shoko Co. Ltd. Futec Europe GmbH GSM Graphic Supplies & Machinery Ltd Hoya Candeo Optronics Corp. INOMETA GmbH International Financial Services Komori-Chambon Kris Flexipacks PVt Ltd Mona Equipments Nilpeter A/S Nim-Cor Novaflex Inc / DCM Group Officine Meccaniche G. Cerutti Polygraphica Equipment Ltd Printco Industries, LLC ProFlexo International Retroflex Inc. Rotomec - Bobst Group Italia S.p.A. (Bobst Group) TKM Meyer GmbH Troika Systems Ltd Universal Print Partners **Uteco Converting** UTECO NORTH AMERICA INC. UV Graphic Technologies Pvt. Ltd. (formerly GTI) Webtech Inc

Hand-held labeling systems

Activa Label Industries Ltd Avery Dennison Axicon Auto ID Ben Clements and Sons, Inc./ Tach-It Bluhm Danmark Computype D.P.R. Labeling, LLC Datum Colour Print (Hatfield) Ltd Epson Europe Gencler Kirtasiye Tic. San Ltd Sti General Labels & Labeling (M) Sdn Bhd Open Data Srl Paxar Pinewood Label Systems Limited Print On Labels Printex Srl PRIX International Avery Dennison Fastener Ameri Romprix Exim Srl SATO START International Ste. PRIX AFRIQUE

Systems Print Media Ltd Take-a-Label, Inc. Typerite \λ/eher Wenzhou OuHua Stationery Co

Hologram equipment

Aradiant Breit Technologies LLC DIAVY SRL Dimuken (GB) Ltd DMS, INC. DPL Industri A/S FAES AG GIETZ AG Hira Holovision - The Hologram Company Hologram Manufacturers Association of India (HoMAI) Holosecurity Technologies ITW Foils Matik, Inc. Mühlbauer, Inc. **Newfoil Machines Limited** Pantec GS Systems AG, PCT Engineered Systems LLC PGI TECHNOLOGIES PVT. LTD Product & Image Security Foundation

Sam Meccanica Srl

Schobertechnologies GmbH Tecscan Print Inspection Systems UV Graphic Technologies Pvt. Ltd. (formerly GTI)
VAN DEN BERGH Consulting

bvba

Western Photonics Technology Zhejiang Zhongjia Technology

Holograms-OVDs (optically variable devices)

Alpha Lasertek India Ltd Avery Dennison - Label and Packaging Materials Europe Brand Security Systems GmbH Breit Technologies LLC CFC International, Inc. Complete Inspection Systems Inc. Crown Roll Leaf, Inc. De La Rue DIAVY SRL DMS. INC. EMD Chemicals, Inc. Episcan FLEXcon Company, Inc. Holo-Source Corporation Hologram Manufacturers Association of India (HoMAI) Hologramas de Mexico Holosecurity Technologies Holostik India Ltd Holowebs, LLC Hutchison Miller Sales Co InkSure Technologies Inc.

Jinda Company Limited Jordan Products Inc. K Laser Technology (USA) Co., Ltd. K Laser Technology Inc. Kurz Transfer Products LP KURZ, LEONHARD, Stiftung & Co. KG L C Trade Leonardus S.r.l - Italy NANOGRAFIX CORPORATION november AG Optaglio Limited Pack Vision BV Product & Image Security Foundation Proma Technologies Prooftag Rolling Optics Sekuworks, LLC Shanghai Fudan-Techsun New Technology Co., Ltd. Shantou Yiming Holotech Machine Co Ltd SURYS, the new name for Hologram. Industries

Tesa Tape, inc.

ITW Foils

Toray Plastics (America), Inc. Western Photonics Technology Zhejiang Zhongjia Technology

A&M Kinzel Siebdruckmaschinen

AAA Press International, Inc.

adphos Digital Printing GmbH

Hot air and IR drying systems

Ahlbrandt System GmbH Al's Co UV, Înc Alpha-Cure Ltd AMS SPECTRAL UV - A Baldwin Technology Company Aradiant Araytech Brenna Srl Brewer UV Systems Coatema Coating Machinery GmbH Davis-Standard, LLC DR. FISCHER Group Eltosch Grafix GmbH **EMERY WILLED SLU EMWI Group** Faustel, Inc. FlexAir G Technologies Srl GEW (EC) Ltd GEW, Incorporated Grafix Equipos Para Artes Graficas Graphbury Smart Solutions, LLC Hamamatsu Photonics Heat Technologies Inc. Heraeus Noblelight Highlight UV-Technology GmbH & Co. KG Honle UV Hoya Candeo Optronics Corp.

Jet Europe BV KAMMANN Maschinenbau **GmbH** KFTT US Kompac Technologies KROENERT Label Industry Consultants (& Machinery) Ltd Lamp Tech Noritsu America Corporation Paul Leibinger GmbH & Co. KG PCMC - Paper Converting Machine Company PCT Engineered Systems LLC Phidastien Phidastien International Phoseon Technology Prime UV Systems, Inc. PrintConcept UV-Systeme GmbH Printing Technology Services, Inc. Process Sensors (Europe) Limited Ouartz Link Ltd R.C. Lamps S.n.c. / VTI Rycobel NV Southern Lamps Inc TCS Technologies Test Supplier | Enhanced Toc Maquinas Industriales SA De CV Tresu A/S TRESU Group UV Ray S.r.l uv-technik meyer gmbh Uviterno AG XDS Holdings, Inc. XericWeb Drying Systems

Hot foil machinery

A&M Kinzel Siebdruckmaschinen AB Graphic International Ltd API Foils Atwell Self-Adhesive Labellers Berra s.r.l Bunting Magnetics Co. Cartes S.r.l. DG Press DIAVY SRL Dison Tec LLC DMR Elettromeccanica S.r.l DMS, INC. DSE Emmendinger Maschinenbau GmbH Etilabgrawo GmbH Etirama European Demonstration Centre FlexoExport Ltd Franchini & C. S.r.l **GIETZ AG** Global Graphic Equipment Ltd Grafische Systeme Volker Schischke Grafisk Maskinfabrik Grafitec Web Ltd GSM Graphic Supplies & Machinery Ltd Infinity Foils, Inc- UEI Group Company









Innovative Equipment

ITW Iwasaki International Inc. KBA Latina KURZ, LEONHARD, Stiftung & Co. KG Kwang Dah Enterprises Co Ltd Label Industry Consultants (& Machinery) Ltd Link Label Machinery Co Ltd Lombardi Converting Machinery LPP Ltd LS-Int.com Ltd Matik, Inc. MGE OCC MGI Mida Maguinaria Mühlbauer, Inc. **Newfoil Machines Limited** OCC Label Printing Machines

ORTHOTEC, WAN AN PRECISE MACHINERY WORKS CO., LTD. Pantec GS Systems AG Pasquini & Kromer GmbH PGI TECHNOLOGIES PVT. LTD PRACMATIC Maschinenbau Ltd Prisma Srl ProFlexo International Rapid Machinery Company Reel To Reel International Ltd Sam Meccanica Srl SANJO Semi-rotary Presses Schobertechnologies GmbH Starfoil Technology Netherlands STOMA GmbH Telstar Engineering Inc. Thomson National Press Co **UEI Falcontec** UltraSource LLC Universal Engraving, Inc.- UEI Group Company UV Graphic Technologies Pvt. Ltd. (formerly GTI) VAN DEN BERGH Consulting

Hot stamping foils

ZHEJIÁNG ZHONGTE

Weldon Celloplast Limited

3D AG Active Holograms Alpha Lasertek India Ltd API Foils Apple Die

ARMOR

byba

Webtech Inc

Werosys ApS

MACHINERY

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DaLian Fujisan Office Equipment
DIAVY SRL
Diehard Dies Pvt Ltd
Dison Tec LLC
Dragon Foils Limited

Infinity Foils, Inc- UEI Group Company ITW Foils Jiaozuo Zhuorim Digital Material Co Ltd Jiaxing Heasn Import & Export Co., Ltd. K Laser Technology Inc. Kasha Ribbon Kurz Transfer Products LP KURZ, LEONHARD, Stiftung & Co. KG L C Trade Lemmaco Kft LEONHARD KURZ FAR EAST LTD. Leviteks Ltd. Sti. Magnum Materials Limited Mastercorp Group MGI Nakai International Corp. Newell Busines Services Co., Ltd Pack Vision BV Pelikan Hardcopy Scotland Ltd Ribbon Ltda Sanyo Corporation of America SECUTAC Shandong Taibao Anti-Counterfeiting Technology Products Co., Ltd Signet Marking Devices STAMP FOIL SPA Sunliky Industry Limited Thermal Transfer Solutions Ltd Thermo Code System TTR Euroworks BV Typerite ÚÉI Falcontec UltraSource LLC Univacco Vacmet Packagings (India) Pvt Ltd Webtech Inc Western Decorating Technology Xiamen Delish Automation

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Graphic Films)

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CÓ, LTD

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Zhejiang Hengfeng Packing Co

Zhejiang Zhongjia Technology

Equipment Co., Ltd

Co Ltd

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Brady
Bunting Magnetics Co.
DIAVY SRL
Dixie Graphics
DMS, INC.
Eastern Engraving
Etilabgrawo GmbH
Felix Boettcher GmbH Co
Form-und Stanztechnik GmbH
Fulflex Flexographic Systems
General Metal Engraving
Hannecard NV
Holfeld Tool & Die Ltd
ITW

ITW
Kocher + Beck
KURZ
LARTEC - Flexible Dies

LPP Ltd Luminite Products Corp. Pantec GS Systems AG Pasquini & Kromer GmbH

Platecrafters
Precise Graphic India Pvt Ltd
ProFlexo International

Rotary Technology (Guangzhou) Co Ltd RotoMetrics

RotoTechnix Signet Marking Devices Simec Group S.r.l.

