

Flatbed and Rotary Die-cutting

An update report by Daniel Brunton

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(Contd. from last issue)



Die-cutting and stripping

From Bao-Der Enterprise Corp of Taiwan comes the BD-1050 C and BD-1050 CS (stripping). Features of these flatbed automatic die-cutters include:

- LCD screen dialogue window displays with recording and setting functions
- Maximum sheet size 1,050 x 750mm
- Minimum sheet size 400 x 370mm
- Steel cutting plates purchased from West Germany
- Handles from E flute up to 4mm corrugated
- Maximum machine speed 7,500sph

The company are currently seeking agents in Western markets to continue their marketing strategy to increase exports in the coming years.

Sumo in the UK

Already well established for the supply of machinery from the Far East, having supplied over 100 TCY machines to the European market, ID Machinery of Milton Keynes, England, offer a semi-automatic die-cutter.

The MIDAS/SUMO machine is ideal for the short to medium run die-cut sector, traditionally catered for by the hand fed platen. With a maximum sheet size of 1820 x 1220mm and a weight of 23 tons, the machine is manually fed making it easy to feed both warped board and irregular sized board.

From the automatic rising feed table, the operator feeds the sheets in to a gripper bar assembly with double action register for accurate feeding. The sheet is then transported in to the die-cut station that is controlled by a robust crank assembly providing up to 400 tons of diecutting pressure. The forme is mounted via the traditional side loading system and is quickly located with the centreline set.

A full stripping station is included with the option of centreline 1 and 2 to facilitate even shorter set up times. The die-cut sheet is then stacked in a non stop lowering delivery section with side squaring to ensure a well stacked pile.

The machine is fitted with three touch screen PLC's at all operator points and includes full fault finding. All electrical and electronic components are quality Japanese brands but can be substituted for European brands if the customer prefers.

To ease maintenance, the machine is equipped with a centralised motorised lubrication system and all main parts are easily accessible for checking and cleaning. A service schedule is available with the machine and the first year's service is included, along with a variety of first line spare parts.

The machine is naturally fully guarded and CE marked to comply with all UK safety requirements and as with all machines from ID Machinery is supplied delivered, installed and with full operator training as part of the package. With set up times of under 5 minutes and speeds of up to 3,500sph, coupled with the full spares and service support, the machine is the ideal choice for any plant looking to improve its die-cutting efficiency.

Two models

Shanghai SR Pack Machinery Co Ltd of China market two automatic flatbed diecutters – models AD-1500 and AD-1650. Both models (1500 x 960mm and 1650 x 1100mm) can incorporate stripping. Other features include: lead edge feeder; transfer table for corrugated and laminated board; maximum pressure of 400 tons; quick set up with centreline and operate at speeds of 4,000sph.

Modular WOOK IL

The WTNS series of flatbed die-cutters from WOOK IL have been further developed and improved over the last 12 months and Andrew & Suter Ltd, the agent for the UK and Ireland, advise that the advances now made ensure that these machines are amongst the best on offer.

Versatility is the key word for the WOOK IL die-cutters. The Korean engineers with European help and additions have produced a range of machines that will compete with any on the market and there has been no compromise on the quality of workmanship.

The WTNS range is available in six sizes, covering 1300, 1500, 1700, 1900, 2100 and 2500. The machines are produced in four formats for each size, starting with the WTNS, which is a semiautomatic machine without stripping. The WTNS-S offers full male and female stripping other than the lead edge, with the WTNS-SS providing full stripping including the lead edge. All of the first three formats are semi-automatic with a pile delivery system.

The range is completed by the WTNSSSF version. This is a fully automatic machine with lead edge feeder for high

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productivity that can be supplied either as a dedicated fully automatic unit or as a dual automatic and semi-automatic machine. In the dual state the automatic feed unit can be moved back on rails, allowing the machine to then be used in a semi-automatic mode. This is achieved by a quick release system and no parts have to be fitted.

The combination option gives the user one of the most versatile machines on the market as it can be used to die-cut all grades of corrugated from micro flute up to double wall as well as plastic corrugated, solid board, cartonboard, foam backed materials and many more.

This combination option provides the converter with the choice of being able to purchase a WTNS-SS version and to add the automatic feed unit at a later date, when the work mix requires this choice. Options are also available to enhance the machines and these include, automatic or semi-automatic pre-loaders, batch delivery system instead of the pile delivery unit, cameras with monitors to help the operator view the board passing through the machine, a touch screen with full diagnostic system and finally an automatic pallet dispenser unit.

