How Modular Finishing Technology Can Help Streamline Postpress

A white paper from MBO America

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EXECUTIVE SUMMARY

For a long time, postpress was regarded as a task without much potential for evolution, and the performance of postpress equipment reflected that somewhat cynical view. But print markets have shifted dramatically in recent years, obliging makers and users of postpress systems to think about post-print processing in correspondingly new ways. This has given rise to a modular approach to finishing, leading to solutions that can expand or adapt as the user's business grows or as job requirements change.

Presenting the advantages of Modular Finishing Technology is the subject of this white paper. It highlights the innovative, adaptive, and scalable finishing systems that are required to keep up with the production demands of the digital print revolution. Included are the stories of several printing companies that have gained major new efficiencies by embracing postpress as it can be — and should be — practiced today.

WHY CONVENTIONAL POSTPRESS CAN'T SUPPORT THE DIGITAL PRINT REVOLUTION

In contrast to the digital transformation of prepress and press, much of postpress remains analog, siloed, and labor-intensive. It still gets the job done, but print market requirements are changing more rapidly than the traditional methods of postpress can keep pace with.

Conventional methods of postpress give printers two options: purchase elaborate finishing systems capable of only one specific production output; or treat every process as an individual step needing separate, stand alone machines to carry out the required functions. Each scenario can incorporate some degree of flexibility and automation, but neither approach was developed with the demands of today's digital print market in mind.

The rise of highly customized, short-run digital production and its numerous job changeovers exposes the shortcomings of both approaches. Customers buying print on demand want it now, and they don't have patience for excuses about delays in the bindery. They also expect printers to be able to handle their requests for unusual formats and special finishing touches on the same tight schedule.

To accommodate the new normal of just-in-time, customized production, printers need systems that can be quickly customized to meet specific finishing requirements. Postpress departments that are able to finish products without gaps or interruptions between processing steps are able to greatly reduce time-to-market.

Achieving this degree of integration means more than just having the usual assortment of postpress machinery. It means streamlining postpress and equipping to deliver everything it can now accomplish. Embracing new postpress technology lets printers consolidate processes into efficient solutions that can cope with the short runs, tight turnarounds, and custom requirements of on-demand production.

MODULAR FINISHING TECHNOLOGY: FEWER TOUCHES FOR GREATER EFFICIENCY

Conventional postpress evolved in an era when high-volume offset applications were the norm. This meant that there were fewer job changeovers and, consequently, that make-ready times were not as important as they are today. Furthermore, the explosion of possibilities that came with the advent of the digital age has driven demand for ever-increasing creativity — die cutting, foil stamping, variable data — that the older methods cannot accommodate without major additional investments.

Modular Finishing Technology, on the other hand, is mobile and reconfigurable at a moment's notice. A flexible postpress system can align and realign equipment as needed, customizing the finishing routines and doing away with many of the redundant touches that cause error and waste in conventional postpress.

As a result, flexible postpress systems are two to three times more efficient than the systems they replace. That makes a strong business case for leaving the old methods behind. A printer who buys a new press expects it to do the work of at least two legacy presses. Now, the same kind of 2:1 and 3:1 replacement can take place in postpress, saving commensurate amounts of labor and other overhead. As the case studies below make clear, incorporating Modular Finishing Technology with postpress increases profit by eliminating production steps and consolidating processes to finish product in one pass.

There's also the human element to consider. The newer machines feature intuitive interfaces and controls, as well as ergonomic benefits. The greater the separation of processes within a postpress system, the greater the potential for operator error, fatigue, and injury. A postpress environment that incorporates Modular Finishing Technology reduces these risks by consolidating processes — a major plus both for operators and for the printers who employ them.

In conventional postpress, each process requires a dedicated machine with a dedicated operator to run it. This makes postpress labor costs hard to control, and it is also the reason why there are limits to what even the most skilled operators can achieve with obsolete postpress equipment. By upgrading from legacy postpress equipment to scalable, modern equipment, productivity won't suffer as personnel change.