Spilker GmbH Starfoil Technology Netherlands

bv
Sunliky Industry Limited
TD Wright Inc
TECHNI FORM
Techniform
UEI Falcontec
Universal Engraving, Inc.- UEI
Group Company
UV Graphic Technologies Pvt. Ltd.
(formerly GTI)

Wink Stanzwerkzeuge GmbH & Co. KG

In-mold label materials

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COSMO FILMS LIMITED Dyna-Tech Adhesives, Inc. Electro Optic Werkzeugtechnik ExxonMobil Chemical Films Asia Pacific Filmquest Flexpol Sp. z o.o FUJIAN TAIXING SPECIAL PAPER CO. LTD Granwell Products / Polylith H.S. Industries Co., Ltd Holo-Source Corporation

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IIC AG
Innovia Films
Inteplast Group Ltd - AmTopp
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KWH Plast Ltd
Leonardus S.r.l - Italy
Manuli Film Spa
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&Industries Limited)

Michelman

Multi-Plastics, Inc. Pasquato SNC Plastic Suppliers Incorporated POLIBAK PLASTIK FILM SANAYI VE TICARET A.S. Polinas Plastic Propyplast ROCHEUX INTERNATIONAL Serlem Shanghai Realtac Trading Company Ltd Sidaplax Sodinor Squid Inks AG (Ltd.) StarTrack Europe v.o.f. Super Film Packaging Films Synthogra Taghleef

Minus Nine Technologies

Taizhou Newtech Film Co Ltd Tamerica Products, Inc. TerraSkin® TESLIN Substrate by PPG Industries Toray Plastics (America), Inc Toyo Ink Arets NV Treofan Valéron Yupo

Industry service suppliers

4Impression A&M Kinzel Siebdruckmaschinen Air and Water Systems, Inc. Alltrade Recycling Equipment Andantex USA Inc Autopack Pte Ltd Avery Dennison - Label and Packaging Materials Europe **B-Core Incorporation** Berkeley Machinery CMYK ÚAE Color Management Group (CMG) Dakota Integrated Services Datum Colour Print (Hatfield) Ltd Drilling Tech Services/POPPS DSF Eaglewood Technologies/Sani-Blast Electro Optic Werkzeugtechnik GmbH **EMERY WILLED SLU EMWI Group** ENFASIS MAGAZINES



Drohmann GmbH Easycut



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Kolon USA Inc

LTHD M Print LLC Mainplate Controls marks-3zet GmbH & Co. KG Nordson (UK) Ltd Nordson Engineering GmbH NPPS - Flexo for Hire Oxford Instruments PAS Media Poland's Sistrade Angulusridet S.A. Partners PowerForward Inc. Praxair Surface Technologies Precision AirConvey Corp Printing Technology Services, Inc. ProFlexo International RK Siebdrucktechnik GmBH **RSI ID Technologies** Runwing Co. Ltd S-two GmbH S.S.I. Inc Shanghai Fudan-Techsun New Technology Co., Ltd. SISTRADE – Software Consulting, S.A. (Spain) SoftSolutions, Inc. Southern Lamps Inc Sun Chemical

Trace.IT - gestão e consultoria, s.a. Trelleborg Sealing Solutions GmbH Tri-Tronics Company, Inc. Wikoff Color Corporation

TEC-IT Datenverarbeitung GmbH

Ink control-dispensing systems

ACTEGA North America AP Systems AG Coates Screen ColorMatic AS Convertech Equipment Pvt Ltd Dai Nippon Printing Co., Ltd. Datex UK DELTAPAK B.V.

DNP Singapore Pte. Ltd. Esko

Fag Graphic Systems SA FlexoArt Graphic Systems Flint Group

Fluid Ink Technology, Inc. Fluid Management

Fujifilm

FÚLL Systembau GmbH Graphbury Smart Solutions, LLC Graphics Microsystems Inc. Graymills Corporation GretagMacbeth AG GSE Dispensing Halm Industries International

Co Inc Harris & Bruno International

Industrial Inkjet Ltd **Inkjet Solutions Limited**

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RK Print Coat Instruments Ltd

Rotary Systems Ltd. Sensient Imaging Technologies SA Sheepscot Machine Works Siegwerk SPEC, Inc Sun Chemical TAIYO KIKAI CO.,LTD. Tresu A/S TRESU Group Vale-Tech Ltd Van Son Liquids Wikoff Color Corporation X-Rite, Incorporated

Inking rollers

Zeller+Gmelin Corp.

A&M Kinzel Siebdruckmaschinen A-Korn Roller, Inc. ABBA Roller Apex International Applied Laser Engineering Ltd. ARC International **BAT Graphics** Carltek Industries (Taiwan) Corp. Cheshire Anilox Technology Ltd Corona Supplies Ltd CTS Industries Double E Company Engineered Metals Corporation Felix Boettcher GmbH Co Flexo Steel Industrial Ltda. Fujifilm North America Corporation Gardall Manufacturing Corporation Garvey Harper Corporation of America Heidelberger Druckmaschinen AG Impreglon Cellramic

Products Jemmco, LLC Jiaozuo Zhuorim Digital Material Coltd

Kasha Ribbon Laserlife Australia Luminite Products Corp. Mid American Rubber Nim-Cor

Pamarco Global Graphics

PFE Rolls, Inc Praxair Surface Technologies **REM Manufacturing** Rossini Rotadyne Rotary Technology (Guangzhou) Co Ltd Ruttiman Trade AG Simec Group S.r.l. Svecom Tech-Cell Ltd Tidland Ungricht Wilson Manufacturing Co. Xinxiang Fineray Technology Ltd Zecher GmbH

Inks

A.M. Ramp & Co Hong Kong Ltd ACTEGA North America Actega Radcure, Inc. AEBO Science Technology Co Ltd Afford Inks Alden & Ott Printing Inks American Water Graphics, Inc. Angstrom Technologies Inc Arets de Mexico **ARMOR** Bella Kagit

Blanco Labels Boussey Control Europe Braden Sutphin Ink Braden Sutphin Inks/Flexo Division Central Ink Corporation Chimigraf Chimigraf Group Coates Screen Collins Inkjet Corporation Collomix GmbH Color Resolutions International, LLC

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Dropjet Makina Kimya San. Ltd. Sti.

Dynic Eaglewood Technologies/Sani-Blast

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Edson International

EMD Chemicals, Inc. EMERY WILLED SLU **Encres Dubuit Engelhard Corporation** Epson America Inc. Frcon Inc.

FFFI

Finjetchemical Industries Ltd Flexo Label Advantage Group LLC (FLAG)

Flexoclean Engineering Flint Group

Fluid Ink Technology, Inc. FRANCIS BUEHLER AG Frimpeks A.S.

Fujifilm Garvev

GBC (Speciality Chemicals) Ltd

General Srl

Grafix Equipos Para Artes Graficas

Graphic Sciences Inc. Graphtech GSB-Wahl GmbH Gulf Commercial Group Hapa AG Heidelberger Druckmaschinen AG

Hostmann Steinberg Hoya Candeo Optronics Corp.

IdeOn LLC IIMAK ImTech Inc.

Industrial Inkjet Ltd

Innovative

Oberflachentechnolgien GmbH Interactive Inks & Coatings INX International Ink Co. Jänecke+Schneemann Druckfarben GmbH Kingfisher Inks Ltd Kolorcure Corporation Label Pack Laner UV Lacquers

Lotar Enterprises Lucky Huaguang Graphics Co Ltd Luminescence International Ltd

Luxul FZC Magnum Inks & Coatings Marabu GmbH & Co. KG

marks-3zet GmbH & Co. KG Memjet Labels Mimaki

Minus Nine Technologies Mirage Inks Ltd Monarch Color Corp.

Natural Ink Nazdar Ink Techologies NeuraLabel Printing Solutions

Nicoat Norcote.

Noritsu America Corporation Paragon Inks

Pelikan Hardcopy Scotland Ltd Pemla Ink Technologies Pitman Company Premier Ink Systems Inc Printgraph SpA





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Sericom Italia Srl SICPA SA Siegwerk

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SPGPrints

Spring Coating Systems Squid Inks AG (Ltd.) Sun Chemical Systems Print Media Ltd

T&K Toka Co, Ltd Thermo Code System Toyo Ink Arets NV Transam Industries Pte Ltd

UCS (UV Curable Systems byba) United Speciality Inks Pvt. Ltd. Uvitec Printing Ink, Inc. Vale-Tech Ltd

VINSAK Wikoff Color Corporation Zeller+Gmelin UK

Van Son

Insertion/onsertion systems

AzTech Converting Systems Bielomatik Jagenberg, Inc. bielomatik Leuze GmbH + Co. KG

Comercial Arquè, S.A. Controls Engineering

Edwards Label Eurograv Limited

Henkel Electronic Materials LLC Innovative Equipment ITW Dynatec

Longford International Ltd MELZER maschinenbau GmbH

Mühlbauer Multifeeder Technology Inc **Newfoil Machines Limited**

Rapid Machinery Company RayPress Corporation Rosas GmbH Sinel Systems S.A. SMAG (SRAMAG SAS) Tamarack Products Inc Thiele Technologies Topack Maquinaria S.L.

Inspection equipment

AAA Press International, Inc. AB Graphic

Accraply

Adhesive Technical Services Ltd Advanced Machinery NV Aghili Drucktechnik

Applied Rigaku Technologies, Inc. Arpeco

Ashe Converting Equipment

Automatic Identification Systems UK Ltd AVT

Axicon Auto ID Axode

Bar Graphic Machinery Ltd bielomatik Leuze GmbH + Co. KG Boussey Control Europe Bradv

BST

CC1, INC

Complete Inspection Systems Inc. Contiweb

Convertec Graphic Technics AB Covectra Europe Limited Crest Solutions CTC International, Inc. DaTARIUS Technologies GmbH

DCM USIMECA

De Rossi Vittoriano S.r.l. Decosystem SRL DG Press Drello GmbH & Co. DSF

DVS Quality Solutions Limited Electromatic Equipment Co, Inc EMERY WILLED'SLU

EMWI Group Eniscan

Erhardt + Leimer GmbH Etlon Corporation

EUROMAC Euroto Limited EyeC

Fag Graphic Systems SA Fellinger Industrieelektronik

GmbH Fife-Tidland GmbH FLEXOR (EMIS) Ltd

Four Pees FRESCHI ITALIA S.R.L. Futec Europe GmbH Global Vision Inc

Grafikontrol North America Grafische Systeme Volker

Schischke Grafisk Maskinfabrik Grafotronic AB GSE Dispensing

HD Barcode LLC

Heidelberger Druckmaschinen AG Honle UV America

Hunkeler AG Hyden Packaging Pvt Ltd IN-CORE SYSTEMES

Inspection Systems, Inc ISRA Vision J. F. Machines Ltd.

Jemmco, LLC K2 International

Karl Menzel Maschinenfabrik Karlville Development

KETT US KOR Engineering Inc. Label Vision Systems, Inc. Labelmate USA LLC Labeltech

Laem Systems Srl Lake Image Systems Lemorau

LeoMat GmbH LPP Ltd

Mahlo America Inc. Mainplate Controls

Maxcess

Menzel Vision Systems

MoistTech Corp. Monotech Systems Ltd, Mühlbauer, İnc.