ROTARY DIE-CUTTERS

Gold award for Göpfert

The new Göpfert double die-cutting unit for the direct driven RDC Evolution-HBL was awarded the Gold Award for Innovation by a jury of the European Federation of Corrugated Board Manufacturers (FEFCO) who were impressed by the solid German design and the innovative machine concept.

Two complete die-cutting and anvil cylinders are mounted in a large rotating support drum. This is the logical extension of the HBL principle, which already offers set while running on the print units. During production, the die for the next order can be pre-set by the operator in a safe position from the factory floor. The die is changed at chest height while the material flow of the current order runs at a height of 2.20m. The changeover to the pre-set die-cutting cylinder takes only two minutes and is fully automatic, once it is activated. Five of these double die-cutters are already running successfully in production and three more are on order.

The success of the Evolution (over 140 installations so far) is due to its true direct drive concept. Every axis has its own



Göpfert high board line die-cutter.

servo motor. In addition to this, the vacuum transport, with long lasting high friction belts provides consistent, accurate board transport. Die-cutting accuracy is excellent and the independent servo drives give the operator the ability to easily fine tune the dimensions in case of tooling errors. As standard, the drives automatically adjust the speed of the anvil cylinder to compensate for the new diameter after grinding.

Because the machine is not only a first class die-cutter but also a high graphics flexo printer, customers have specified it with up to eight print units. In addition to a number of highly sophisticated machine options, the Evolution can be equipped with any type of sheet dryer and an ejection unit allows sample sheets to be removed on the run.

In combination with the zero-feed interrupt stacker EVO-Stack, (which is available either for bundles or stacks), Göpfert is able to provide a bottleneck free die-cutting line. Machine reliability is ensured through the company's high standard of engineering and the use of internationally known component suppliers. Spare parts are readily available all over the world. Remote diagnostics with a 24 hour Hotline service, a large spare parts store and multilingual staff means that plant managers can be sure of maximum machine availability.

Accuracy, flexibility and performance

Martin (Bobst Group) has developed a complete range of innovative and productive in-line corrugated rotary diecutting solutions offering short set-up times and high quality flexographic printing. More than 365 Martin DRO lines are now running worldwide.

DRO 1628 GT (66"): the 'plug and play' DRO solution, featuring feed-belt feeder, high performance bottom flexo printing units with vacuum transfer and a 66 x 110" gear train rotary die-cutter. Ideal for long run orders. Quick and easy to install.

DRO 1624/28/32 NT (66"): high performance mobile DRO with independent drives, a servo driven machine with excellent register accuracy and precise die-cutting. Designed for high graphics applications, it includes in-line varnishing and drying. It also features a new direct drive feeder, full vacuum



Martin DRO 1628 NT HBL.



transfer, extended transfer space between flexo units, closed inking circuits and dust collection system.

Based on the same technical platform as the DRO NT machine, Martin has developed a fixed machine concept allowing shorter set up times. The DRO 1624/28/32 NT Rapidset (66") is a high performance Rapidset DRO with pit. A real Rapidset concept (set up during the run) is achieved, thanks to pits under the flexo units offering easy and quick access to the printing units.

Some markets are demanding even more flexibility and higher printing quality (anilox roll change from one order to another). To answer these demands, the company has developed a High Board Line machine, the DRO 1624/28/32 NT HBL (66"). It offers set up while on the run and easy access to printing units (convenient for large printing stereotypes). This machine offers greater flexibility in terms of board grades as a result of the automatic anilox roll changeover system.

Martin prefeeders, palletising solutions, and peripheral equipment are available to maximise the performance of all Martin DRO lines.

Extendo for Jumbo

Rapidex (Bobst Group), is dedicated to the design of large size flexo converting machines with in line slotting and rotary die-cutting. These flexo folder gluers and printer slotter die-cutters have been developed for producing big boxes, made from the heaviest grades of corrugated board.

The Jumbo machines (Advanced and Rapidset NT) are available from 1600 x 4100mm (66" x 161") to 2200 x 5500mm (86" x 210") with a wide range of finishing options – die-cutting, folding, gluing/taping/stitching.

Meeting a growing demand to process ever larger sheets, all Rapidex Jumbo lines are available with full machine speed Extendo features. This technology, using independent servo motors, enables slotting and die-cutting of sheets up to 100" depth on a 86" Jumbo format. Each slotter shaft is equipped with one independent servo drive, as is the rotary die-cutter. Therefore, the Jumbo is able to produce at a speed of 6,000sph in Extendo Mode.



