

Following the introduction by a number of press manufacturers – among them KBA with the PRISMA – of four-across newspaper presses with one plate around the circumference, the six-by-two giants have entered the spotlight once again on the back of technical advances in press engineering (minigaps, sleeves et al).

The appeal of the 6/2 concept for newspaper publishers with high-circulation and/or high-pagination titles primarily lies in the potential for enhancing press economy and handling. As opposed to the eight plates of the double-width, double-circumference presses that currently dominate the newspaper market, the plate cylinders on six-by-two presses hold a full twelve plates (six across, two around), so with a 6/2 tower it is possible to print 24 broadsheet pages in full colour instead of the maximum of 16 pages possible with a 4/2 tower.

Fewer Aggregates, Smaller Footprint, Lower Investment Costs, Higher Net Output...

The production capacity per six-by-two printing tower is

Renewed Interest in Presses Six Plates Wide

Renaissance of a 20-Year-Old Idea

The Tristream, a six-across, two-around newspaper offset press that Heidelberg trumpeted at Ifra Expo 2000 in Amsterdam, was not as novel as it seemed, but the renaissance of an idea that Koenig & Bauer had discussed with American newspaper publishers over 20 years ago. So what are the benefits of this configuration?



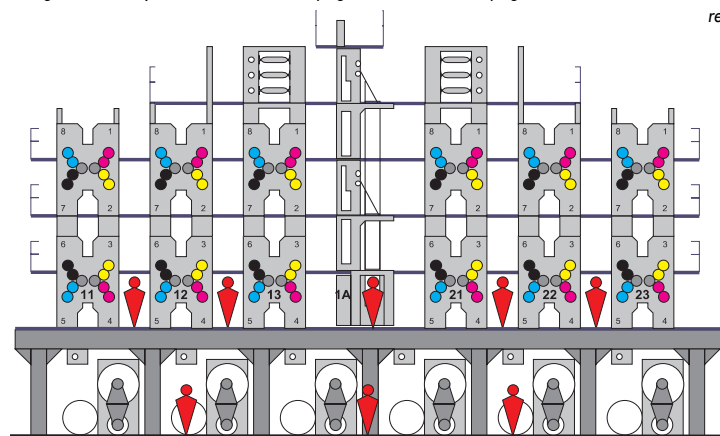
The Jumbo Courier six-by-four letterpress press of 1974 – a forerunner of today's superwide 6/2 KBA Commander offset giant

thus 50 per cent higher than that of four-by-two towers, so for a 48-page, full-colour broadsheet newspaper, for example, only two four-high towers and two reelstands would be required instead of the usual three, while a 96-page broadsheet newspaper would require just four instead of six. For tabloids, twice the number of pages would apply.

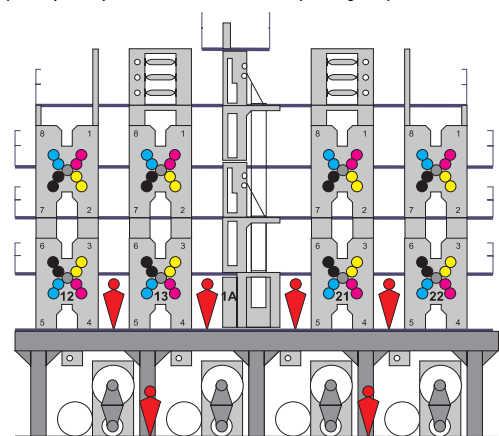
From the newspaper publisher's point of view this means that fewer towers and reelstands are needed for the same number of pages, so the footprint is much smaller and capital investment costs for press and buildings correspondingly lower, as is the volume of waste because there are fewer webs. The reduction in the number of aggregates also means that

net output is higher because makereadies take less time, there is less manning and maintenance work involved, and fewer potential sources of error in electronic and automation systems. So as long as this is compatible with agreements between management and unions, the size of the press crew can be permanently reduced.