NDC

Nikka Research Deutschland GmbH

Nordson Engineering GmbH Novation, Inc.

One Box Vision

Pantron Automation. Inc Paul Leibinger GmbH & Co. KG PC Industries

Prati s.r.l. **Print Products** Process Sensors ProFlexo International. Q.I. Press Controls QIPC-EAE Americas

OuadTech Reconcile Engineering Ltd. Rheintacho Messtechnik GmbH

Rosas GmbH Rotary Systems Ltd. ROTOCONTROL

Rotoflex Rycobel NV Ryeco

S-two GmbH Scantech Automation Inc.

Selectra Srl Sibress

Sigrist Engineering AG SMAG (SRAMAG SAS) Sneep Industries Stamfag

Surfscan Technologies Ltd Tecscan Print Inspection Systems Tectonic International Ltd

Testing Machines Inc. Tidland

Topack Maquinaria S.L. TruColor Vision Systems, Inc. Unilux

UV Graphic Technologies Pvt. Ltd. (formerly GTI)

uv-technik meyer gmbh Valco Melton ÚK VAN ZALINGE Benelux B.V.

VINSAK

Visi-tech Systems Limited Voyantic Ltd

Wasberger Label Equipment Web Techniques, Inc. Webex

Webscan Inc

WyndRyte Rewind Tables X-Rite Europe GmbH

Label applicators

3M Europe A&M Kinzel Siebdruckmaschinen

Accraply Accu-Label Inc Accuplace

ACHEM Industry America, Inc. Adesivos e Papéis Especiais RR

Ltda. **ADVENT**

Albertina Trading S.R.O.

ALTECH Srl

Altrapack Hungary Kft. Arca Etichette Spa

Atwell Self-Adhesive Labellers Automatic Identification Systems

UK Ltd Avery Dennison Axiom GB Ltd Bandall International

Ben Clements and Sons, Inc./ Tach-It Bluhm Brady

BUSKRO USA Ltd cab

CDA France Chris Finished Machinery Co. Ltd

Computype CVC Technologies D.P.R. Labeling, LLC

Datum Colour Print (Hatfield) Ltd DG Press

Dison Tec LLC Dispensa-Matic Label Dispensers

DMR Elettromeccanica S.r.l

Doranix

Dropjet Makina Kimya San. Ltd. Sti.

DSE

EASYLABEL Europa Etipack Etiquettes Plus

FRESCHI ITALIA S.R.L.

Garvey General Labels & Labeling (M)

Sdn Bhd **GODEX** Gold Fai Machinery **GROUPE MBC**

Hu Zhou HengXin Label manufacture Co Ltd Hurkimsa Kimya San. Hurletron Inc.

Impression Technology Americas dba Rapid Label Systems Impresstik Pty Ltd

Inkstar Office Appliance Factory of Tianjin

Interactive Coding Equipment (ICE)

Ìtochu Deutschland GmbH K-D Hermann GmbH contact-Auszeichnungssysteme Karlville Development Kirk-Rudy, Inc.

Konica Minolta Business Solutions Europe GmbH



www.anytronlabel.com



www.vipcolor.com



Konica Minolta IJ Technologies, Label-Aire A/S Lowry Computer Products, Inc. Luen Hop Engineering & Enterprise Co. Ltd MALBATE **MECAMARC** Mimaki Europe BV Modi Paper & Label Systems NAM SING RIBBON (H.K.) LTD. NITA Labeling Equipment Nordson (UK) Ltd Novation, Inc. OKI Europe Ltd Open Data Srl Packaging & Converting Hotline Paragon Labeling Systems Pasquini & Kromer GmbH PCM Image-Tek PDC International Corporation Pinewood Label Systems Limited PowerForward Inc. Primera Technology Print On Labels Printech Machinery Trading Canada PRISYM ID Limited PRIX International Avery Dennison Fastener Améri Quadrel Labeling Systems Rapid Label Systems Ravenwood Packaging Ltd RayPress Corporation REA JET GmbH Reconcile Engineering Ltd. ROFIN-BAASEL, Inc. Romprix Exim Srl S-two GmbH S.S.I. Inc SATO Screen USA Seagull Scientific Sew Access (Far East) Ltd Simple Solutions and Innovations Sinel Systems S.A. START International StarTrack Europe v.o.f. Ste. PRIX AFRIQUE Summa, Inc. Systems Print Media Ltd Take-a-Label, Inc. Tamarack Products Inc Tech-Melt Adhesives Ltd. Techcon Printing & Packaging Tharo Systems, Inc. Thermal Printer Support Thiele Technologies UltraSource LLC Vacuumatic Ltd VAN DEN BERGH Consulting bvba Wenzhou OuHua Stationery Co Wide Range Srl WRH Global Americas Xinxiang Fineray Technology Ltd Zhejiang Ouli Digital Inkjet

Materials Co Ltd

Co.Ltd

Zhongshan Shuguan Self-

Adhesive Products Co., Ltd

Zhongtian Machinery Works

Label dispensers Activa Label Industries Ltd AEBO Science Technology Co Ltd Albertina Trading S.R.O. ALTECH Srl Altrapack Hungary Kft. Atwell Self-Adhesive Labellers Avery Dennison, Fastener & Labeling Systems Avery Dennison, Fastener Americas Axicon Auto ID Axiom GB Ltd Bandall International Ben Clements and Sons, Inc./ Tach-It Bluhm cab Produkttechnik GmbH & Co KG CDA France Computype D.P.R. Datum Colour Print (Hatfield) Ltd Dispensa-Matic Label Dispensers Etilux Etipack Etiquettes Plus Garvey General Labels & Labeling (M) Sdn Bhd GODEX GROUPE MBC Impresstik Pty Ltd K-D Hermann GmbH contact-Auszeichnungssysteme Label-Aire A/S Labelmate LLT Labels Longford International Ltd Novation, Inc. OKI Europe Ltd Open Data Srl Pinewood Label Systems Limited Primera Technology Europe Print On Labels Printex Srl PRIX International Avery

Dennison Fastener Ameri REA JET GmbH Romprix Exim Srl SATÓ START International Ste. PRIX AFRIQUE Systems Print Media Ltd Take-a-Label, Inc. Thiele Technologies UltraSource LLC Vacuumatic Ltd Visel Italiana S.r.l. Voyantic Ltd Weber Wide Range Srl WRH Global Americas

Label overprinters and printapply systems

3M Singapore
Afinia Label
Albertina Trading S.R.O.
Alpha-Cure Ltd
ALTECH Srl
Altrapack Hungary Kft.
Arca Etichette Spa
Atwell Self-Adhesive Labellers
Automatic Identification Systems
UK Ltd

Avery Dennison Axiom GB Ltd Bandall International Rluhm cab Computype D.P.R. Labeling, LLC Dakota Integrated Services De Rossi Vittoriano S.r.l. **Domino Printing Sciences** EASYLABEL Europa Etipack Etiquettes Plus Etlon Corporation Eurocoding FFEI FRANCIS BUEHLER AG Grafotronic AB **GROUPE MBC**

Hurkimsa Kimya San.
Impression Technology Europe
Inkjet Solutions Limited
Interactive Coding Equipment
(ICE)
ITL Group
Iwatsu Electric Co Ltd
Kanematsu Corporation
KBA-MePrint AG
Label Industry Consultants (&
Machinery) Ltd
Label-Aire A/S
Labelmate LLC.
Lake Image Systems Ltd
LeoMat GmbH

Hapa AG

IIT Labels

MECAMARC

Mimaki Europe BV
Mutoh Belgium n.v.
Newfoil Machines Limited

NITA Labeling Equipment OKI Europe Ltd

Palmetto Imaging Technology, LLC Paragon Labeling Systems PCM Image-Tek

Positive ID Labelling Systems
Print On Labels
Printex Srl

PRISYM ID Limited ProFlexo International Prototype & Production Systems, Inc./ DICE Graphic Technologies

Rea Reliance Label Solutions, Inc

ROTOCONTROL Rotoflex UK S.S.I, Inc SATO SwiftColor

Systems Print Media Ltd Take-a-Label, Inc.

Techcon Printing & Packaging Tharo Systems, Inc. Thermal Transfer Solutions Ltd

Transfer Trade s.r.l.

TrojanlabelTyperite
UltraSource LLC

UniNet Union Chemicar Europe VAN ZALINGE Benelux B.V. VanDerEng BV

VanDerEng BV Weber

WRH Global Americas Zhongtian Machinery Works Co.Ltd

Label papers

Adesivos e Papéis Especiais RR Ltda. Ahlstrom > see Munksjö Al Husein International Aluminium Feron GmbH &Co. KG Appvion, Inc. ARclad

Arconvert

Arjobex/Polyart
Arjowiggins
Avery Dennison
AzCoat, Inc.
Bandall International
Bella Kagit
BESEL
Blanco Labels
Boise Paper
Brady

BW Bielomatik
Camelot Papers Inc
Cartonal Italia SpA, Release &

Label Paper Catalyst Paper

Catalyst Paper CEZAR Ltd. Cham Paper Group Colacril Continental Datalabel

Contract Converting, LLC
CPD the Coated Products Division

Crown Van Gelder B.V.
Dakota Integrated Services

Delfortgroup AG
Dunafin Kft.
DuraFast Label Company
Epson Europe

Etiquetas Brasil Ltda Etiquettes Plus Fangda Packaging Co., L

Fangda Packaging Co., Ltd. (Hebei,China) Folien Fischer AG

Foshan Chancheng Hengyi Plastic Color Printing Factory FUJIAN TAIXING SPECIAL PAPER

FUJIAN TAIXING SPECIAL PAPER CO, LTD

Gencler Kirtasiye Tic. San Ltd Sti Globus International GODEX

Gombau Group Granwell Products / Polylith Greenstik Limited

GROUPE MBC GTechnology LTD

Guangdong Guanhao High Tech Co Ltd

Guangzhou Manborui Material Technology Co Ltd

Hansol Paper Co Ltd Hollingsworth & Vose Company Hop Industries Corp.