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Position and speed of the slotting shafts and the die-cutting cylinder are controlled. After the first die-cut, the die cylinder slows down to let the board pass through the machine and then reaccelerates to die-cut a second time in register at the same tangential speed as the sheet. Furthermore, Extendo technology applied on two independent slotting shafts enables substantial make ready time saving. There is no need to open the machine to change the knives to modify the slot length. All tools are positioned automatically.

New generation

The new generation Isowa FD-71 rotary die-cutter is well respected for its high productivity, trouble-free running and production of high quality print and diecut boxes. The die-cut unit is independent from other units and is driven by its own independent motor. Features of the line include:



Isowa Rotary Diecutter.

- Instant ink recovery and washing time.
- Chamber doctor blade with automatic viscosity controller function
- Steady sheet travel without skew, thanks for vacuum transfer system
- High production speeds
- Independent direct drive of the die-cut unit

Available as 2100 x 2700mm wide, these bottom print die-cutters can be supplied with up to four colours, offering quality print to meet the demand for point of sale and value added packaging. The FD-71 is designed to be most efficient, saving valuable man hours in all aspects of setup, clean-up and maintenance, while being fully computerised to control the short time-set-up. As an optional feature, a dryer unit is available for the last print unit.

Direct Drive version is new

The Curioni 'Plus Series' rotary die-cutters are proving to be an excellent choice for box makers around Europe. Over the last two years, more than 10 machines have been successfully installed. Productivity and printing accuracy are key features shared by all Curioni machines and this is ensured due to the heavy duty, accurate, construction of the machines. The company's latest development is the introduction of a Direct Drive series of rotary die-cutters.



The SUN Automation Extend-O-Feed, widely acknowledged as one of the best feeders available, has been installed as a standard on Curioni machines for nearly 20 years now. The improved Raffaello printing units can be supplied with a choice of inking options – traditional roll to roll, reverse angle doctor blade or closed chamber doctor blade. Whichever option is chosen, precision of shafts and rolls comes as standard.

The precision of print register, which is critical on machines designed to run multiple colour jobs, is further enhanced by the proven Suction Grip vacuum sheet transport system, which also prevents board crushing and provides kiss-touch printing performance. The sheet transport system is integrated and completed by a wide Split Process section, which prevents marking of the sheet generated by the cutting die and provides enough time for ink drying.

The heavy duty design of the rotary die-cutting unit suits the most demanding requirement of multiple shift production, even when running double wall board. It is also equipped with Synchro Drive, (a positive rotation control of the anvil), a grinding device for the polyurethane blanket and a fast die mounting system. A computer controls the machine and a large memory allows for pre-setting of the machine in an efficient manner.

The company's RDCs are available in 1350 and 1676mm repeat length with working width from 2200 to 3700mm for

traditional gear train machines, and in 1676mm repeat with working widths of 2400 and 2800mm for the new Direct Drive series.

Two versions

Avon, Ohio-based EMBA Machinery Inc offers a complete line of McKinley rotary die-cutters in both the traditional track opening style and the latest open architecture, high board line design.

The McKinley ColorStar™ is the company's high board line offering, consisting of fixed and separated vacuum transfer printing modules, and designed especially for high graphics and high output. It utilises independent electronic servo drives and has a fixed height board line of 84" (2.133 m) with a full 67" (1.7 m) of separation between print stations. This ensures that sheets are in contact with a single print section at a time. In addition to ensuring superior registration, this spacing also facilitates drying between print stations and provides ample space for third-party IR dryers.

The ColorStar™ is recommended for 100-line+ process printing. In addition, the fixed station design and high board line makes unused print sections available for set-up and anilox changes while the machine is running. It is available in 50" (1.27m) or 66" (1.67m) cylinder sizes, with machine widths of 80" (2.28m), 110" (2.79m), and 130" (3.30m). The machines are capable of producing high graphics at speeds up to 9,000sph.

EMBA's line of McKinley Premier™ rotary die-cutters are conventional open/close track operated machines. Offered in a broad range of standard cylinder sizes and machine widths, including flexo folder gluer die-cutting modules from 24" x 78" to 88" x 210", McKinley has a size to fit most needs. All machines are modular in design, allowing custom configuration and later expansion as needs develop. These configurations can include multiple flexo printing units, scoring capability, and a creaser/slotter section. Among many standard features are True Zero™ digital registration, EMBA ServoFeed™ lead edge feeder system and variable speed cutting anvil. Optional equipment includes vacuum transfer sections, automatic wash-up system, computerised set-up, and complete servo-driven electronic line-shafting.



