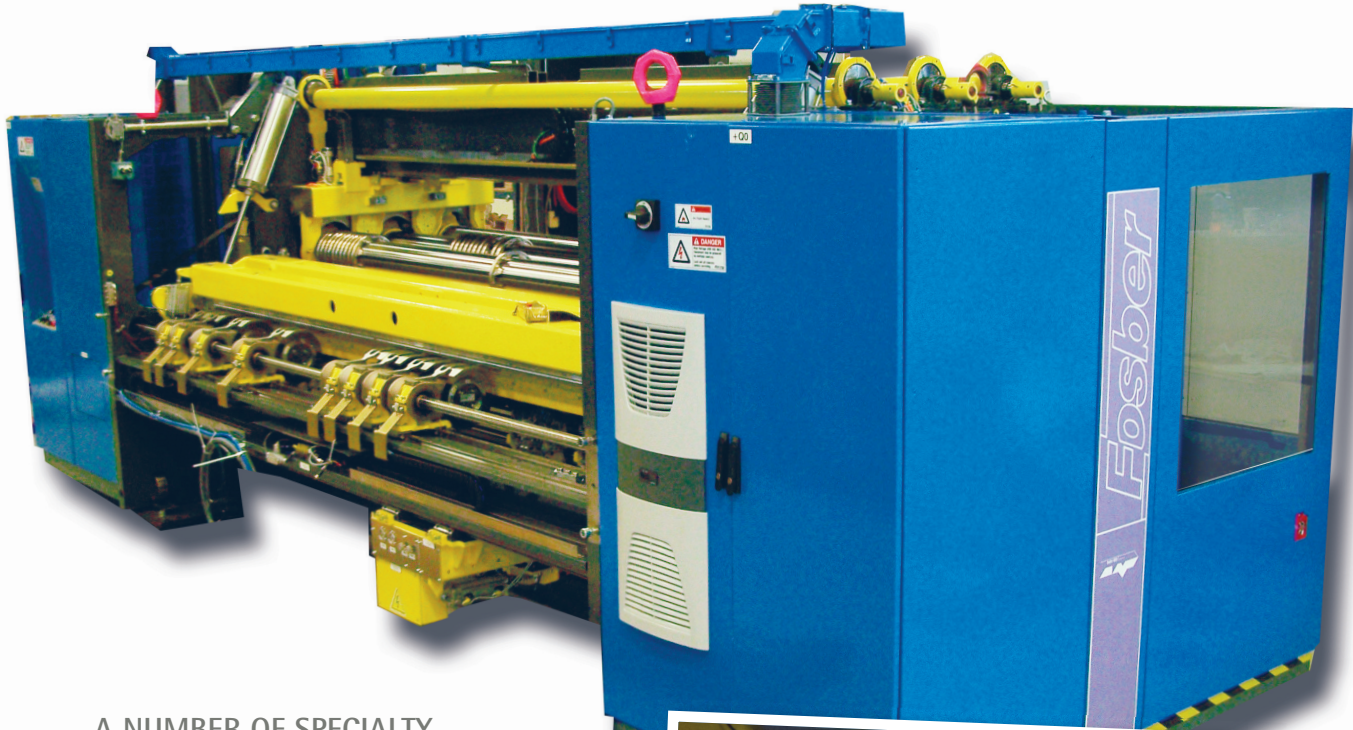


## Specialty Corrugator Tooling



A NUMBER OF SPECIALTY APPLICATIONS CAN BE PERFORMED ON THE AUXILIARY SHAFTS OF A CORRUGATOR, ELIMINATING COSTLY CONVERTING PROCESSES.  
BY PETER SAUER, SAUER SYSTEM

## MAXIMIZE CORRUGATOR CAPABILITIES WITH SPECIALTY TOOLING

In corrugated converting facilities across North America, plant managers are looking for ways to increase productivity and throughput for a solid return on investment, and salespeople working in these organizations are looking to differentiate their product offerings and meet specific customer needs.