Hop Industries Corp.
Hu Zhou HengXin Label
manufacture Co Ltd
Huadi Machinery Co.,Ltd
Hurkimsa Kimya San.
Huzhou Kingdom Coating

Industry Co.,Ltd. Idea Paper

IGF Europe NV (International Graphic Films)

Image Computer Systems Infinity Tapes Innovative Adhesives

Italstick Self Adhesive Materials &

Coatings
Japan Pulp & Paper GmbH
Jujo Thermal Ltd.
K Laser Technology Inc.
Kanzaki Specialty Papers
KANZAN Spezialpapiere GmbH
Kasha Ribbon
Kimberly-Clark, Technical Paper
Koan Hao Technology Co.,Ltd
Label Pack
Label Planet
Lana Papiers Spéciaux II
LECTA
LLT Labels
LTHD
Mactac

LTHD
Mactac
Mark Products Corp
Masterpiece Graphix
Matthias Paper Corporation
MAX International Converters Inc
MDV GmbH
Merchant Net / Heritage Paper
Mitsubishi HiTec Paper
Modi Paper & Label Systems
MultiSTiQ International Coating

Munksjö National Paper Company NDC Spray Coating System Fabricating Co., Ltd. Neptun Technologies GmbH New Solution S.A. NuCoat Inc Optimum Metallising Oracle Paper Group Inc Oxford Instruments Paper Resources, Inc. Papertec Inc Papeteries du Pont de Claix PASACO Coated Papers Co Ltd Perez Trading Company Printum UV PRIX International Avery Dennison Fastener Ameri

PT PINDO DELI PULP & PAPER

PURE Labels (Elevate Packaging, Inc) REA JET GmbH Ricoh

Ritrama

MILLS

Rolling Optics Romprix Exim Srl Sappi

SATO ScandStick AB Seibert - PFV

Shanghai Jinda Plastic Co., Ltd. Shanghai Realtac Trading Company Ltd

Sihl GmbH

SMI Coated Products Pvt Ltd Sodinor Sojitz Europe Plc Star Coating AG Ste. PRIX AFRIQUE

Stratos Systems Print Media Ltd Taizhou Newtech Film Co Ltd Tamerica Products, Inc. TESLIN Substrate by PPG Industries

Thai KK Industry Co Ltd Thilmany Papers Torras Papier GmbH Torraspapel Tullis Russell Twin Rivers Paper Company UPM-Kymmene Corporation VanDerEng BV Verso Corporation Verso Specialty Papers VIP Color

Wausau Paper Corp. Wenzhou OuHua Stationery Co Ltd

Wenzhou Protec Vacuum Metalizing Co Ltd Western Photonics Technology Xiamen Delish Automation Equipment Co., Ltd Yakasan A.S.

Yupo Zhongshan

Zhongshan Shuguan Self-Adhesive Products Co., Ltd Ziegler Papier AG Zuber Rieder

Laser-cutting engraving systems

MLT - Micro Laser Technology GmbH A&M Kinzel Siebdruckmaschinen AB Graphic ALS Engineering GmbH Anilox Laser Technology LTD - ALT Applied Laser Engineering Ltd. Bitek Technology Inc. (anytron) cab Technology, Inc. Cartes S.r.l. Coherent Inc. Creative Machinery & Technologies Ents. D.P.R. Delta ModTech Demak S.r.l. Dorey Converting Systems Ecolabel Ltd Epilog Laser Flexoclean Engineering FlexoLaser GmbH Fujifilm North America Corporation Fulflex Flexographic Systems Gannicott Limited GCC Europe BV Golden Hontec Laser (Donnguan Hontec Machinery) Grafisk Maskinfabrik Hans-Gronhi Graphic Technology Company Limited Helios Elio Cavagna srl Hell Gravure Systems GmbH & Co. KG Hontec Machineries Hunkeler AG Karlville Development LLC Label Industry Consultants (& Machinery) Ltd LANG GmbH & Co. KG Laserlife Australia LasX Industries, Inc. Masonlite Sign Supplies and Equipment Matik, Inc. Max Daetwyler Corporation Morgan Design Group Preco, Inc.

ROFIN-BAASEL, Inc.

Schober USA, Inc.

SEI Laser

Spartanics

Sibress

Trotec Universal Laser Systems, Inc. VAN ZALINGE Benelux B.V.

Letterpress presses

Alpha-Cure Ltd AP Systems AG Autoprint Machinery Mfrs.Pvt. Ltd Belfar Ltd BTS Industries (S) Pte Ltd Carltek Industries (Taiwan) Corp. Champion Creaton Industries Co Ltd. Chromos AG Codimag Da Shen Printing Machine Co Ltd DG Press Etipol A/S Printing Technology FlexoExport Ltd Graficon Maschinenbau AG Grafische Systeme Volker Schischke Grafitec Web Ltd GSM Graphic Supplies & Machinery Ltd Han Yang Industries Heidelberg Hontec Machineries Hoya Candeo Optronics Corp. Hu Zhou HengXin Label manufacture Co Ltd Innovative Equipment Iwasaki International Inc. KPG Kyoto International Corporation Label Industry Consultants (& Machinery) Ltd Label Planet Pvt. Ltd. Labelform Graphics Ltd

Larson/Burton Inc. Link Label Machinery Co Ltd Lintec LS-Int.com Ltd MALBATE MAM - Machines & More Mid American Rubber Mida Maquinaria Nickel Printing Machinery Co Ltd OCC Label Printing Machines ORTHOTEC, WAN AN PRECISE MACHINERY WORKS CO., LTD. Polygraphica Equipment Ltd PRACMATIC Maschinenbau Ltd Reel To Reel International Ltd Ruttiman Trade AG Sanjo Machine Works Ltd SANJO Semi-rotary Presses Sanki Machinery Co Ltd Sanki USA, Inc. SHIKI MACHINE SUPPLY CORP. Smooth Machinery TAIYO KIKAI CO.,ĹŤD. Tangshan Wanjie Europe

Labelmen Machinery Co. Ltd

Linerless and self-wound labels

YINHUA Printing Technology

Zhejiang Hexiang Printing

Machinery Co Ltd

MACHINERY

ZHEJIANĠ ZHONGTE

Co.,Ltd

ACHEM Industry America, Inc.

AERO, d.d. Appvion, Inc. Atwell Self-Adhesive Labellers Avery Dennison - Label and Packaging Materials Europe Bandall International Bella Kagit Bostik SA Continental Datalabel CPD the Coated Products Division D&K Coating Technologies, Inc ETI Converting Equipment Evonik Corporation Frimpeks A.S. HIP-Mitsu s.r.l. Hunkeler AG IGF Europe NV (International Graphic Films) Impresstik Pty Ltd Kanzaki Specialty Papers Kumar Labels Lemu Talleres SA Maan Engineering

Maan Engineering
MAX International Converters Inc
Mitsubishi HiTec Paper
Nadco Tapes & Labels, Inc
NAStar Inc.
Neptun Technologies GmbH
Nicoat
Onemech Industries CO.,PTE LTD
PASACO Coated Papers Co Ltd
QSPAC Industries, Inc
Ravenwood Packaging Ltd
Ricoh

Ritrama

ScandStick AB Transfer Trade s.r.l. Wacker Chemie AG

MIS software

BEL Computer SystemsCerm Business Management

Cerm Business Management Software Computer Productivity Services Inc. Covectra Europe Limited

CRC Information Systems, Inc. DALIM SOFTWARE GmbH DiMS! organizing print (European Headquarters)

Enterprise Print Management Solutions ERP ABBATE UK LIMITED FFEI

Globe-Tek Corporation Heidelberger Druckmaschinen AG

Hybrid Software Inc. ITL Group Key2Print sp z.o.o. Kodak Label Traxx

Lake Image Systems Ltd Nikka Research Deutschland GmbH Perspex Kft

Q.I. Press Controls
QIPC-EAE Americas
Rti Digital
Shuttleworth Business Systems
SISTRADE – Software Consulting,

S.A. SoftSolutions, Inc. Tharstern theurer.com UpSoftware Argentina

Metalized substrates Brady Brushfoil, Division of Interfilm Holdings, Inc. Camelot Papers Inc Clarifoil Coburn Graphic Films Inc Color-Logic Inc - European Office Continental Datalabel Contract Converting, LLC Cytec Surface Specialties SA/NV Dunmore **Eckart America Corporation** ECKART GmbH Filmquest FLEXcon Company, Inc. Folex AG FuWei Films(ShanDong) Co. Ltd GARWARE POLYESTER LTD. Griff Paper and Film Hanita Coatings HUECK FOLIEN GmbH

IGF - International Graphic Films IIC AG **Infinity Tapes** Innovia Films

Inteplast Group Ltd - AmTopp **Division**

Italstick Self Adhesive Materials & Coatings

ITW Jindal Films Kumar Labels **LECTA**

Leonardus S.r.l - Italy LINTEC Corporation Manucor Spa Manuli Film Spa Masterpiece Graphix

MAX SPECIALITY FILMS LIMITED (A Subsidiary of Max Ventures

&Industries Limited) MDV GmbH

Metallized Products Inc Newell Busines Services Co., Ltd Optimum Metallising

Perez Trading Company POLIBAK PLÄSTIK FILM SANAYI VE TICARET A.S.

Poligof S.R.L.

Polinas Premier Coating & Converters

Print Systems Proma Technologies R Tape Corporation

Sanyo Corporation of America Seibert - PFV

Sustanium

Taghleef Technical Coating Intl

TerraSkin® Toray Plastics (America), Inc Torras Papier GmbH Torraspapel Treofan America, Inc. Triton International Enterprises Vacmet Packagings (India) Pvt Ltd

Wenzhou Protec Vacuum Metalizing Co Ltd X-Film Selbstklebefolien GmbH

Offset blankets

Braden Sutphin Ink Central Ink Corporation Felix Boettcher GmbH Co Fujifilm North America Corporation Future Pack / KOREA Heidelberger Druckmaschinen AG Komori-Chambon LARTEC - Flexible Dies marks-3zet GmbH & Co. KG Monarch Color Corp. Printgraph SpA RM (Rotary) Services Ltd Rossini

Offset presses

adphos Digital Printing GmbH Alpha-Cure Ltd

Bobst

Codimag Comexi

Contiweb DG Press

DIP Co. Eurograv Limited Futec Europe GmbH

Gallus Ferd. Rüesch AG

Goss International Graficon Maschinenbau AG Grafische Systeme Volker Schischke

GSM Graphic Supplies & Machinery Ltd Gulf Commercial Group Hamillroad Software Ltd

HC Miller Press Heidelberger Druckmaschinen AG Iwasaki International Inc.

Komori-Chambon Label Industry Consultants (& Machinery) Ltd

Labelmen Machinery Co. Ltd Link Label Machinery Co Ltd Matik, Inc.