Established partners

Dong Fang is one of China's leading manufacturers of printing and rotary diecutter machinery and one of the most respected companies in the Asian corrugated industry. In a relatively short space of time, thanks to the proper focus on market needs, Dong Fang has become a reputable, privately owned company. It is owned by the Tang family, with Victor Tang being President.

The most important machine series for international markets are the Topra and Apstar models, (top and bottom printing respectively). Both machine series come with many technical developments from the company's technical partners, SUN Automation. As a result of this collaboration, the machines are fitted with SUN lead edge feeder, MicroGrind, vacuum transport and the dual doctor blade systems. Both models can be supplied with up to five colours, with air dryers.



New from UK-based Crosland VK.

Dong Fang has quickly developed its international markets, mainly with the successful Apstar series. These machines are equipped with European-standard parts, as well as remote control cabinet, touch screen and modem for remote technical troubleshooting. They have a well established sales network, (with international sales accounting for over 50 per cent of the annual production) and representatives with after sales offices around the world, like Warak Consulting for Southern Europe and the Middle East, Goettsch for US, Latin America and Asia-Pacific areas and M&K Trading for the UK. Dong Fang is in the process of manufacturing a new, high quality, modular printing machine that will be available in the first quarter of 2008.

Largest in class

Tony Sullivan, Managing Director of UK-based Corserve Ltd comments, "The RotacuT all servo engineered rotary diecutter continues to replace conventional flatbed die-cutters in significant numbers for the manufacture of die cut corrugated sheets. The reason is that the patented technology adopted gives a number of advantages for the boxmaker such as excellent no edge trim registration accuracy, rotary speed and trim separation, a format size much larger than others in



it's class and the ability to extend die cutting beyond the set format to a staggering 3m x 6m for RSC's and wraps."

The RotacuT also handles a variety of materials without any additional adoption needed. This modern die-cutter shares little with conventional rotaries and is at the forefront of the latest work on 'adjustable plywood dies and off machine make ready'.

Rotary as well

Joining the range of flatbed machines produced by UK-based Crosland VK is a newly introduced rotary die-cutter that offers high speed, flexible die-cutting that is ideally suited to volume production. Up to six flexo units can be added allowing printing and die-cutting to be done in one operation. Both top and bottom print is available. High performance is combined with user-friendly features.

Second generation

EMBA Machinery GmbH of Lübeck Germany reports continued strong market interest in its second generation of Easy.Up programme – upgrades and retrofits for converting machines. The Servofeed is available for all machine types and will improve output as well as product quality. It provides more vacuum surface, better capability to run warped board and is easier to install than mechanical systems.

Easy.Up also includes a new vacuum transport system that provides accurate board transfer for perfect register from the front to the back of the machine. The system requires no set-up for order change yet provides perfect adaptability for each individual job.

The Harmonic Drive register gear box upgrade is now available with a digital B&R Servo drive that makes register accuracy easier to control and memorise. After completing an upgrade with a ServoHarmonicDrive and their new Vacuum Transport System, almost any rotary die-cutter can hold registration to within ± 0.5 mm.

Other components in the programme are ink-control-units, chamber blade systems and complete computer control upgrades.



The Deltastack, the current generation of die-cut stripper stacker, is also part of the upgrade products for rotary diecutters, increasing productivity as well as print quality. All upgrades for rotary diecutters and flexo printer slotters are manufactured in Germany.

Steel to Steel

The range of rotary die-cutters from TCY of Taiwan is well established – whether for specialist die-cut work, conventional die-cuts and vegetable trays or displays. Machines are available in sizes of 1600 x 2500mm, 1600 x 3000mm and 1600 x 3600mm.

The company also markets a rotary die-cutter using the concept of steel to steel die-cutting. Features of the machine include:

- Heavy-duty construction to avoid vibration
- Sun Lead Edge Feeder with sheet cleaner
- Printing units with vacuum transfer
- Vacuum transfer unit between last print unit and die-cutter to avoid vibration and ensure good register. The result is clean cut blanks.

Retrofits and new

Based in Italy, Wintek SpA markets a range of retrofit upgrades for existing converting machines (casemakers, rotary die-cutters, printer slotters and printing lines). Aimed at optimising the performance of most makes of converting machine, these retrofits can be completed on site at the customer's facility. Installation, commissioning, training and technical assistance are carried out by skilled engineers. The most successful retrofits include Winair and Wingrinding. The Winair vacuum transport system for existing print units eliminates use of pull collars and sheets guides. Advantages are:

- set up time reduction at order change (it is no longer necessary to adjust the pull collars and sheets guides, caliper and positioning)
- more precise and fast sheet transport even with warped corrugated board
- printing quality improvement (printing pressure reduction, elimination of any colour streaking)
- printing register improvement
- sheet lateral trim saving
- ease of operation
- quick return on investment.