This article takes a look at how to maximize the capabilities of the corrugator with tooling designed for specialty applications. The number of corrugators in North America has been on the decline for many years owing to improved run speeds



and setup times as well as industry consolidation and the success of the sheet feeder model. Today's corrugators are expected to do more than ever.

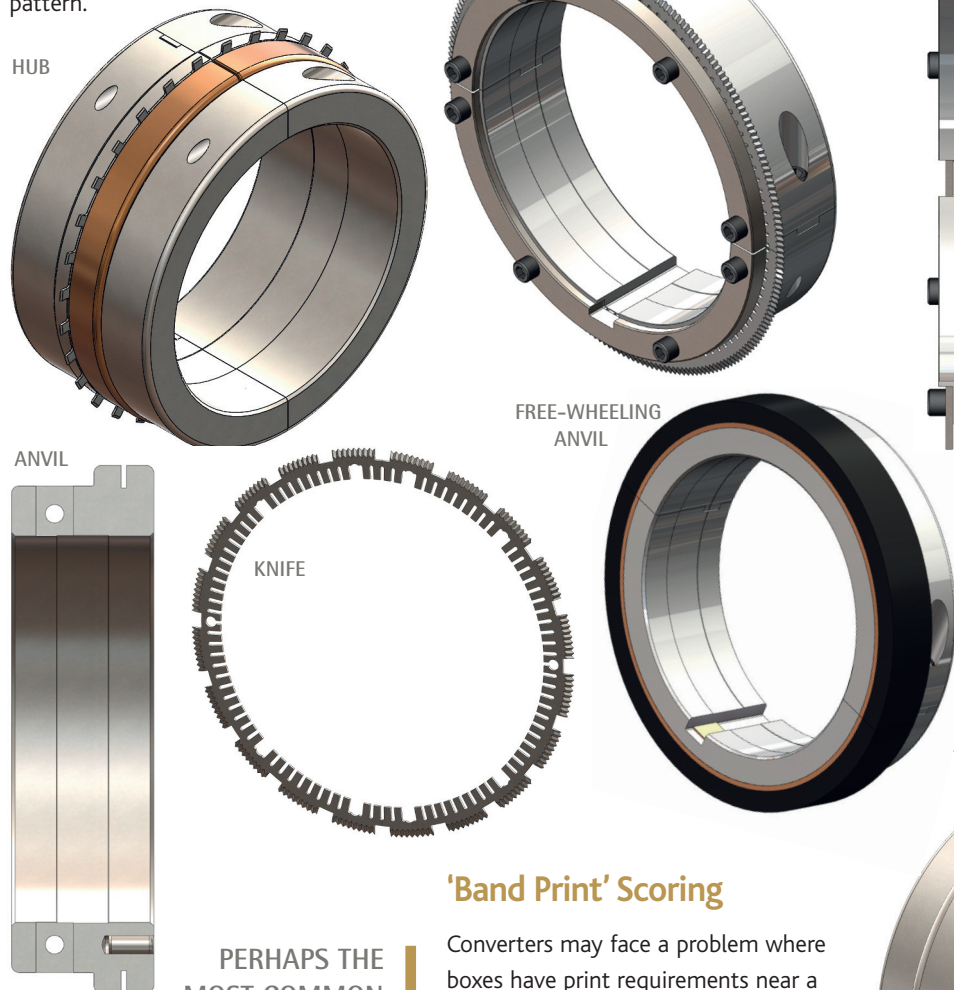
Along with these advances, converters may not be fully aware of a number of specialty applications that can be performed on the auxiliary shafts of a corrugator to furnish sheets with more than just basic score lines and slit edges. Performing additional operations on the corrugator can eliminate costly operations during the converting process. Examples include having to double-pass sheets through a floor slitter to add slit-scores, or running boxes calling for perforations on a diecutter instead of a high-speed flexo folder-gluer. The following is an overview of these specialty applications.

continued

## Specialty Corrugator Tooling

### Perforating

Perhaps the most common specialty application that can be achieved on the auxiliary shafts of a corrugator is perforating. A hub holding a perforating knife inset within a free-wheeling bronze ring is driven at the speed of the web, cutting through the corrugated medium into a grooved anvil. The pattern remains consistent as the web speeds up or slows down. Perforating knives are available in almost any pattern.