POSTPRESS AUTOMATION OR POSTPRESS FLEXIBILITY: WHICH IS MUST-HAVE?

Some postpress systems are designed for automation, and others offer flexibility. The concepts aren't mutually exclusive, but the distinction between them is important to keep in mind when choosing a solution.

A high degree of postpress automation works best in environments where one category of product is produced and there are few format changes to deal with — for example, books. Here, the emphasis will be on reducing touches in order to maximize volume and throughput. Green-button operation is characteristic of postpress systems designed for this kind of continuous, high-output production.

On the other hand, in commercial printing environments where the product mix never stops changing, end-to-end automation may not be possible — or even desirable. Commercial printing has always been a form of custom manufacturing in which the workflow adapts to whatever type of job comes up next in the queue. Productivity is important, but flexibility is what assures that the job will be completed to the customer's specifications.

Flexible postpress systems are two to three times more efficient than the conventional postpress systems they replace.

This is why commercial environments need systems that can be integrated quickly for customized production on demand, enabling the shop to deliver the widest range of products finished in one sequence. Although flexible postpress systems are less extensively automated than single-application systems, some of their subcomponents (for example, fold plates and rollers) can be automated for greater efficiency.

This kind of adaptive flexibility is the hallmark of Modular Finishing Technology pioneered by MBO.

THE MANY MERITS OF MODULARITY

Instead of one-size-fits-all solutions, MBO offers separate but compatible postpress modules that are mobile and interchangeable. Because they are not fixed solutions locked into one type of production, the modules can be quickly assembled and reassembled into whatever configuration the job calls for. The result is a flexible and efficient postpress department that thrives on customized finishing applications, even under the toughest on-demand deadlines.

The heart of modern postpress systems is MBO's Modular Finishing Technology. In this flexible machine configuration setup, core finishing units — usually an unwinder and a sheeter — remain in fixed locations on the shop floor. Additional modules of task-specific equipment are then moved into position to support the core units.

Modernized printers have the potential to produce almost anything in a two-stage process: load the job on press with no further touches until it is a fully printed roll; complete all remaining steps in one pass through the modular finishing line. Consolidating processes in this way minimizes touches and lets printers create unique systems that meet customer demands in true 1:1 fashion.

Upgrading to a modular system represents a sensible investment in postpress. With the core elements in place, a printer needs to purchase only the modules required for work customarily produced: for example, a folder and a delivery for letterfold jobs. The model is also ideal for printers who expect growth, because adding modules is much more cost effective than purchasing new, all-in-one solutions.

MBO makes modules for nearly all finishing requirements: pile, pallet, and continuous feeders for cut sheet applications; 20″ and 30″ digital and conventional web finishing; cutting units; fold-

ing machines; transfer tables; plow folding and knife folding units; hot or cold glue application systems; and shingled or stacking deliveries. All are designed for easy roll-in and roll-out as job specifications change. The implementation of modern, flexible postpress systems works best in offline configurations because that allows both the press and the finishing to run at their optimal speeds.

POSTPRESS SUCCESS STORIES

WModular finishing isn't mere theory — it's a proven concept that printers have learned to use with great success. The stories that follow point towards what can be achieved by other printing companies wishing to optimize postpress to serve their customers better.

Allied Printing

Established in 1952 as a commercial printer, Allied Printing Company (Ferndale, MI) successfully integrated a digital workflow into its existing commercial offset workflow by incorporating both traditional commercial finishing and web finishing solutions. After purchasing its first inkjet web press in 2015, however, the company decided to separate the two workflows in order to make room for an even more expanded digital operation.

Experience showed that having both sheet-fed and web-fed digital and conventional offset printing created issues on the finishing end because work could no longer be allocated across all the finishing equipment. To address this, Allied Printing installed a finishing line from MBO that can create palletized stacks of full size sheets (28″ x 40″) or be reconfigured for folded work.

With its MBO High-Pile Stacking Solution, Allied Printing minimized a production bottleneck at the finishing stage by creating palletized stacks and diverting digital inkjet web applications to traditional cut-sheet finishing lines. This resulted in faster job turnarounds and increased press uptime.