Mid American Rubber Mida Maquinaria Miyakoshi

Monotech Systems Ltd,

MPS Systems B.V. Nilpeter A/S

Omet Srl ORTHOTEC, WAN AN PRECISE MACHINERY WORKS CO., LTD. Polygraphica Equipment Ltd R.C. Lamps S.n.c. / VTI Rotatek Printing Machinery, S.L SHIKI MACHINE SUPPLY CORP. Styers Equipment Company Super Web Digital Tangshan Wanjie Europe TKM Meyer GmbH Weifang Donghang Graphic Technology Inc.
WEIGANG Machinery
ZHEJIANG ZHONGTE

Plate mounting equipment

Agfa Graphics Aghili Drucktechnik All Printing Resources Altec Vision Equipment

MACHINERY

Anderson & Vreeland, Inc.

ATS-Tanner Banding Systems AG AV Flexologic Bieffebi S.p.A C.T. Graphic Arts CAMIS SRL Carl Ostermann Erben GmbH (COE)

Conversource Inc. CT Graphic Arts DELTAPAK B.V.

Distribuidora Gráfica Novaro, SA

de CV Dixie Graphics DuPont de Nemours (Deutschland) GmbH È.L. Harley, Inc. Eurograv Limited Felix Boettcher GmbH Co

Flexotech Hungary Ltd Fujifilm North America Corporation

Glunz & Jensen

Gonderflex International Inc, Graphbury Smart Solutions, LLC INOMETÁ GmbH

IM Heaford Ltd Mark Andy Mezzadri Srl

PGI TECHNOLOGIES PVT. LTD

Pitman Company Polymount Int Bv Precise Graphic India Pvt Ltd Print Products Print Systems

Proact Converting Equipment ProFlexo International Quality Discount Press Parts &

Equipment raantec GmbH & Co. KG Rogers

Sigrist Engineering AG

Sinkotech

ST Converting S.r.l. Sys Tec Converting Tectonic International Ltd

UV Graphic Technologies Pvt. Ltd. (formerly GTI) Weifang Donghang Graphic Technology Inc. Weldon Celloplast Limited

Plates and platemaking equipment

3ES Mega Elektromekanik Advanced Prepress Graphics Inc Agfa Graphics Agfa Graphics All Printing Resources

Alltrade Recycling Equipment

Anderson & Vreeland, Inc. Applied Laser Engineering Ltd. Asahi Kasei E-Materials

Corporation Asahi Photoproducts (Europe) Athena Graphics

AV Flexologic Beta Industries - The Qualilty Control Company
Bunting Magnetics Co. C.T. Graphic Arts Caprock Developments Inc.

Carl Ostermann Erben GmbH ContiTech Elastomer Coatings Cron Europe Gmbh CRON-ECRM LLC CT Graphic Arts Currie Group

Dantex

DigiFlex Ltd Distribuidora Gráfica Novaro, SA de CV

Dixie Graphics Douthitt Corporation Du Pont

E. I. DuPont India Private Limited Eastman Kodak Company Econo Products, Inc.

Esko

Feket Elektrik Elektronik Makina Felix Boettcher GmbH Co Flexo Plate Digital Flexo Wash LLC Flexoclean Engineering FlexoLaser GmbH Flint Group

Focus Label Machinery Ltd

Fujifilm Fulflex Flexographic Systems **GE Richards**

Glunz & Jensen GretagMacbeth AG Hamillroad Software Ltd

Heidelberger Druckmaschinen AG HEIGHTS (UK) Limited Heights USA Inc.

Hell Gravure Systems GmbH & Co. KG

Inglese S.r.l Intec Printing Solutions

IRAC Srl Jet Europe BV

Jet USA Corporation JH Davenport and Sons Ltd. JV Imaging Solutions, Inc Kammann Machines India Pte Ltd

Kodak

Label Industry Consultants (& Machinery) Ltd Laserlife Australia Lucky Huaguang Graphics Co Ltd

Luminite Products Corp. MacDermid Graphics Solutions marks-3zet GmbH & Co. KG

Max Daetwyler Corporation Mekrom Engineering SA

Mitsubishi OEC Graphics,Inc. Olec Corporation Pitman Company Platecrafters

Platingtech Beschichtung GmbH

Print Systems
Proveedora Flexografica Railex (Filing) Ltd RBCOR, LLC **RGK Video Systems**

Ruian Jingda Printing Machinery Co Ltd

Screen Europe Sibress

Sinkotech

Solutions Graphiques Southern Lamps Inc Spring Coating Systems ST Converting S.r.l. STOMA GmbH TCS Technologies ThermoflexX Tower Products Inc.

Toyobo Co Ltd, Trinity Graphic USA Inc Troika Systems Ltd Vianord Engineering SAS Xante Corporation Xeikon

Xpedx

Prepress systems

3ES Mega Elektromekanik Agfa Graphics All Printing Resources Alphasonics

Anderson & Vreeland, Inc.

Athena Graphics AV Flexologic

Banta

BEL Computer Systems C.T. Graphic Arts

Carlo Tagliabue CGS Publishing Technologies International, LLC CHILI Publish Color-Logic Inc Compose System Ltd Computer Productivity Services

Creo Seattle, Inc (formerly ScenicSoft) Cron Europe Gmbh CRON-ECRM LLC CT Graphic Arts Currie Group

DALIM SOFTWARE GmbH

Datum Colour Print (Hatfield) Ltd DigiFlex Ltd DIP Co. Distribuidora Gráfica Novaro, SA de CV. Dixie Graphics Douthitt Corporation DSF

Eastman Kodak Company Econo Products, Inc.

EFI Epson Esko EskoArtwork EyeC GmbH Fag Graphic Systems SA

(FLAG) Four Pees Fujifilm

Fulflex Flexographic Systems

Flexo Label Advantage Group LLC

GE Richards

Global Graphics Software Global Vision Inc

Glunz & Jensen GMG Americas GretagMacbeth AG Hamiliroad Software Ltd

Heidelberger Druckmaschinen AG Hell Gravure Systems GmbH &

Co. KG

Hewlett-Packard Company Hybrid Software Jet USA Corporation IM Heaford Ltd Jura JSP GmbH

JV Imaging Solutions, Inc. Kammann Machines India Pte Ltd

Lüscher Technologies AG

marks-3zet GmbH & Co. KG Max Daetwyler Corporation Mekrom Engineering SA Monotech Systems Ltd Nikka Research One Box Vision PAS Media PC Industries Perfect Proofer by Integrity Engineering Pitman Company

Polymount Int Bv Print Systems Provident RBCOR, LLC Rossini Rti Digital

Ryback & Ryback Inc. SaatiPrint S.p.A.

Screen Serinova Srl Sign Tronic AG Specialcolor SPGPrints STOMA GmbH Stork Prints America, Inc. Tech Sleeves

ThermoflexX Tilia Labs Inc. Trinity Graphic USA Inc

Vale-Tech Ltd Vianord Engineering SAS Webtech Inc

Xante Corporation Xante Flexo Division

Pressure-sensitive films

3M Industrial Adhesives & Tapes 3M Mexico ACHEM Industry America, Inc.

Achilles USA acpo, ltd

Acucote

Adesivos Ltd

Aluminium Feron GmbH &Co. KG

Appvion, Inc. Arconvert

Arjobex/Polyart ATP Adhesive Systems AG

Avatack Co Ltd Avery Dennison AzCoat, Inc.

Baker Self Adhesive Materials BeardowAdams, Inc.

Bella Kagit Bluhm Brady

Brushfoil, Division of Interfilm

Holdings, Inc. Budaval AG C.I ARclad S.A.

CCT (Coating and Converting Technologies)

Cerium Group Ltd Channeled Resources Group

Clarifoil Clear Cast Technologies Inc. CMC Klebetechnik GmbH

Coburn Graphic Films Inc Colacril Self-Adhesive Materials Collano Adhesives AG Continental Datalabel Convert-all, Inc.

COSMO FILMS LIMITED CPD the Coated Products Division

of PCI

CPPC - Decorative Products Co., Ltd.

Crown Roll Leaf, Inc.

 $CS\Delta T$

Cytec Engineered Materials D&K Coating Technologies, Inc

Discount Labels

Drytac

DURICO C&T, INC **Emax Label Solutions**

EPS Materials

ExxonMobil Chemical Films Asia

Pacific Flexcon

Flexo Label Advantage Group LLC (FLAG)

Folex AG Folien Fischer AG Folit

Franklin Adhesives & Polymers

Frimpeks A.S.

Full Bond Tape Corporation
GARWARE POLYESTER LTD.

Gascogne Laminates Globus International Gombau Group

Graphic Marking Systems Green Bay Packaging Inc.

Greenstik

Griff Paper and Film

Guangdong Guanhao High Tech Co Ltď

H.S. Industries Co., Ltd Herma GmbH Holowebs, LLC

Icap-Sira Chemicals And **Polymers Spa**

IGF - International Graphic Films IGF Europe NV (International

Graphic Films) Infinity Tapes Innovative Adhesives

Innovia Films Intercoat Italnastri S.p.A

Italstick Self Adhesive Materials & Coatings

Itochu Deutschland GmbH Japan Pulp & Paper GmbH Jindal Films Americas King Label Adhesive Products

Co., Ltd KK Label

Klöckner Pentaplast Koan Hao Technology Co.,Ltd

Kumar Labels Lecco Industries Ltd

LECTA

Lenzing Plastics GmbH Leonardus S.r.l - Italy

LINTEC Mactac Madico Inc Manter Manuli Film Spa

Masterpiece Graphix MAX SPECIALITY FILMS LIMITED (A Subsidiary of Max Ventures &Industries Limited)

MDV GmbH Metallized Products Inc

Momentive Performance

Materials Mondi Akrosil, LLC

Mondoplastico Spa

MSM

NAStar Inc.

National Paper Company Oracle Paper Group Inc

Pantech Tape Co., Ltd Paper Resources, Inc. Perez Trading Company

Phoenix Packaging/Premier Cuts Plastic Suppliers Incorporated POLIBAK PLASTIK FILM SANAYI

VE TICARET A.S.

Polinas

Polykote Corporation

Polyonics

Precision Coated Products Ltd Premier Coating & Converters Print-O-Tape Inc

PURE Labels (Elevate Packaging, Inc)

QSPAC Industries, Inc R Tape Corporation RayPress Corporation

Rayven, Inc Repacorp, Inc. Ricoh

Ritrama

ROCHEUX INTERNATIONAL Roll Cover Italiana S.r.L SaatiPrint S.p.A. SAELIM CO., LTD.

Sales Srl

Sanyo Corporation of America SAScoat

ScandStick AB SECUTAC

Sihl GmbH

SMI Coated Products Solar Plus Company Solutia Singapore Pte Ltd Spectratek Technologies, Inc.

