NAPKINS: NOT JUST WHITE ANYMORE!

EQUIPMENT SUPPLIERS RESPOND TO GROWTH OPPORTUNITIES IN CONSUMER NAPKIN MARKET

By Steve Leibin

While many converters are struggling to grow their businesses, North American napkin converters are enjoying a steady 3 percent annual growth. Let's look at market trends, opportunities in the North American napkin market and some new equipment now available to help converters succeed in this market.

In the late 1990s, many converters were enjoying 10 to 15 percent annual growth rates. The consumer napkin market's annual 3 percent growth seemed miniscule. Now, in the post-9/11 economic downturn, that stable growth rate has attracted a lot of attention. As converters look for new areas to expand and grow, the consumer napkin market offers numerous opportunities. Flexo printers can utilize their current printing skills to expand into the napkin market, but they will need to understand the market requirements and the characteristics of converting tissue.

For the purpose of brevity, this article will concentrate on the North American at-home consumer folded products category. This includes dinner, luncheon and cocktail napkins. According to Paperloop, the demand for consumer napkins in the U.S. for 2003 is estimated to be 269,000 tons. For 2004, the demand is expected to increase 3.9 percent to 285,000 tons. The consumer napkin market is a mature market. Consumers' expectations are high, and they demand improved quality at lower prices. As the napkin market has grown, napkin manufacturers have been pushed to offer a greater variety of shapes, sizes, formats and printing patterns.

The consumer napkin marketplace can be divided into two primary segments: high-volume white napkins and value-added printed napkins. The white napkin market is predominately controlled by three big manufacturers (Proctor & Gamble, Georgia-Pacific Corp. and Kimberly-Clark Corp.). This is primarily due to the fact that white napkins are a low-margin commodity item and need large-capacity machines to be successful.

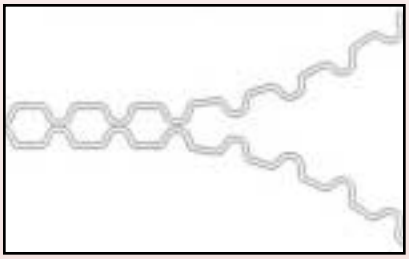
The value-added segment actually offers more opportunity and higher profit margin for the smaller converter. Here the trend is clearly shorter print runs, more customization and specialty products. These benefits are becoming more important in the marketplace, as consumers demand higher quality and more distinctive products for parties, special occasions and holidays.

New Press Features

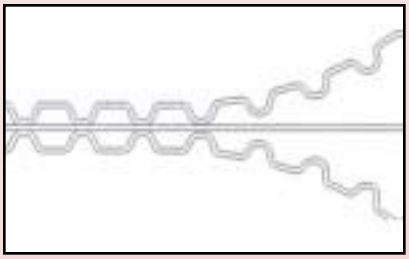
Market trends are forcing equipment manufacturers to supply napkin machines with newer capabilities and features. To meet the high-volume production needs, in-line narrow and mid-web napkin folder manufacturers are offering machines that can produce white napkins at up to 9,000 napkins per minute, with a four-stream, eight-lane production format. The ability to utilize larger parent tissue rolls (up to 87 inches wide) and turret unwinds—even dual-turret unwinds—allows faster, more continuous production.

Many manufacturers now incorporate servomotor-controlled drives to eliminate line shafts, improve tension control and allow for connections to one or more packaging machines.

Incorporating high-speed drying (combined IR and heated drum) into the CI press configuration allows for up to 150-percent ink coverage, final drying of both plies and excellent run speeds even in process-color printing.



Above: 2-ply point-to-point embossed tissue napkin.
Below: 3-ply point-to-point embossed tissue napkin.



Modular embossing stations now make off-line changeovers quickly and with minimal production downtime. White-napkin production lines are now often integrated with wrapping and case-packing equipment to create a production line that goes from roll to finished, packed and crated product in one smooth process.

Another newer offering in the high-capacity production side is a mid-web, 33-inch, CI press that can produce up to 4,300 napkins per minute. This means the press can incorporate up to four color decks and simultaneous printing of two different colors on the same print unit. The CI configuration allows for quick changeover, excellent registration and print quality. Incorporating high-speed drying (combined IR and heated drum) into the CI press configuration allows for up to 150-percent ink coverage, final drying of both plies and excellent run speeds even in process-color printing.

A very interesting innovation for value-added napkins is point-to-point embossing for the production of two- or three-ply napkins. Point-to-point produces a napkin that has higher softness and higher absorption capacity with excellent consistency. Most importantly, two-ply point-to-point embossing is a less expensive alternative to TNT or air-laid three-ply tissue. Point-to-point is an in-line embossing station installed before the printing units of a press. It separates a two- or three-ply tissue web, embosses the plies, then glues them back together to create an air cushion between the plies at up to 1,800 fpm. Point-to-point also provides for 33-percent longer running time compared to three-ply tissue rolls.

Other innovations that help address the needs for value-added production are:

- Completely servo-driven, in-line narrow web presses that can handle tissue or non-wovens.
- Quick-change embossing units.
- Automatic calendar-adjusting units.

Napkin Folding Head

One consideration that anyone purchasing a napkin folder must consider is what style of folding head should be purchased. The two choices on the market today are mechanical heads and vacuum folding heads. Each has advantages and disadvantages.

The mechanical head works by pulling and tensioning the web between two steel drums with grippers. The web is cut in half by a band saw to create two napkin lanes. Mechanical folding heads that offer more constant web tension control, are the most accurate and fastest (up to 2,310 fpm). Napkins produced on these heads are perfectly square and can hold print-to-cut registration with incredible accuracy (+/- .002-inch). Perfectly square napkins can be transferred and packed faster and smoother because of their brick-like stack uniformity. Also, mechanical folding heads are more durable; easier to change over and service; and less prone to clogging from tissue dust.

Vacuum heads are very common in North America. They offer more versatility of folding styles. Vacuum folding heads incorporate a cutting blade to cut the web into the proper napkin size. Vacuum heads typically need continual cleaning, as the tissue dust tends to clog them.

Controlling Lint, Dust

Converters new to working with tissue will learn quickly that it is unlike any other substrate. Not only are there issues with tension control, matching colors, and drying high-color print patterns, but tissue also presents problems with dust, much moreso than any other substrate.

To produce tight print registration on an extensible product like tissue running at high speeds, most manufacturers incorporate numerous digitally-controlled web nip points, as well as independent motor drives in the unwind to properly control web tension throughout the web path.

To help control the high level of linting and paper dust, an automatic calendaring unit, enclosed double doctor blade systems, ink pump and ink filtering systems on the return lines, vacuuming systems and even mechanical plate cleaners can be utilized to allow for a much cleaner printing surface.

As the North American consumer napkin market continues to grow and change, converters' production needs will change to produce more, faster and better products. Manufacturers will respond with higher-production equipment, higher-quality flexo printing and unique equipment features that will help you to carve out your niche and maintain your profits in this important growth market.

About the author…
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