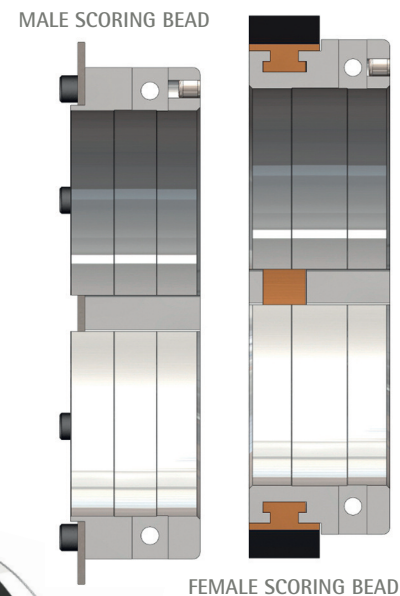


PERHAPS THE MOST COMMON SPECIALTY APPLICATION THAT CAN BE ACHIEVED ON THE AUXILIARY SHAFTS OF A CORRUGATOR IS PERFORATING.

### Slit-scoring

Slit-scoring, an alternative to traditional scoring, is particularly useful for manufacturing wraps or internal packaging applications. Slit-scoring can be achieved on the corrugator with a slit-score knife cutting into a free-wheeling bronze-ring-backed polyurethane anvil traveling at the speed of the web.

This problem can be minimized with a special profile scoring system. The system utilizes a steel ring acting as a flat male scoring bead that embeds into a free-wheeling bronze-ring-backed polyurethane-covered scoring anvil traveling at the speed of the web. The result is minimum distortion of the outside liner during the scoring process.



### Crushing

For certain applications, especially those involving heavy-doublewall and triplewall board, crushing can be accomplished directly on the corrugator with crush collars.

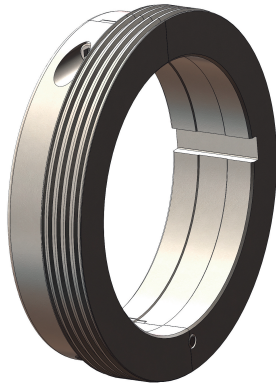


### 'Band Print' Scoring

Converters may face a problem where boxes have print requirements near a corrugator score line. Because the score lines were produced using a traditional 3-point or offset point-to-point scoring profile, the outside liner has a depressed area where ink doesn't adhere, resulting in blank spots.

## Specialty Profiles

Specialty profiles, including offset point-to-point scorers on specific centers, 5-point, 7-point, and 9-point scorers can all be achieved on the corrugator. This provides the box maker with options to meet customer needs.



5-POINT  
SCORER FOR  
PRODUCING  
MULTI-DEPTH  
CARTONS

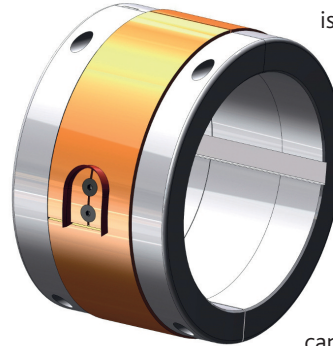


## Unique Applications

Limited diecutting can be achieved on the corrugator as well, with the repeat of the cut being determined by the

circumference of the diecutting tool and the speed of the web. Applications are limited at this time with future development opportunities pending.

Many of these specialty applications are the result of customers, box salespeople, and designers working together to optimize a solution. As a sheet plant, it is important to work with your sheet suppliers to review what applications can be offered that can save time during the converting process. For a box plant, understanding the capabilities of the in-house corrugator and weighing the benefits of investing in tooling can increase the efficiencies when running specialty work. And finally, sheet feeders should understand the benefits afforded by an investment in an auxiliary section for their corrugator. ■



DIECUTTING TOOL

*Peter Sauer is the Product Manager for Sauer System.*