The Wingrinding device (based on a reliable solution successfully applied for a number of years on standard Wintek/SUNRISE converting lines) allows grinding of the RDC anvil cylinder to be undertaken quickly – during the time necessary for an order change or with the machine running. More frequently removing a minimum of polyurethane across the full width of the anvil cylinder results in extended blanket life, while keeping die-cutting quality and precision constant. The

Wingrinding device can be supplied as an additional component for a new machine or as a retrofit on existing installation.

Wintek SpA is also the exclusive distributor in Europe for the range of Wintek Sunrise converting machines that include Casemaker Series 37 (available in sizes of 950 x 2200 – 2500mm), Casemaker – Flexo Printer Slotter Series 50 (available in the sizes of 1270 x 2700 – 2900mm), Rotary Die Cutter Series 66 (available in sizes of 1676 x 2000 – 2800 – 3300mm) and Flexo Printer Slotter Series 66 Large (available in sizes of 1676 x 3600 – 4000 – 4300mm).

These European concept machines are the result of a technical and industrial alliance between Wintek and Sunrise Pacific of Taiwan. All machines are of solid construction and are equipped in their standard version with Sun Automation 'Extend-O-Feed', vacuum transport through the print sections, bottom flexographic printing system with dual doctor blade, vacuum transfer unit between the print section and the die-cut section, variable speed anvil for die-cut accuracy in the rotary die-cutter and computer control.

Machines are manufactured partly in Taiwan by Sunrise Pacific based on European specifications and partly in Italy. The casemaker range is completed with a folder gluer and counter ejector section that is manufactured in Italy.

Offering a quick return on investment, the complete range of machines is manufactured to satisfy the requirements of the European market both in performance and technical/safety standards. Installation, start-up, training and after sales service activities are carried out by Wintek skilled engineers with a long experience in this specific market.

Robust construction

The YSF rotary die-cutter is of proven design and has continually evolved over the last 20 years. It has been designed to be economic to purchase, yet still provide all the features necessary to produce a modern die-cut blank in an ever increasing competitive environment.



ANCILLIARIES AND RETROFITS

Wide range of tooling

As with all YSF machinery, the die cut units are of a robust and strong construction with the die drum ground, polished and fully chromed. The anvil life and accuracy is prolonged with lateral oscillation and machines can be supplied with either anvil synchronisation or equalisation. Anvil life and accuracy is further enhanced by optional anvil trimming systems – two systems are available, either knife or abrasion.

The die drum can be offset laterally ± 20 mm. This adjustment enhances register control and reduces the need to remount the cutting die. All models are supplied with internal pin stripping as standard – however, conventional ejection rubber stripping can also be utilised.

Linear encoders are used to control die-cut pressure and register is also CNC controlled. Both these axis are adjustable to within ± 0.1 mm. CNC control is via touch screen PLC and on the Super S type machine can also be controlled via a central PC touch screen station.

Elan accuracy

The Mitsubishi second generation ELAN is a 66" rotary die-cutter that can handle the most intricate shapes and the smallest cut-outs and can even make reverse matrix scores at high speeds of up to 12,000sph. The large cylinder, 1,675mm in circumference, provides strength to help minimise cylinder bend from the weight at die-cutting. It therefore combines the die-cutting accuracy and scoring capability of a flatbed with the set-up ease and speed of a rotary system. A stainless steel sheet, mounted on the anvil cylinder in combination with the cutting die, eliminates the need for the extensive set-up necessary with the traditional steel anvil designs. Using the semi-hard anvil and cutting die together allows reverse scoring to be pre-set.

Sheet feed is accomplished by a lead edge feeder. Smooth sheet feeding ensures that double wall, soft sheets, E-flute and even cross corrugated board is handled at high speed. Vacuum pulls each sheet on to a bottom grate and feeder wheels. The feeder wheels accelerate to reach the same speed as the feed roll and the sheet is then fed. The lead edge feeder eliminates slippage caused by the corrugator score as well as slippage at start-up. Paper dust removal is standard within the feed unit. Vacuum removes paper dust from the surface and the cut edge of the sheet, effectively preventing problems during printing, resulting in sharper printing and less downtime for clean up. A vacuum belt type transfer conveyor is available between the printing and die-cut unit.