Spinnaker Coating

STA, LLC Strata-Tac

Stratos Sunbelt Sales & Marketing

Associates, Inc. Super Film Packaging Films

Sustanium Synthogra

Taghleef Tamerica Products, Inc.

Tamperguard

Tech-Melt Adhesives Ltd. Technicote, Inc. Tenza Technologies Ltd

TESLIN Substrate by PPG Industries

Toray Plastics (America), Inc Torras Papier GmbH

Torraspapel Treofan America, Inc.

Triton International Enterprises

UPM Raflatac

VPF GmbH & Co. KG Wausau Coated Products, Inc.

Weber Yakasan A.S. Yenom

Yupo Zhejiang Ouli Digital Inkjet Materials Co Ltd

Pressure-sensitive papers

Acucote

ADVENT AERO, d.d.

Aluminium Feron GmbH &Co. KG Appvion, Inc.

Arconvert

Arjowiggins

ATP Adhesive Systems AG

Avatack Co Ltd

Avery Dennison - Label and Packaging Materials Europe Avery Dennison do Brasil Ltda Avery Dennison Label and

Packaging Materials

AzCoat, Inc.

Baker Self Adhesive Materials

BeardowAdams, Inc.

Bella Kagit Bluhm

Boise Paper

Budaval AG

C.I ARclad S.A.

Cartonal Italia SpA, Release &

Label Paper Catalyst Paper

CCT (Coating and Converting

Technologies) Cerium Group Ltd

Cham Paper Group

Channeled Resources Group

Colacril Self-Adhesive Materials

Collano Adhesives AG

CSAT

Delfortgroup AG

Dilli

Discount Labels

Dunafin Kft.

Emax Label Solutions

EPS Materials

Flexo Label Advantage Group LLC

(FLAG)

Folien Fischer AG

Franklin Adhesives & Polymers

Frimpeks A.S.

Full Bond Tape Corporation

Gascogne Laminates

GBC

Globus International

Gombau Group

Green Bay

Greenstik Limited

Griff Paper and Film

Guangdong Guanhao High Tech

Co Ltd

Hansol Paper Co Ltd

Herma GmbH

Icap-Sira Chemicals And

Polymers Spa Infinity Tapes

Intercoat

Italnastri S.p.A Italstick Self Adhesive Materials &

Coatings

Japan Pulp & Paper

King Label Adhesive Products

Co., Ltd

KK Enterprise Co., Ltd.

KK Label Co., Ltd.

Lecco Industries Ltd **LECTA**

Lenzing Plastics GmbH LINTEC Corporation

Maan Engineering B.V.

Mactac

Manter

Masterpiece Graphix

MAX International Converters Inc

MDV GmbH

Mitsubishi HiTec Paper

Mondi Akrosil, LLC

MSM

NAStar Inc.

National Paper Company Neptun Technologies GmbH

Non-Stop Label Co.

Oracle Paper Group Inc Paper Resources, Inc.

Perez Trading Company

Phoenix Packaging/Premier Cuts Polykote Corporation

Premier Coating & Converters

Print-O-Tape Inc Printum UV

Proma Technologies

PURE Labels (Elevate Packaging,

Inc) QSPAC Industries, Inc

QuickLabel Systems

R Tape Corporation

RayPress Corporation

Rayven, Inc

Repacorp, Inc. Ricoh

Ritrama.

SAELIM CO., LTD.

Sales Srl

Sappi

SAScoat

ScandStick AB Shanghai Jinda Plastic Co., Ltd. Shenzhen Moma Technology Co.,

SMI Coated Products Smith & McLaurin Ltd

Solutia Singapore Pte Ltd Spinnaker Coating

Stic on Papers Pvt Ltd

Strata-Tac Stratos

Tamperguard Tech-Melt Adhesives Ltd.

Technicote, Inc.

Tenza Technologies Ltd Thai KK Industry Co Ltd

Thilmany Papers
Torras Papier GmbH

Torraspapel

Trinity Graphic USA Inc

Triton International Enterprises

UPM Raflatac

Vacmet Packagings (India) Pvt Ltd

VPF GmbH & Co. KG Wausau

Weber

Weldon Celloplast Limited

Xpedx

Yakasan A.S.

Yenom

Zhejiang Zhongjia Technology

Co Ltd

Pressure-sensitive tapes

3M Mexico

ACHEM Industry America, Inc. acpo, ltd

Aluminium Feron GmbH &Co. KG ATP Adhesive Systems AG

Avatack Co Ltd BeardowAdams, Inc.

Bella Kagit

Ben Clements and Sons, Inc./ Tach-It

Bi.Esse Adesivi S.p.A

Brady

C.T. Graphic Arts Captain Inc

CCT (Coating and Converting

Technologies) Cerium Group Ltd

Cham Paper Group Channeled Resources Group CMC Klebetechnik GmbH

Collano Adhesives AG Conversource Inc.

CPD the Coated Products Division of PCI

CT Graphic Arts

Cytec Engineered Materials

Dantex

DELTAPAK B.V.

Dilli Discount Labels

Distribuidora Gráfica Novaro, SA

de CV.

Edward Graphic

EPS Materials Expert Stephan Heuser GmbH &

Co. KG

Finjetchemical Industries Ltd Flexcon

Folex AG Forbo Bonding Systems

Franklin Adhesives & Polymers Fujifilm North America

Corporation

Full Bond Tape Corporation **GBC**

Green Bay Packaging Inc. Greenstik

Icap-Sira Chemicals And

Polymers Spa Infinity Tapes

Innovative Adhesives Italnastri S.p.A

King Label Adhesive Products

Co., Ltd

KK Enterprise Co., Ltd. Lecco Industries Ltd

Lenzing Plastics GmbH

LINTEC Corporation

Lohmann

Maan Engineering B.V.

Metagalaxy Industries Co., Ltd.

Momentive Performance

Materials

Mondi Nadco Tapes & Labels, Inc Pantech Tape Co., Ltd

Paper Resources, Inc. PEACE Company

Pitman Company

Polykote Corporation Polyonics

Premier Coating & Converters **Print Products** ProFlexo International

Proveedora Flexografica

OSPAC Industries, Inc. R Tape Corporation

Ritrama Rogers BVBA

Rogers Corporation Seal King

SECUTAC Self Adhering Products Shanghai Realtac Trading

Company Ltd Solutia Singapore Pte Ltd Specialty Tapes LLC

STA, LLC

START International Stic on Papers Pvt Ltd

Strata-Tac

Stratos

Taiwan Regional Association of Adhesive Tape Manufacturers

Tamperguard, Tech-Melt Adhesives Ltd.

tesa Thiollier

UV Graphic Technologies Pvt. Ltd.

(formerly GTI)

Wausau Coated Products, Inc.

Weldon Celloplast Limited

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AM-PG Group

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Comercial Arquè, S.A. Dorey Converting Systems

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Products Co., Ltd StarTrack Europe v.o.f.

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Release liners 3M Industrial Adhesives & Tapes

AERO, d.d. Ahlstrom > see Munksjö Applied Rigaku Technologies, Inc.

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Boise Paper Cartonal Italia SpA, Release & Label Paper

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Colacril Self-Adhesive Materials COSMO FILMS LIMITED

Coveme S.p.A Crown Van Gelder B.V. D&K Coating Technologies, Inc

Delfortgroup AG Douglas Hanson Co. Dunafin Kft.

Yearbook 2019

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UPM-Kymmene Corporation Verso Wacker Chemie AG Wausau Paper Corp. Weldon Celloplast Limited Wenzhou Protec Vacuum Metalizing Co Ltd Yenom Pte. Ltd. Zhejiang Ouli Digital Inkjet Materials Co Ltd Ziegler Papier AG

Roll handling equipment

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Contiweb

CONVERPACK Benelux B.V. Core Systems International CTC International, Inc. CTS Industries

Daco Solutions Ltd

Dilli Dima Dimuken (GB) Ltd Dorey Converting Systems Double E Company DSF Fife-Tidland GmbH FLEXOR (EMIS) Ltd Holtby William's International Karl Menzel Maschinenfabrik KOR Engineering Inc. KTI- A Quantum Design Company Labeltech

Lemu Talleres SA LPP Ltd M A Supplies Group Maxcess Mona Equipments NeuraLabel Printing Solutions Onemech Industries CO.,PTE LTD PRACMATIC Maschinenbau Ltd Precision AirConvey Corp Print Products Quality Discount Press Parts & Equipment Reconcile Engineering Ltd. Rotary Systems Ltd. Sermar Machines Srl SRC Systems Limited Stratis Roll Pallets Svecom TAWI AB

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Screen printing equipment

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(formerly GTI)

WEIGANG Machinery

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Zeller+Gmelin

TerraSkin®

Thilmany Papers

Test Supplier | Enhanced

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Univacco Technology Inc.

Security materials

acpo, ltd

Acucote

Aluminium Feron GmbH &Co. KG AM-PG Group

Angstrom Technologies Inc

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GmbH Folien Fischer AG

Globe-Tek Corporation Guangzhou Manborui Material Technology Co Ltd Hanita Coatings Holostik India Ltd

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Seal King SECUTAC

Seibert - PFV Sihl GmbH

Sixtrue Srl

Smart Tab Products Limited **SPGPrints**

Tamperguard

TESLIN Substrate by PPG Industries

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Spartanics Suntech & Ko LLC Tangshan Wanjie Europe

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Plastic Suppliers Incorporated Pro Pack Group QSPAC Industries, Inc

Repacorp, Inc. SECUTAC.

Sidaplax Sustanium Taghleef

Taizhou Newtech Film Co Ltd Test Supplier | Basic TGW International Inc. Treofan America, Inc.

Triton International Enterprises

Silicone release coatings

ACHEM Industry America, Inc. Actega Radcure, Inc.

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adphos Digital Printing GmbH Applied Rigaku Technologies, Inc. Ashland Bluestar Silicones

COMPONEX INC Douglas Hanson Co. Dow Corning

Ecology Coatings ETI Converting Equipment

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GARWARE POLYESTER LTD. Genus Marketing Services (P) Ltd.