By integrating mobile cross carrier tables between the sheeter and the stacking delivery, Allied Printing gained the ability to swap in additional modules to produce a completely different output. Instead of a fixed roll-to-palletized sheet line, capable of only one type of production, they have a highly flexible and sophisticated digital web finishing system.

The advantage of a modular, flexible finishing system for an inkjet production workflow like Allied Printing's is that it can keep pace with the time-to-market requirements that are inherent in this kind of production. MBO digital web finishing technology lets printers handle the much tighter timelines of digital printing with confidence in being able to produce a high-quality result.

Fenske Media

As a pioneer in 1:1 consumer communications, Fenske Media (Rapid City, SD) was one of the first marketing service providers to offer innovative, relevant cross-media solutions. While Fenske Media produces both traditional offset and digital print, almost 90% of the print work has moved in the direction of variable data direct mail.

During the transition to digital, MBO worked closely with Fenske Media to ensure that its exist-

The High Speed Letterfold System from The MBO Group was designed with the highest dependability, flexibility, and job integrity features — making it ideal for processing bank statements, letterfold products, and sensitive materials at high speeds. With automation, these solutions can be quickly and easily configured for a variety of job applications with just the touch of a button, which minimizes waste and reduces the number of touches required.

ing equipment could integrate into MBO's digital web finishing lines. The resulting solution is a modular concept based on equipment from MBO and from Herzog + Heymann (H + H), an MBO subsidiary for specialty finishing applications.

H + H provides systems for handling lightweight stocks and complex buckle and plow folds. Fenske's MBO complement includes folders, glue systems, cutting and perforation tables, and various deliveries and stackers. As job demands change, the MBO and H+H modules can be easily rolled in and out, as needed, to fulfill new job demands.

MBO's Modular Finishing Technology is a major advantage for Fenske Media because it enables the production teams to easily and quickly change out equipment to produce more customizable, variable jobs. By implementing it, the company was able to streamline production into a two-step operation that maximizes ROI:

- Print without intervention by loading the job on the press with no additional touches until a complete roll has been printed.
- Complete all finishing work in one step.

This has given Fenske Media the flexibility it needs to address all customer requirements on a 1:1 basis. There are no cookie-cutter solutions, because there are no cookie cutters: just highly adaptable finishing equipment from MBO and Herzog + Heymann.

Documation

After losing a major account to a less expensive competitor, Documation set out to win the customer back. The challenge that they were facing was one all too common for printers running conventional systems — how do we lower costs without sacrificing quality or capability?

The customer, a seminar producer, relied on mailed brochures to promote its programs. Documation used to print long runs of the brochures on a coldset litho web press, cut, fold and glue-seal them, and hold the pieces in inventory for inkjet addressing and mailing. This analog finishing routine ceased when the job was lost to the price-cutting competitor, which held onto it for the next three years.

During that time, Documation replaced its coldset litho web press with a pair of HP T230 color inkjet web presses. These variable-capable printing devices enabled Documation to reengage with the customer, but only at the original price. If the work was to remain profitable, time, cost,

and labor had to be taken out of the finishing routine. This is exactly what Documation was able to do with the help of MBO's Modular Finishing Technology.

By integrating a 30" digital web finishing system from MBO, consisting of an unwinder, a sheeter, a folder, and a shingled stream delivery, in concert with the HP T230 inkjet presses, Documation was able to consolidate numerous production steps into just two sequences: printing and finishing.

The presses print in on-demand quantities with fully variable content, including all addressing. The modular finishing system adds all of the post-print processing in one sequence, delivering brochures that are ready to tray and mail. The results: elimination of offline inkjetting and inventory; a net reduction in labor costs; and an adaptable finishing system that's now as versatile as the digital presses it supports.

The modular approach to finishing developed by the experts at MBO provides printers with finishing solutions that can expand or adapt as customer business grows or as job demands change.

