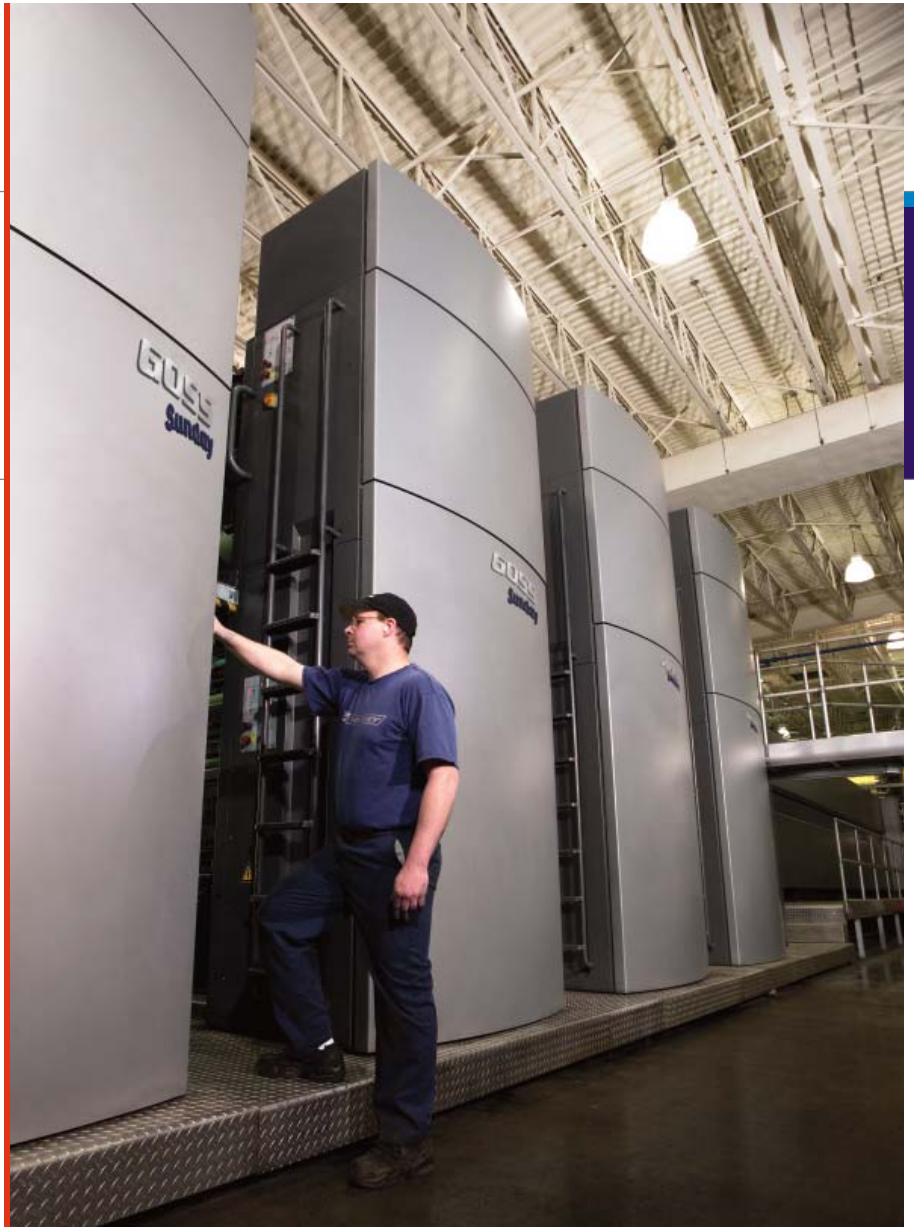


SUNDAY 4000 AND 5000

GAPLESS WEB OFFSET PRESS SYSTEMS



GOSS | INTERNATIONAL

introduction

2



BUILDING ON THE SUCCESS OF GAPLESS TECHNOLOGY, THE HIGH OUTPUT, QUALITY AND VERSATILITY OF THE SUNDAY PRESS SERIES HAS BEEN EXPANDED TO INCLUDE 96-PAGE CAPABILITY.



The Sunday™ 4000 and Sunday 5000 presses deliver all the proven advantages of gapless Sunday press technology in highly productive and versatile double-circumference configurations. With format options ranging from 32 to 96 pages, they excel even at extremely short run lengths.

Fast makereadies and simplified operation also create a unique ability to print high-pagination, high volume jobs more efficiently and competitively. High speed and proven durability ensure continued performance at signature counts well into the millions.

Such versatility is complemented by gapless printing, which with virtually no gap bounce, ensures that every magazine, directory, catalog, book, insert or coupon is printed with premium quality.

Easy operation

Automation also defines the Sunday press range. High pagination and productivity are achieved in combination with simplified operation. Closed-loop control and presetting capabilities are extensive. Virtually every step in the printing process

can be controlled and monitored by a single operator with the Omnicon™ controls and Goss Web Center™ workflow system. With standard and optional features, the long list of fully automated functions can extend from roll loading and webbing up to plate changing, color and register control, web catching and folder changeovers.

Integrated systems

From the splicer to the printing units, dryer and folder, Goss International designs and manufactures all the major components. This ensures integration at every level and eliminates the complexity of working with multiple vendors. Goss® options throughout the system give printers extensive opportunities to customize, while an open control system makes it easy to add auxiliary equipment from the leading suppliers.