Ink is dried as it passes between units eliminating ink smear, smudging and soiling in the high-speed die-cutting process. A 4 wide vacuum belt system provides stable transport. A bottom printing system achieves top quality accurate printing even at high speeds. A dust purge system blows air into the hopper encasing the ink roll to prevent dust from degrading the printing.

Northampton, England-based Mansfield Board Machinery Ltd. provide a range of tooling to support die-cutting applications. These include polyurethane rotary die-cut anvils, die cut hand hole tooling for printer slotters (Dovey), diecut stitch flap tooling for printer slotters (Tabtool) and chase plate protection sheets. With specialist knowledge of the industry, MBM can design tooling to suit most machines and applications. The Dovey handhole equipment offers rotary die-cutting with simple formes while attached to the slotting shafts of a printer slotter. Hand holes, vent holes, special shapes and perforations can easily be fitted. This increases the type of orders that can be run on a simple printer slotter.

The Tabtool is also designed to fit printer slotters and casemakers to give die-cut quality edge to the stitch/glue flap of a box. Replacing the standard upper and lower knives, the system operates as a continuous slot and flap cut, using serrated rule blades, while cutting against a polyurethane anvil cover. Results are a clean cut with no waste tags.

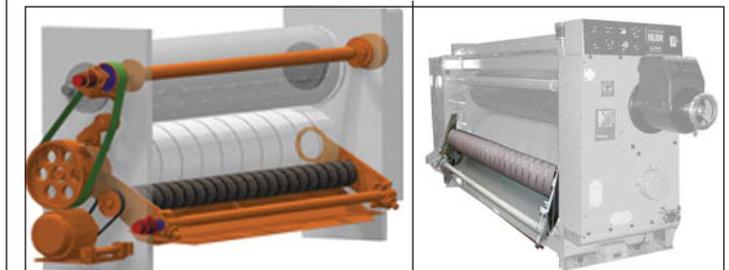
High performance

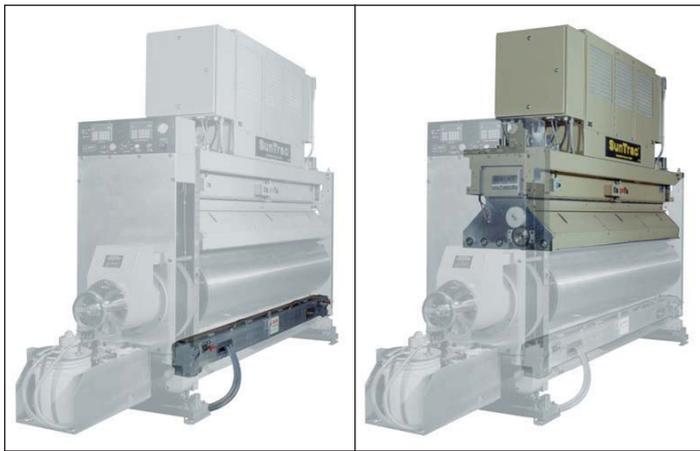
Spanish company Rodicut have been supplying rotary die-cutting dies and polyurethane anvil covers for over 25 years. The extensive range of products helps operators of rotary die-cutters achieve similar levels of accuracy expected of flat bed die-cutters.

Over the last 8 years, the company has developed a series of maintenance programmes and training programmes to help extend the life of their die products. The company claims that its products can help increase productivity on the diecutter by as much as 40 per cent whilst saving 90 per cent on usual consumption rates for polyurethane products. Rodicut's polyurethane covers have also been developed to allow for a certain amount of stretch whilst a job is being run. The company also claims that with a 3kg blanket, over 1 million sqm of board can be die-cut before it needs to be replaced.

Global appeal

SUN Automation Group specialises in maintaining and improving the productivity of a box plant by providing parts, service and upgrades to existing rotary die-cutters. It offers conventional rebuilds on most machines with OEM quality parts. The company can modernise machines by adding SunTrac vacuum transfer, RainbowGraphics chambered doctor blade ink systems, digital harmonic registers, Extend-O-Feed lead





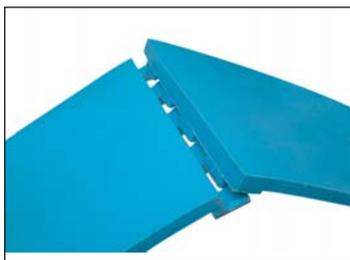
edge feeders, MicroGrind anvil accuracy systems, or PrintPrep sheet cleaning systems. Print stations, die-cut stations and dwell stations are also available for most machines.

These upgrades can be added individually to solve a specific problem, such as poor registration or too much scrap, or can be retrofitted as a group to transform a machine into one capable of higher production and quality thus enabling entry to new markets.