Trend Offset

Operating full-service heatset and open-web printing facilities in California, Texas, and Florida, Trend Offset provides high-quality direct mail, publishing, marketing, and catalog printing services for clients in the retail, healthcare, and financial services sectors. Trend also has a full-service mailing operation that processes about 50 million direct mail pieces per week.

After becoming the first company in the U.S. to install a Canon Océ ImageStream 2400 inkjet press, the company decided to complement the machine's capabilities with the most advanced

This high-speed, high pile stacker from MBO minimizes the dead time of a production line by stacking large sheets directly onto the pallet. Once a pallet batch count is fulfilled, the SHP automatically ejects the finished stack. The incoming sheets become a shingled stream and are transported along a lengthwise alignment system in order to form a perfect stack. During a pallet change, the SSC Separation Module will collect the sheets and create a gap between the stream and the pallet to enable full speed production. With the aid of special vacuum overguides even very long sheets can be stacked neatly and accurate.

finishing system it could find. Aiming to gain additional speed and functionality for high-volume production, Trend wanted to create an integrated but flexible finishing solution.

In researching finishing options, the Trend team visited organizations using postpress solutions from a variety of brands. Their final choice of a supplier was MBO. Seen as a major plus was the modularity of MBO solutions, which enables different pieces of MBO equipment to be easily rolled in and out as needed to suit specific job requirements. The idea behind MBO's Modular Finishing Technology is to let users pick and place the right devices to custom-fit different job formats.

MBO worked with Trend to develop combinations of automated and manual solutions that span the full range of finishing routines that the company handles. Eventually, Trend installed almost one of everything that MBO manufactures in order to take full advantage of its new press capabilities.

CONCLUSION AND RECOMMENDATIONS

The best advice for printers ready to invest in new postpress solutions is to think holistically: to see finishing as part of the whole continuum of prepress press postpress. Failing to think things through in this way inevitably leads to decisions at one level that aren't feasible in the bigger picture.

Printers who don't keep finishing in mind from the moment when they begin shopping for a press run precisely this risk. A common scenario is the failure to consider production speeds at all levels. If the press can produce twice what the finishing stage can output, the printer needs to invest in two finishing systems to support the press. If a second system isn't implemented, the printer will be faced with a massive bottleneck scenario. It doesn't matter how fast the press can print because product simply cannot get out the door at the same pace.

To help printers avoid such problems, MBO has been encouraging them to talk to finishing experts even when finishing isn't part of the immediate investment plan. Finishing is highly complex and plays such an important role in production that printers can't afford to get it wrong. This is why printers who think about finishing holistically achieve far better results at all levels than printers who don't.

The modular approach to finishing developed by the experts at MBO provides printers with finishing solutions that can expand or adapt as customer business grows or as job demands change — the key to staying ahead of the event-based, time-sensitive marketing strategies embraced by today's print-buying organizations.

MBO, the leader in high-performance finishing solutions for conventional, digital, and hybrid print operations, began developing digital web finishing systems in 2009. Its modular finishing technology is fully compatible with all types of printing equipment from all of the major OEMs. The company is also a leader in training, technical support, field service, and parts replacement.

The first step for printers who are ready to turn their postpress departments from cost centers into profit centers should be a consultation with the experts at MBO. They're invited to schedule a free postpress audit by calling Rich Freely at (609) 367-3288.

About MBO America

MBO America was established in 1984 in order to bring MBO (Maschinenbau Binder Oppenweiler of Germany) to the growing US market. Through the acquisition of specialty finishing provider Herzog + Heymann in 2000, the MBO Group became a comprehensive single-source provider of postpress finishing solutions.

Strategically located in Marlton, NJ, just outside of Philadelphia, MBO America fulfills specialized needs upon request for cut sheet and web digital finishing applications, commercial finishing, pharmaceutical folding, packaging, and die cutting throughout the Americas. MBO and MBO America are internationally renowned for superior customer service and technical support, as well as for top-notch business consultation programs.

ABOUT THE AUTHOR

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