

'A SMALL BIG PRESS'

Short parallel press lines run high and wide to a superstructure suited to semicommercial work

BY JIM ROSENBERG

Pedersen. Dansk Avis Tryk's technical director is banking on a more sizable, more sophisticated version of an idea that first took form several years ago at the Independent Newspapers Inc. plant in Dover, Del. There, as in Denmark, the objective was to configure all the required capacity and product flexibility into the least amount of iron occupying the least possible space. INI's plant prints its own broadsheet and tabloid dailies and week-

lies, as well as semicommercial and specialsize products, including monthly niche publications and shoppers. In the first half of 2007, however, it added about \$1.5 million to its commercial printing business, according General Manager Thomas Bugbee.

In contrast, Dansk Avis Tryk (Danish Newspaper Printing) publishes nothing.

Based near Copenhagen, the company handles only newspaper contract work — lots of it. A typical week will see 80 to 100 jobs printed on 45- to 80-gram paper stock in runs ranging from 15,000 to 30,000 copies, according to Pedersen. Products include the *Børsen* financial daily, two free dailies, and numerous weeklies and monthlies.

INI replaced one- and two-around singlewide press lines with its single five-high doublewide tower. Dansk Avis Tryk has used one- and two-around doublewide presses; next summer it will begin adding four triplewide towers in a new press hall. In both cases, the superstructure and right-angle folders (one with quarterfolding) are suited to variable web widths needed for publications in different formats.

Also common to the Delaware and Denmark sites are their choices of consultant and manufacturer. Dover runs a 10-couple KBA Colora tower, while Dansk will print on 32 KBA Commander couples. KBA supplies variable web-width capability at four other North American doublewide sites.

But INI was KBA's first customer to upgrade a site running singlewide equipment with a Colora ($E \otimes P$, June 2, 2003). Similarly, Dansk's order will be what the press maker calls a first-of-its-kind configuration. Each of its two parallel press lines will consist of two color towers in line with two Pastomat RC reelstands. At right angles to the towers, singlewide superstructures between

two folders will join singlewide product flexibility to triplewide (six pages across) capacity.

Behind the configurations is Sam Wagner, veteran of press maker Harris Graphics (later Heidelberg) and President of Web Offset Services in Sarasota, Fla. In both cases, while also building in options for diverse products, Wagner sought to place wide towers where narrower presses might otherwise supply the same capacity in more space, thereby reducing not only plant size, but also equipment cost and labor. The larger Danish installation will require a higher level of automation than in Dover, and use more ancillary equipment.

The Dover project may have been first, but for Wagner, the idea originated from earlier observations of print operations in Scandinavia and Asia. "I think it planted the seed in my mind," he says. Wagner points to recent growth in free Danish dailies from new and established publishers, including one from Iceland. That and other reasons, including labor issues, he adds, created "a balance of printing that couldn't be serviced, and Dansk began seeing this opportunity last year."

One million copies a day

As pages slim to less than 12 inches, "in the U.S., this is an 8-by-2 press," Wagner says of

the 941/2-inch-web Commander. At least six firms offer triplewide offset, which began moving off drawing boards about five years ago. But for Dansk's unique configuration and operation, Wagner adds, "not everyone could build the press to our requirements."

KBA may have been first to install triplewide offset at a newspaper, but Heidelberg



Web Offset Services President Sam Wagner (center), with Dansk Avis Tryk President Sven Togsverd, left, and Technical Director Johnny Pedersen.

said it would build its Tristream back in 2000, just months after unveiling and selling its first Mainstream one-around doublewide.

In two plants across the street from each other, Dansk runs three early- to mid-1990s Galaxy presses from Harris Graphics (which Heidelberg acquired) and that first Heidelberg Mainstream. Though later Mainstreams were made to function properly, the first was a troubled installation — almost five years late going on edition, according to Pedersen.

Goss International acquired Heidelberg's newspaper equipment business. It reached an agreement with Dansk and rebuilt the press

with new controls to the customer's satisfaction. says Wagner. "We are running the press now," Pedersen confirms. His press-vendor list eventually narrowed to Japan's TKS, MAN Roland, and Koenig & Bauer, and then only to MAN and KBA. Pedersen calls the final selection a tough decision after studying presses and prices.

Scheduled to ship next summer to a building soon to go up adjacent to Dansk's others, the presses are expected to turn out more than a million copies daily, with page widths from just under 10 inches to almost 20 inches. By another measure, the towers will be

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able to output almost 200 million full-color pages in 24 hours, enough to "satisfy all current production requirements" and provide "new opportunities for future growth," according to KBA. The Commander is rated at 85,000 copies per hour in straight mode, but the Dansk project plans on collect runs, which Wagner says tax downstream systems less while requiring less labor and fewer webs, with little difference in throughput.

Automation includes a KBA Patras A system to convey and load newsprint rolls up to 60 inches in diameter. Automation on each tower's stacked nine-cylinder satellite units will extend to plate changing, KBA Roller-Tronic adjustable roller locks, ink pumping, and wash systems. For optimal process control, blanket cylinders, ink oscillating drums, gear oil cases, and electrical drives will be water-cooled to hold a constant temperature.

Explaining the choices, Wagner says while no one wants to deal with fan-out on a triplewide blanket-to-blanket tower, commonimpression satellites have their drawbacks: ink build-up and offsetting. So with Dansk's "extremely high" quality expectations and every page in full color, cleaners will go on everything the paper touches. "We're also putting web cleaners on this press," he adds,

citing a system supplied by British firm PDM that uses a high-speed, non-contact, fiberimpregnated roller that disturbs surface particles, which are then vacuumed off.