With the recent acquisition of Deritend, SUN are now in a position to support existing Deritend customers with parts and service to original specifications. The company also stocks a large selection of parts for Ward Models 866, 166, 11500, 12000, 13000, 15000, and 16000 machines. Many of these parts have been re-engineered for improved performance and longer life. SUN Automation Group Europe supports sales for equipment, parts and service through its Bristol headquarters and sales office in Holland.

Extended wear

DuraBlue anvil covers are the latest innovation in Dicar's line of precision, long wearing urethane covers. Users of DuraBlue will quickly realise the benefits including extended wear, easy rotation and fast mounting.



DuraBlue enhances the Boltless™ design with a 'dove-tail' shaped lock-up which allows the removal of both the male and female ends of the cover in one simple motion. Advantages of the design include reduced installation, rotation and

removal times which can be translated to reduced downtime and increased productivity. The lock up design ensures perfect edge alignment and eliminates the potential for cover skew that is often an issue with standard mounting lockups. The design, which offers enhanced flexibility making them easier to handle, store and wrap around the cylinder, is as durable as it is easy to use and will withstand hundreds of rotations while providing the same secure lock-up and edge alignment precision.

Dicar offers a complete line of diecutting products that meet high speed, high precision die-cutting needs including the Equalizer anvil system, Anvilok III glue tab and hand hole systems and complete lines of urethane components and diecutting and die-making supplies.

High performance stackers

The Geo. M. Martin Company's line of rotary die-cutter stackers are designed to match the maximum performance of any rotary die-cutter. They all feature fast set-up, low maintenance design, reliability and the latest modern operator and safety controls.

The Valu-Stak® LCS series RDC stacker offers an economical, reliable, high performance solution for most diecutting applications. Standard features include 3-across by 4-up capabilities, auto tracking drives to match changing press speeds, quick adjust snubbing wheels, accurate high performance counter, auto jam detection, proportional hydraulics, 127mm stacking deck belts and the Vari-Stack hopper system.

The Select®-LCS series stacker is designed to meet the most demanding 24/7 die-cutting operations. Its fast setup, high performance operation and multiout capabilities maximise die-cutting line efficiency. Standard features include the Smart-Stak order entry system for fast and repeatable set-ups, extended nip layboy arms, spring loaded carriage-style snubbing wheels and the Pozi-Stack front end with access backstop which handles a wide range of products while providing the operator a full view of the stacking process.



Standard on all stackers is the patented LCS-LG safety system, which provides optimum protection while allowing the stacker to automatically cycle without operator attention. Designed to European and USA standards, the fully integrated safety system includes automatic self-testing and redundant controls.

The Select and Valu-Stak are available with a full range of options to match specific production requirements. The company also offers a complete line of material handling equipment including bundle separators, load formers, and a full complement of Pozi-Lock components.

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Under three minutes

CUE Inc is a leading manufacturer of urethane anvil covers for rotary diecutting. The company traces its roots to the pioneering days of cast urethanes in 1957 and manufactured one of the first urethane anvil covers for rotary diecutting in 1962. Today the company is ISO 9001-2000 certified.

The company's Timesaver™ anvil covers provides converters with a consistent urethane die-cutting surface. Timesaver's design starts with a solid-steel backing that ensures a precise fit and dimensional stability throughout the life of the blanket. Next, a solid steel hold-down angle and an exclusive solid steel lock bar are welded to the metal backing in a proprietary process that ensures a precise fit. Highest quality urethane is chemically bonded to the metal backing and the cover surface is then ground to a consistent thickness and trimmed to an exact width.

Its exclusive solid steel lock bar fills the die-cutter keyway with metal, providing a consistent cutting surface for the entire circumference of the cylinder. The operator can then use minimal die impression depth for clean cuts – one of the primary ways of maximising product quality and blanket longevity.

The Timesaver was designed to minimise machine downtime during blanket rotations without modifying the die-cutter in any way. There are no systems to buy, so there is no capital expenditure required. A video is available demonstrating a complete Timesaver Anvil Cover rotation on an unmodified die-cutter in under three minutes.

High Efficiency dryers

High quality and high production diecutting operations continue to turn to the high efficiency flexo drying and curing systems of JB Machinery. Specifically designed for the corrugated industry, these IR drying and UV curing systems continue to gain worldwide acceptance – currently JB has over 500 installations in 27 countries around the world.