One of the many four-across, one-around presses currently in operation, configured as 10-cylinder satellites for 96 pages collect or 2 x 48 pages non-collect



A 6/2 press configured as 9-cylinder satellites has the same production and colour capabilities as a 4/2 press, yet only two-thirds the number of printing couples and reelstands



The 9-cylinder satellite design, as featured on this new KBA Commander for the Rheinische Post in Düsseldorf, is the best configuration for 6/2 presses because it eliminates fan-out and promotes a superb print quality

...and Enhanced Cost-Efficiency

Provided the publisher's product parameters (run length, page count, colour content) are compatible with the capacity-oriented 6/2 system, the bottom-line benefits can be substantial.

It follows that the six-by-two configuration is less suitable for local newspapers with an average, say, of 24 pages and a daily circulation of 25,000 copies than for big national titles with daily circulations of several hundred thousand, a high page count and few split editions. This is why it is the big newspaper publishers that are expressing renewed interest in this concept, for instance to boost the capacity of an existing press hall that cannot be extended or to run production with fewer printing units and reelstands and thus a smaller press crew.



The Jumbo Courier of 1974

When Koenig & Bauer shipped the legendary Jumbo Courier – the world's first six-across newspaper press – to Belgian newspaper house Gazet van Antwerpen in 1974, most newspaper printing plants were still using letterpress and the heavy stereo plates that this involved. In order to counteract the problems – aggravated by the weight of the plates – of cylinder deflection and vibration associated with cylinders whose width was so much

greater relative to their circumference, the Jumbo Courier press line was configured as a six-by-four press with a web width of 2,540mm (100") and a cut-off of 598.5mm (23¹/₂").

This meant that the huge plate cylinders had to accommodate 24 of these heavy plates. The circumference of the cylinders, at 2,394mm (94¹/₄"), was almost the same as the width. Inquiries from other newspaper publishers, among them the New York Daily News, for six-across

presses with two plates around the circumference, a web width of 2,286mm (90") and a cylinder circumference of 1,192mm (47") were regrettably declined by Koenig & Bauer at that time because it was impossible to achieve the necessary degree of rigidity in the letterpress plate cylinders.

Wide Cylinders now Feasible in Offset

Technical advances which, in the letterpress era, were simply

too risky to pursue because of the sheer weight of the plates – a problem that thwarted all attempts by other press manufacturers to implement this concept – have been dusted off again for use with offset plates following big advances in recent years in cylinder construction and bearing technology. For example, over the past 20 years KBA has shipped to the USA some 30 directory offset presses engineered for web widths of more than 1,900mm (74³/₄"), 15 or more

Cross sections of a six-by-two press (right) and a four-by-two press. The towers are the same height and width, but the printing units are one-third deeper