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Paragon Polinas Plastik QSPAC Industries, Inc Rayven, Inc

Rossella S.r.L. Royal Adhesives and Sealants Saint Gobain Performance

Plastics Siliconature Squid Inks AG (Ltd.) Stic on Papers Pvt Ltd Sunliky Industry Limited Test Supplier | Basic TLS Anilox GmbH

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Sleeve systems

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Yenom

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Dantex DCM USIMECA

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Gilbreth Glunz & Jensen Goss International

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Tech Sleeves TLS Anilox GmbH Ungricht

Vianord Engineering SAS Xymid, LLC Zecher GmbH

Splicing equipment

A&M Kinzel Siebdruckmaschinen Berkeley Machinery Brenna Srl **BST eltromat International**

GmbH CMC Klebetechnik GmbH Contiweb

CTC International, Inc. Davis-Standard, LLC Dover Flexo Electronics, Inc. DSE Erhardt + Leimer GmbH FAES AG

Kirk-Rudy, Inc. KTI- A Quantum Design Company Martin Automatic Inc Pasquato SNC Self Adhering Products

Serame

TGW International Inc. VAN ZALINGE Benelux B.V.

Static elimination systems

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Airtrim, Inc. Berkeley Machinery Boussey Control Europe Brady Corotec Corporation DELTAPAK B.V. Doyle Systems (formerlyJE Doyle Co.) DRAABE Humidification Eltex Elektrostatik GmbH **Euroto Limited FCT Corporation** Fraser Anti Static Techniques Ltd General Magnaplate Hamamatsu Photonics Husson Inc. lemmco. LLC KFIVA KERSTEN Elektrostatik GmbH Meech MKS, Ion Industrial Precision AirConvey Corp Proact Converting Equipment Rycobel NV SDI Simco Spengler Electronic AG Static Clean International StopStatic.com division of Alpha Innovation . Tantec Inc. Teknek UV Process Supply, Inc.

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Thwing Albert Instrument Company Unilux uv-technik meyer gmbh VAN ZALINGE Benelux B.V.

Thermal transfer ribbons

X-Rite Europe GmbH

VivaCasa

Voyantic Ltd

Webscan Inc

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Columbia Comercial Arquè, S.A.

Continental Datalabel Dai Nippon Printing Co., Ltd. Dakota Integrated Services DaLian Fujisan Office Equipment DNP Dynic EÁSYLABEL Europa Emax Label Solutions Etilux Etiquetas Adesivas Ltd Etiquetas Brasil Ltda Etisoft Eurocoding Eurolabels Ltd FAES AG Far East Yu La Industry Limited Fuji Copian (UK) Ltd Gencler Kirtasiye Tic. San Ltd Sti General Srl CODEX Graphic Marking Systems Gulton Inc. H.S. Industries Co., Ltd

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Hu Zhou HengXin Label manufacture Co Ltd

Huzhou Siny Label material Co., IIMAK Inkstar Office Appliance Factory

of Tianjin Interactive Coding Equipment (ICE)

ÌTD S.r.l

Jiaozuo Zhuorim Digital Material

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Track and trace solutions

Zhejiang Hengfeng Packing Co

AlpVision AM-PG Group Angstrom Technologies Inc Appvion, Inc. Atlantic Zeiser ATT Advanced Track & Trace Avery Dennison - Label and

Packaging Materials Europe Axode **BEL Computer Systems** Bluhm Brady cab Technology, Inc. CCL Package Label SNC Computer Productivity Services Computype Covectra Europe Limited Crown Roll Leaf, Inc. D.P.R. Labeling, LLC Dakota Integrated Services Datalase Inc. De La Rue Digimarc Corporation Digital Print, Inc. Dima **DOMINO** Dynic Eaglewood Technologies/Sani-Blast Eastman Kodak Company EMERY WILLED SLU **EMWI Group** Fasver Felins USA FLEXcon Company, Inc. Formyflex GBC (Speciality Chemicals) Ltd Gemini TRAZE RFID Pvt Ltd Globe-Tek Corporation Graphi Mecc srl GSE Dispensing Hewlett-Packard Company Holostik India Ltd Hunkeler AG IIMAK ImTech Inc. InkSure Technologies Inc. Interactive Coding Equipment (ICE) ITD S.r.l ITL Group Iakob Müller AG Iordan Products Inc. Jura JSP GmbH Lake Image Systems Longford International Ltd Lowry Computer Products, Inc. Monotech Systems Ltd, Mühlbauer GmbH &Co. KG Multifeeder Technology Inc NiceLabel Nikka Research Deutschland GmbH Orell Füssli Security Printing Ltd Pap'Argus Paul Leibinger GmbH & Co. KG Paxar/Avery Dennison PCM Image-Tek Pelikan Hardcopy Scotland Ltd PolyIC GmbH & Co. KG Polyonics Premier Coating & Converters Printing Technology Services, Inc. Prooftag

Prototype & Production Systems, Inc./ DICE Graphic Technologies

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Rolling Optics

Sekuworks, LLC

Seal King

QIPC-EAE Americas

ProFlexo

Shanghai Fudan-Techsun New Technology Co., Ltd. SICPA SA Sixtrue Srl SoftSolutions, Inc. StarTrack Europe v.o.f. SURYS, the new name for Hologram. Industries Trace.IT - gestão e consultoria, s.a. TraceTag International Ltd UBIQUE.TAG VanDerEng BV VINSAK Weber

Trade associations

AIMCAI Associação Brasileira das Indústrias de Etiquetas Adesivas Berkeley Machinery Datum Colour Print (Hatfield) Ltd DiTrolio Flexographic Institute Inc Febelgra FINAT Flexo Label Advantage Group LLC (FLAG) Flexographic Prepress Platemakers Association Flexographic Technical Association (FTA)/FLEXO Magazine Foil & Specialty Effects Association (FSEA) Hologram Manufacturers Association of India (HoMAI) Institute of Packaging Professionals KVGO Labelexpo Global Series LMAI - Label Manufacturers Association of India Picon Product & Image Security Foundation Tag & Label Manufacturers Institute, Inc. (TLMI) Tag and Label Manufacturers Institute Taiwan Regional Association of Adhesive Tape Manufacturers **UL LLC** UNFEA Universal Print Partners

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A&M Kinzel Siebdruckmaschinen

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Trade press

Yeuell Nameplate & Label

Printabl FD PrintConcept UV-Systeme GmbH

Kompac Technologies

Lamp Tech

Mark Andy

Miltec UV

Phidastien

Primarc

Print Products

Lipi és társa Bt

Kühnast Strahlungstechnik GmbH

m print morlock gmbh co. kg

Noritsu America Corporation OnLine Energy UV Systems

PCT Engineered Systems LLC

Pagendarm BTT GmbH

Phidastien International

Prime UV Systems, Inc.

Phoseon Technology

Printum UV ProPhotonix Quartz Lamps Inc Quartz Link Ltd R.C. Lamps S.n.c. / VTI Rotary Die Company Sp. z o.o. Runwing Co. Ltd Ruttiman Trade AG Shun Zhe (Shanghai) Mechanical & Electrical Technology Co Ltd Sign Tronic AG Southern Lamps Inc SPDI Inc Starna Industries Ltd. TCS Technologies Tec Lighting, Inc. Toc Maquinas Industriales SA De CV U.V. Reflection Ultralight AG Ushio UV Graphic Technologies Pvt. Ltd. (formerly GTI) UV Process Supply, Inc. UV Ray S.r.l uv-technik meyer gmbh Uviterno AG XDS Holdings, Inc. XericWeb Drying Systems

Printing Technology Services, Inc.

Used and rebuilt presses

A&M Kinzel Siebdruckmaschinen AAA Press International, Inc. Belfar Ltd Berkeley Machinery Carltek Industries (Taiwan) Corp. DG Press DRI-TEC UNLIMITED LLC Drilling Tech Services/POPPS DSE FlexoExport Ltd Gallus Ferd. Rüesch AG GB Flexo Equipment GIETZ AG Global Graphic Equipment Ltd Gonderflex International Inc, Graficon Maschinenbau AG Grafitec Web Ltd Graphic Innovators Inc/ Lighthouse Consulting & Restoration Services GRAPHIMAT -LABELPACKMACHINE GraphixOne Corp. GSM Graphic Supplies & Machinery Ltd H.C. Miller Press Holtby Williams International J&J Converting Machinery J. Zimmer Maschinenbau GmbH **KPG** Label Industry Consultants (& Machinery) Ltd Labelform Graphics Ltd LPP Ltd LS-Int.com Ltd Mainplate Controls MAM - Machines & More Mark Andy Maschinen Frommer GmbH & Co. KG McKay OnLine Energy UV Systems

Polygraphica Equipment Ltd

Quality Discount Press Parts & Equipment Reel To Reel International Ltd Reynders Label Printing Rhein Sleeve GmbH Roberts Graphics Ltd Ruttiman Trade AG STOMA GmbH Styers Equipment Company

Thomson National Press Co VIP/thermal materials 3M Industrial Adhesives & Tapes Adesivos e Papéis Especiais RR Itda. AERO, d.d. Afinia Aluminium Feron GmbH &Co. KG Appvion, Inc. Arconvert Arjobex/Polyart ARMOR Avatack Co Ltd Avery Dennison Baker Self Adhesive Materials Bella Kagit Bluhm Bostik SA Brady BTS Industries (S) Pte Ltd C.I ARclad S.A. Cham Paper Group Channeled Resources Group CleaningCard.com Colacril Self-Adhesive Materials Continental Datalabel Contract Converting, LLC Coveme S.p.A Dakota Integrated Services Data Label Diversified Tape & Graphics Inc DURICO C&T, INC Etiquetas Brasil Ltda Fangda Packaging Co., Ltd. (Hebei, China) Frimpeks A.S.