Because seams where three blankets abut would limit product sizes, two blankets with staggered gaps will be used across each cylinder. "We had a number of choices," but owing to "design criteria," Wagner explains, "that was our best choice."

Using two plates and straight-across gaps will allow both to be mounted on the same cylinder rotation, and their size alone contributes to labor savings: 32 per tower, versus 96 single-page plates.

"We've tried to do everything possible with existing technology to maximize the print quality and process, and overall press performance," says Wagner.

More flexibility, versatility

Each former section has two singlewide boards, one above the other. Turning webs at right angles to the folders allows ribbons of different widths to be guided over the center of the formers, compensating for width changes by controlling paper path rather than former location. (Alternatives would be hanging a commercial former elsewhere or

changing former size to an extent and making it somewhat adjustable. But as KBA Marketing and Newspaper Sales Director Gary Owen earlier told E&P, "The complexity has always been in the former relocation/ resizing." And the usual set-up — three equal widths across three formers - would limit production to a single product or format.) Slitters and turner bars are set automatically at the console for correct ribbon width and alignment. Roller and compensator settings for various product sizes can be stored and preset at the consoles.

While an ordinary tabloid needs only one former, the second former provides a separate section, perhaps bound and/or on tinted newsprint. For that, Dansk's ribbon stitching will bind and segregate sections, possibly of different page counts, within some of the many tabloids it prints. It also will have a section stitcher in the folder for a whole paper, including skipstitching a tabloid within an unstitched broadsheet.

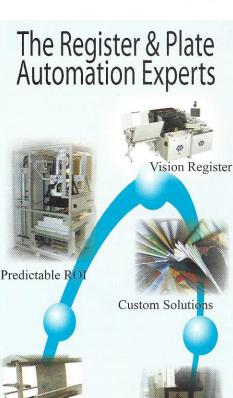
For reasons of convenience, litter control, and easier mailroom and distribution handling, "broadsheets over there typically are glued," says Wagner. So the press is outfitted with gluing capability that also

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will be set up for magazines.

A staggered superstructure also provides on-the-fly backup, diverting webs from one folder to the other. In collect mode, for example, 96 tabloid pages can be delivered at each folder, or 144 pages via one folder and 48 at the other.

Simplify the complex

Though all the printing system's elements are proven, once they are assembled, the control system becomes the most critical. Without it, says Wagner, "this would be a total nightmare to make work," given the "set-up and adjustment of all the moving parts in the press — getting them to their proper positions."

Knowing that, he began working with press controls and workflow system vendor EAE back in 2002, in some ways starting from scratch to come up with the simplest way to go from job to job using available automation. The result, a semicommercial system based on EAE's newspaper offering, "has been in production in Dover now for a little more than a year without a hitch," adds Wagner, who adds that he was reluctant to start over with another supplier.

In fact, EAE was tapped for the Dansk project before a press maker was chosen. The comfort level with a controls-first approach varied widely among press makers, from KBA's long working experience with the Ahrensburg company to one late holdout for use of its own system. But as discussions progressed, says Wagner, all realized that it made sense to stick with the system.

Operators will control and monitor the press from four consoles that feature soft proofing and programming with more than 500 job configurations (including default settings for all running press adjustments) for instant presetting.

According to KBA, the preprogramming reduces time and money spent during installation and start-up, eliminates the need to build, store and test hundreds of possible set-ups, and saves time and waste from the outset of production.

Wagner says the same choices of kit and configuration that support revenue growth in large measure are responsible for containing the costs of equipment and operation: "We wanted to make everything simple, reliable and at the same time minimize labor and maintenance."

"We hope we can reduce the manpower — [by] how much, we don't know," adds Pedersen, who cites faster makeready and printing with better quality on less equip-



One view of a triplewide KBA Commander (showing narrower plates than those Dansk Avis Tryk will use).

ment than would be required using doublewide towers and reelstands. In addition to those sources of savings, the building "absolutely" will occupy a smaller space than would be required to house the greater amount of doublewide equipment needed to equal the triplewides' capacity.

It's a matter of pages or papers per piece of expensive equipment, says Pedersen. Triplewides cost more than doublewides, but not so much that savings don't accrue from the fewer towers needed — not to mention fewer ancillaries such as register systems, ink levelers, and wash systems.

And makereadies are so important when switching jobs or running jobs to different folders. Their time — ordinarily 30 to 60 minutes to change jobs, according to Pedersen — adds to costs while subtracting from revenue opportunities.

Forced to consider new manufacturing methods over the past five to eight years, other parts of the printing industry have seen "a very big wave of larger equipment taking the place of smaller equipment," Wagner says. In trying to bring "that same line of thinking" to newspapers, he continues, "the stumbling block to get people past is the thinking that it's a really big press" that will prove "unmanageable."

Dover's lone five-high doublewide tower and Denmark's quartet of four-high triplewides represent ends of a spectrum of new ways of creating "a small big press" requiring fewer people. Wagner says he has two other projects "now in the talking stages between those bookends."

For the new equipment, Dansk Avis Tryk had to get buy-in from unions concerned about jobs. While there's been no talk about shutting down the other press halls and moving all jobs to the Commanders, this press has the capability "to replace all of their existing presses," says Wagner. "It will take only five or six people to run."