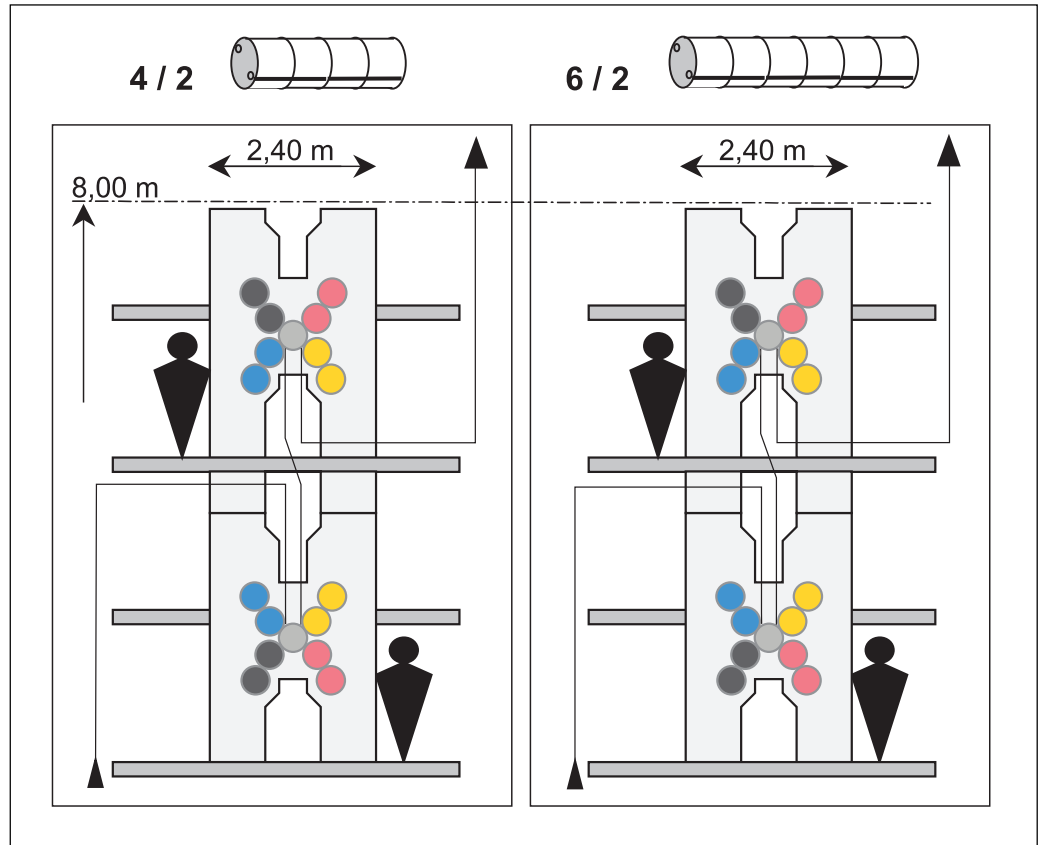
of them for web widths of between 2,000 and 2,040mm (78³/₄" – 80¹/₄"), and for more than ten years now full-colour directory sections have been printed on ultra-lightweight stock in quality four-colour production on 2m (78") wide four-high towers with a minimum cut-off of 578mm (22³/₄").

KBA Favours 9-Cylinder Satellites for 6/2 Presses

On four-high towers configured blanket-to-blanket the fan-out problems so feared in trade circles multiply in direct proportion to the increase in web width. This means that a register-true, quality four-colour print is almost impossible to achieve, even with sophisticated technology, or only possible in conjunction with a relatively high volume of start-up waste.

For this reason, the six-by-two presses KBA offers for current newspaper formats (up to a maximum web width of 2,400mm, or 94¹/₂") are all configured as 9-cylinder satellites, stacked in twos for 4-over-4 and non-reversible. 9-cylinder satellites deliver an excellent register because the web paths between the four printing couples are so short in four-colour production.

At present KBA is the only major manufacturer of newspaper presses with big, new-generation 9-cylinder press lines already in operation – or on the order books – for four-



colour production on both sides of the web. The 13 Commander 48-page presses soon to be shipped to the Mediaprint group in Vienna are just one example.

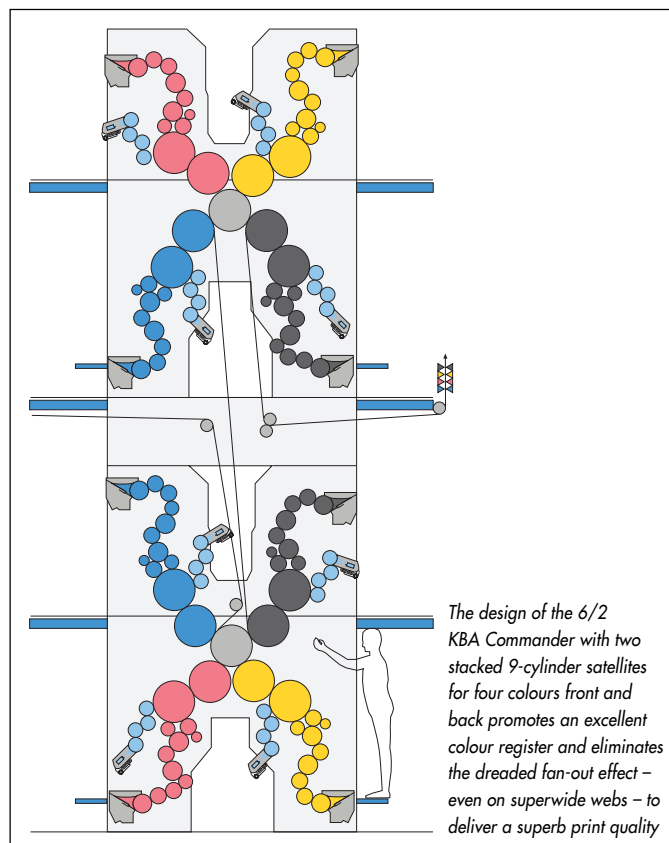
Lock-up Slots on Plate Cylinders, Minigaps on Blanket Cylinders