Gilbreth Greenstik Limited Guangdong Guanhao High Tech Co Ltd Gulton Inc. H.S. Industries Co., Ltd Hanita Hansol Paper Co Ltd Herma GmbH Hollingsworth & Vose Company Huzhou Siny Label material Co., Ltd Idea Paper Innovia Films

ITL Group Japan Pulp & Paper Jujo Thermal Ltd. Kanzaki Specialty Papers KANZAN Spezialpapiere GmbH **KDS** KICTeam KK Label Co., Ltd. KWH Plast Ltd Lecco Industries Ltd **LECTA** Lintec (Suzhou) Tech Corporation LINTEC Corporation Lintec

Mactac

Madico Inc

Manter Mark Products Corp Masterpiece Graphix Matthias Paper Corporation Mitsubishi HiTec Paper NAStar Inc. Nastrificio di Cassano SpA National Paper Company NuCoat Inc Oracle Paper Group Inc Papeteries du Pont de Claix Perez Trading Company Phoenix Packaging/Premier Cuts Polyonics, Inc Print On Labels Print-O-Tape Inc PURE Labels (Elevate Packaging, Inc) Ribbon Ltda

Ricoh Ritrama

RK Siebdrucktechnik GmBH Rolling Optics S&K LABEL spol. s r.o. SAELIM CO., LTD. SAScoat SATO Seibert - PFV Shanghai Jinda Plastic Co., Ltd. Shenzhen Moma Technology Co.,

Sihl GmbH

SMI Coated Products

Smith & McLaurin Ltd
Spandex Group
Star Coating AG
Stic on Papers Pvt Ltd
Systems Print Media Ltd
Tech Folien Ltd
Technical Coating Intl
Technicote, Inc.
TODAYTEC Thermal Transfer
Ribbons
Tollgate Labels
Torras Papier GmbH
Torraspapel
Twin Rivers Paper Company
UCA

UPM Raflatac

Verso Specialty Papers
Wabash Coated Papers
Weber
Yakasan A.S.
Yenom
YINHUA Printing Technology
Co.,Ltd
Zhejiang Hengfeng Packing Co

Waste management and handling systems

Airtrim, Inc.
Alltrade Recycling Equipment
Andantex USA Inc
Berkeley Machinery
Blower Application Company
C.A. Litzler Co., Inc.
CTM Systems Inc
Daven Industries
DSE
Fives North American
Gerhard Bartling GmbH Co KG
Grafikontrol North America
Impact Air Systems
International Surface
Technologies

IRAC Srl
Kongskilde Industries A/S
KTI- A Quantum Design Company
LPP Ltd
Lundberg Tech A/S
Matho GmbH
Precision AirConvey Corp
QuadTech Inc.
SoftSolutions, Inc.
Trim Waste Management, LLC
Universal Print Partners
VAN ZALINGE Benelux B.V.
Weldon Celloplast Limited

Web cleaning systems

A&M Kinzel Siebdruckmaschinen ACE di Barbui Davide & Figli S.r.l Advanced Machinery NV Agfa Graphics Ahlbrandt System GmbH Archem S.R.L Berkeley Machinery Boussey Control Europe Doyle Systems (formerlyJE Doyle Co.) ECO Industry USA Erhardt & Leimer Euroto Limited Fasnacht+Co AG FCT Corporation Fife Corporation Flexo Wash LLC Gardall Manufacturing Corporation Greenstik Limited Hurletron Inc. International Surface Technologies IRAC Srl Jemmco, LLC KELVA LPP Ltd Meech New Eurografica SRL ORTHOTEC, WAN AN PRECISE MACHINERY WORKS CO., LTD. PolymagTek Inc. Proact Converting Equipment SDI Simco (Nederland) B.V. Simco-Ìon Simco-Ion/Teknek Solutions Graphiques Spengler Electronic AG Static Clean International StopStatic.com division of Alpha Innovation Innovation Tantec Inc. Teknek Wandres Weldon Celloplast Limited Yieldmax Limited

Web guiding and tension

control Accraply

AccuWeb, Inc.
ACE di Barbui Davide & Figli S.r.l
Advanced Machinery NV
Aghili Drucktechnik
Altec Vision Equipment
Andantex USA Inc
Berkeley Machinery
BST eltromat International
Cleveland Motion Controls

Coast Controls, Inc. Comptrol, Inc. Contech CTC International, Inc. **Datacon Technology** Dorey Converting Systems Double E Company Dover Flexo Electronics, Inc. Erhardt & Leimer, Inc Erhardt + Leimer GmbH Fife Corporation Fife-Tidland GmbH Fives North American FMS USA, Inc. Focus Label Machinery Hiflex GmbH Innolutions, Inc INOMETA GmbH Kar Ming Industrial Supplies Co Karl Menzel Maschinenfabrik KROENERT KTI- A Quantum Design Company Mach III Clutch Inc MAGPOWR Mainplate Controls Martin Automatic Inc Maycess MBO America Menzel Vision Systems **MEROBEL** MKS. Ion Industrial Montalvo (Shanghai) Trading Co Ltd Montalvo NDC Infrared Engineering NIRECO EUROPE / CALGRAPH Onemech Industries CO.,PTE LTD Pasquato SNC Perfecto Web-Control Pvt Ltd Quality Discount Press Parts & Equipment Re S.p.a. Controlli Industriali

Roll-2-Roll Technologies LLC

Selectra Srl
Solutions Graphiques
Stratis Roll Pallets
Tecscan Print Inspection Systems
Telstar Engineering Inc.
Tidland
Vacuumatic Ltd
Webex

Wraparound films

Beijing Yongshengyunjia Wrapping Materials Co Ltd BESEL Flexpol Sp. z o.o GARWARE POLYESTER LTD. Globe-Tek Corporation Interactive Coding Equipment (ICE) Ìtochu Deutschland GmbH Jindal Films Europe Jurmet Sp. z.o.o. Sp.K. Leonardus S.r.l - Italy Manucor Spa MAX SPECIALITY FILMS LIMITED (A Subsidiary of Max Ventures &Industries Limited) Multi-Plastics, Inc. OKI Europe Ltd POLIBAK PLASTIK FILM SANAYI VE TICARET A.S. **ROCHEUX INTERNATIONAL**

Sustanium

Synthogra **Taghleef**

Taizhou Newtech Film Co Ltd
Tamerica Products, Inc.
TGW International Inc.
Treofan America, Inc.
Zhejiang Zhongjia Technology
Co Ltd
Others,NO CATEGORY
EP Digital Sdn Bhd
Laserclean
Shanghai Aurora printing
equipment Co.,ltd



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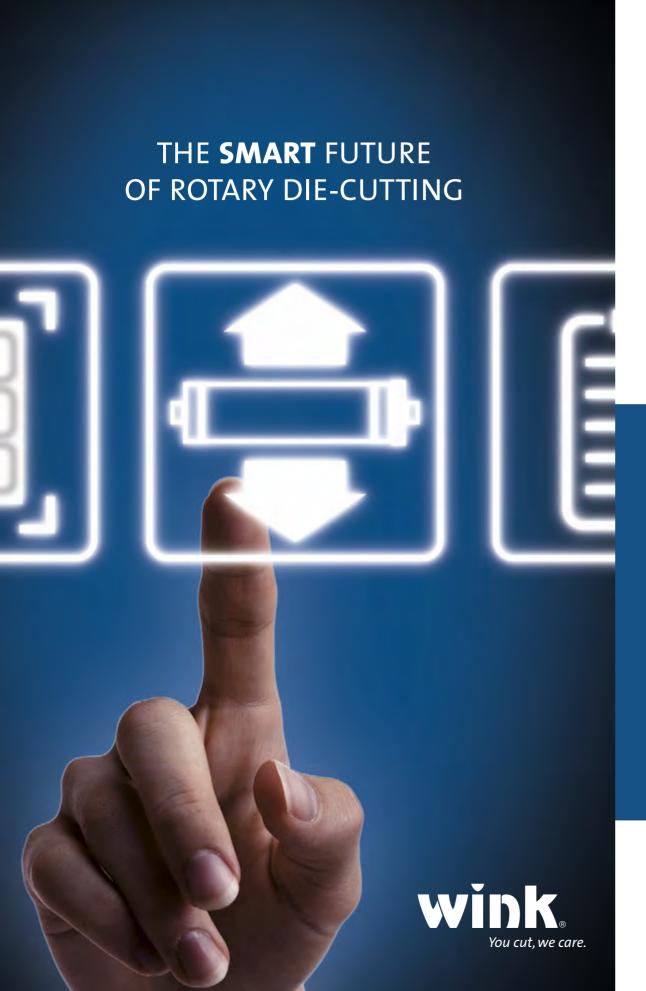
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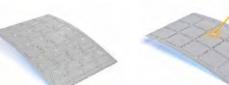


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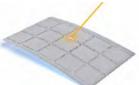




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Cost savings through increased tool life, shorter changeover times and less waste

✓ No limitations

Unique stability allows for flawless cutting-through and high web speeds

Smart **X**Gap. **Touch**

New version with digital control and many additional features for increased production efficiency. Learn more at www.wink.de/smartgap



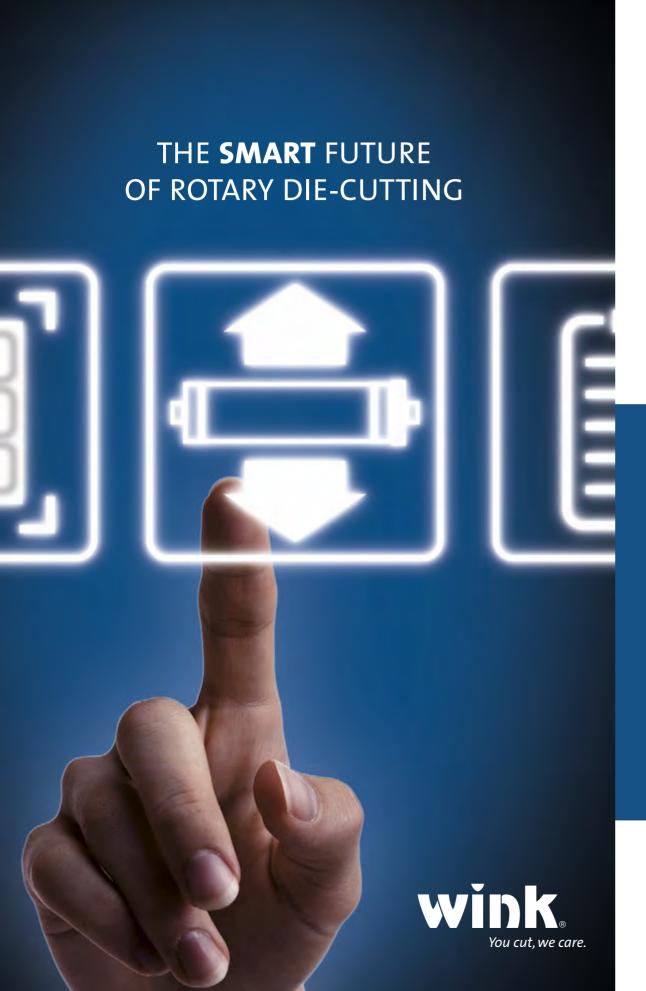




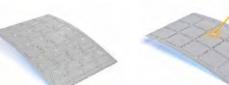


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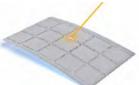




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ADJU**STABLE** ANVIL SYSTEM

- ✓ easy gap adjustment with maximum precision
- ✓ optimum die-cutting results on any material
- ✓ trouble-free processing of ultra-thin liners
- \checkmark increased tool life and overall efficiency
- \checkmark very stable and low-maintenance system
- ✓ well-suited for cutting-through and high web speeds

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