Combining optimised performance with an ergonomic design to offer greater accessibility, easier maintenance and enhanced safety, JB gives users the ability to run faster, reduce multi-pass jobs to a single pass, provide higher quality graphics and create value for their customers. Drying also maximises the ability to use high holdout substrates like clay coated, high-graphics sheets, without compromising run speeds.

These high efficiency IR inter-station flexo dryers and final flexo dryers increase productivity, provide higher quality graphics options and expand the capability of the flexo

operation. Interstation flexo dryers make it possible to dry each or selected colours before the next is applied, eliminating ghosting, smearing, optimising colour brightness and gloss with increases in productivity and product value. Final flexo dryers increase productivity by drying over-print varnish or a final colour prior to die-cutting and or finishing operations; eliminating offsetting onto anvil covers, marking and smearing on transportation belts, optimising colour brightness and gloss with dramatic increases in productivity and product value. The company's UV flexo curing systems increase productivity, product offerings and product value. The systems make it possible to cure UV over-print varnishes at maximised machine speeds providing extreme scuff, rub and water resistance, box strength and 'wet look' gloss levels.

Positive feedback

Following Sandvik DieCutting Products' launch of its range of special hard edge coated rules, designated Sandvik Dieflex Platinum, feedback from customers is extremely positive. All trials and customer orders are supporting the claim that, although initially more expensive, the longer life of Dieflex Platinum proves the life cycle cost argument. It makes the new rules a real alternative for high volume, quality applications, such as food packaging and the coated boards of top of the range, high end packaging.



As the coating is very thin, there is no rounding of the edges. Sandvik Dieflex Platinum cuts tougher materials at a lower cutting pressure with improved release properties. This reduces dusting problems and at the same time gives excellent and even cutting results on long runs. Yet, even combined with the edge and body coating hardness, it retains its extreme bendability.

Also new from Sandvik is an anticorrosion coating across its range of flatbed and rotary die-cutting products. The special lacquer-based formula, the result of a substantial investment by the company, protects the product both during shipment to customers and throughout its operational life, eliminating the risk of rust formation.

New exit line

Para of Italy has developed a new product – a fully automatic exit system for diecutting lines. Two installations are already working well in Italian boxplants. One has been installed at a factory in Italy that produces board for fruit boxes – the automatic RDC exit line includes breaker, 180° layer turner and palletiser and it is fitted behind a Martin DRO. The other system has been installed at a plant owned by a multi-national group, located in northern Italy, running behind a Corpart rotary die-cutter. Both installations have been in place for 12 months and are operating well.

Breaker III is new

The Bundle Breaker III from Alliance Machine Systems International has been updated to provide box makers with the increased performance demanded by today's latest rotary die-cutters. Updated controls, with improved position sensing, allow greater overall line performance. Machine motions have been specifically optimised to reduce overall platen travel during the break cycle, resulting in faster machine cycle times.

The Bundle Breaker III is constructed with durable components to provide years of reliable performance under the continuous, high speed operation found on today's finishing lines. An improved colour touchscreen interface is intuitive and reduces setup times. It takes only minutes to set up the Bundle Breaker III.

The Bundle Breaker III also offers a smooth plastic infeed and exit conveyor surfaces for added bundle control stability. This helps to preserve bundle quality and allows the handling of slippery and unstable bundles.

Dry-Board series



The Giardina Dry-Board series of IR dryers are suited to the drying of water-based inks and varnishes and can be installed on machines for both top and bottom printing. The company's dryers have been designed with the operator in

mind. Complete with high efficiency quartz tube radiators, they produce quick drying of printed sheets.

The Dry-Board Hot Air system is a more traditional drying system. To heat the air inside the exchange unit, other sources,



(besides electrical power), can be used such as steam recovered from the corrugator, hot water, diathermic oil or gas.

The final system in the Dry-Board series is a UV unit. The installation of UV systems produces many advantages such as immediate curing for quick passage to successive treatments and high gloss on varnish. These units are high power systems (up to 200 W/cm).

Introducing Propel

The latest innovation from US based Monroe Rubber & Plastic is Propel, a new, high performance ejection rubber for rotary die formes. Due to the new materials compact construction, the height of the ejection rubber is lowered, which the company claims will allow for an increase in productivity and performance from the die-cutter. With virtually no compression set, the need for surplus rubber over knife height is eliminated.

Additionally, with the reduced rubber height, the machine operates closet to design pitch diameter and less blanket wear is encountered. The company also explains that its product offers improved scrap ejection, is easy to set-up and allows for a cleaner cut without crushing the board. The new material is equally well suited for flat bed die formes.

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The Corrugator invites Product Writeups and Original Articles along with the Photographs

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