In order to improve the rigidity of six-by-two presses and to eliminate problems

caused by vibration, the super-wide plate cylinders on KBA presses have optimised lock-up slots, with a continuous gap across the entire cylinder width to facilitate plate mounting.

The blanket cylinders feature the minigaps and blanket plates we originally developed in the mid-1990s for our Compacta commercial offset presses and which have since demonstrated their virtues on more than 500 blanket cylinders. Blanket plates are cheaper, easier to handle and store, and less vulnerable to damage than the sleeves favoured by MAN.

To improve handling, the blanket plates on the 6/2 Commander are each one-third of a cylinder wide. To enhance stability the lock-up slot on the centre plate is staggered 180° around the circumference relative to the two outer plates. So the press can still print double-spread pages.



*Performance and Automation
Level of a 4/2 Commander*

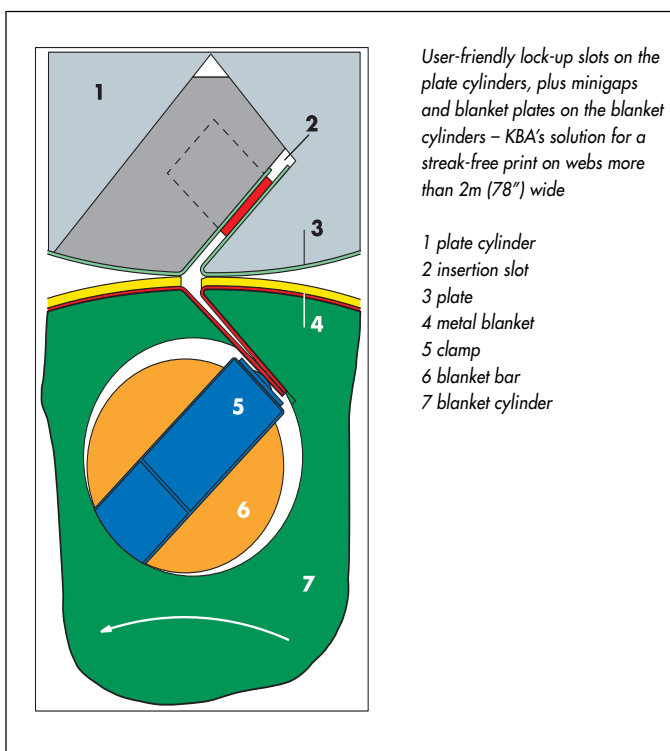
Our new six-by-two presses also feature four-roller spray dampeners and full-width or third-width undershot ink ducts (for two broadsheet pages side by side). Their maximum production output of 45,000cyl rph, advanced level of automation and many other winning features are of the same high standard as those of our international flagship press, the 4/2 Commander.

Conclusion:

Our superwide six-by-two KBA Commander is a logical addition to our newspaper offset range, and is based on proven technology. Like the four-wide version, it features proven KBA KF5 jaw folders (or gear folders as an option) and heavy-duty reinforced Pastomat RC reel stands, with a Patras A automated reel logistics system available as an option. Newspaper publishers whose regular titles have a high circulation and, very often, a large number of pages would find it well worth their while to take a closer look at the six-wide Commander.



The minigaps and blanket plates launched by KBA in 1995, and now featured on more than 500 commercial printing couples, expand the options in newspaper offset



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For further information please contact our sales department at:
Koenig & Bauer AG
Würzburg Facility
Postfach 60 60
97010 Würzburg, Germany
Tel: (+49) 931 909-4512/4225
Fax: (+49) 931 909-4101
Web: www.kba-print.de
E-mail: kba-wuerzburg@kba-print.de