Sunday 4000 and Sunday 5000

- **Gapless blankets and shorter cut-offs**
- **Up to 15 meters per second (3,000 feet per minute)**
- **32- to 96-page long-grain formats**
- **32- to 48-page short-grain formats**
- **Pinless folding**
- **Fast makereadies**
- **Versatile applications**
- **Extensive automation**
- **Simplified operation**
- **Proven reliability**

Sunday technology

4



GAPLESS BLANKETS AND PINLESS FOLDERS MAKE SUNDAY PRESSES THE MOST PRODUCTIVE AND EFFICIENT WEB PRESSES.

High quality

Gapless blankets revolutionized web printing in 1993, and Sunday™ presses have been setting new standards for print quality, productivity and efficiency ever since.

With no gaps, Sunday presses can take print quality to a higher level and maintain that quality at higher speeds and on wider webs. Removing the gaps eliminates vibrations and associated print defects such as bump streaking, doubling and web flutter.

Gapless blankets also last longer and can be changed faster than flat blankets, with no packing required.

Paper savings

Eliminating the blanket gap also increases the printable area on the cylinder, allowing shorter cut-offs and significant paper savings. Pinless folding enhances the savings by eliminating pin trim requirements.

Proven durability

With data from more than 15 years of high-performance production, durability has emerged as yet another major advantage of Sunday technology. Design features, including the vibration reducing gapless blankets, reduce wear and tear on major printing unit components and systems. This minimizes long-term maintenance requirements, the scope of rebuild projects and the overall cost of press ownership.

Continuous development

Research and development to extend the fundamental benefits of gapless Sunday presses continues at full strength. Web widths as well as the range of applications continue to be extended, and ongoing advances in press performance, controls, auxiliaries and consumables continue to invigorate the industry. Even gapless blankets themselves are being refined to reduce costs, enhance performance and further increase longevity advantages.



Gapless blankets slide in through the side frame and can be changed in less than two minutes.



printing units

6

ADVANCED PRINTING UNIT TECHNOLOGY MAKES EXCELLENT RESULTS EASIER TO ACHIEVE.



Printing units designed for speed as well as premium print quality, easy operation and maintenance, and long-term reliability are the heart of the Goss® Sunday™ 4000 and Sunday 5000 presses. In addition to gapless blankets, all Sunday press units feature in-line cylinder stacks that are bearerless and force loaded. The advantages include high flexural stiffness and vibration absorption and an optimum degree of web wrap for better dynamic control. The design also reduces the possibility of damage from high-speed wrap ups and provides easy accessibility for roller settings, cleaning and maintenance.

High-tech inking and dampening

Convertible inking and dampening capabilities combine to provide exceptional ink coverage precision and the flexibility to meet complex lithographic challenges. Sunday 4000 and 5000 printing units also offer remote lateral register, circumferential register, and plate cylinder skewing capabilities.

Multidrive advantages

Independent a.c. motors drive all Sunday press components, reducing mechanical maintenance and ensuring consistent web tension, premium print quality and easier system integration. Crews also gain the flexibility to complete makeready or maintenance work on one or more units without impacting the rest of the system.



Sunday 4000 & Sunday 5000 features

- Continuous inker with motor-driven fountain rollers
- Segmented ink fountain blades or DigiRail™ digital inking (optional on Sunday 4000 and standard on Sunday 5000)
- 14-roll ink train with vibrator cooling
- Remote plate cylinder skewing
- Remote circumferential and lateral register
- Cooling to plate and blanket cylinder bearings
- Individual inker and/or dampener silencing
- Autoplate™ or semi-automatic plate changing
- Oil cooling
- Automatic blanket washing
- Enhanced Duotrol® dampening system

Convertible inking



100-0-0

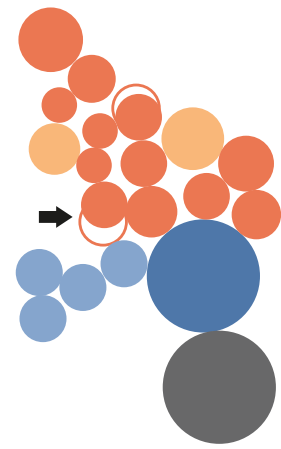


60-20-20

Convertible dampening



Film type



Emulsification type

Convertible inking (100-0-0 or 60-20-20) and dampening (film or emulsification) provide the flexibility and precise adjustment of ink coverage to meet the most demanding lithographic challenges.

high pagination and short runs



8



PRODUCTIVITY, PRINT QUALITY AND EFFICIENCY MAKE THE GOSS SUNDAY 4000 AND SUNDAY 5000 PRESSES THE ULTIMATE CHOICES IN THIS MARKET.

Printers and publishers throughout the world recognize the benefits of high-pagination, double-circumference web presses. Modern systems are ideal for producing catalogs, magazines, directories, books and other products requiring high page counts. Sunday™ 4000 and Sunday 5000 presses excel in this sector, delivering the premium print quality and exceptional productivity that only gapless presses can.





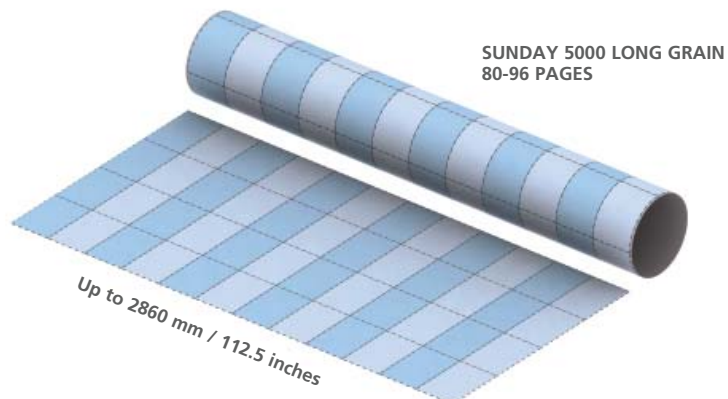
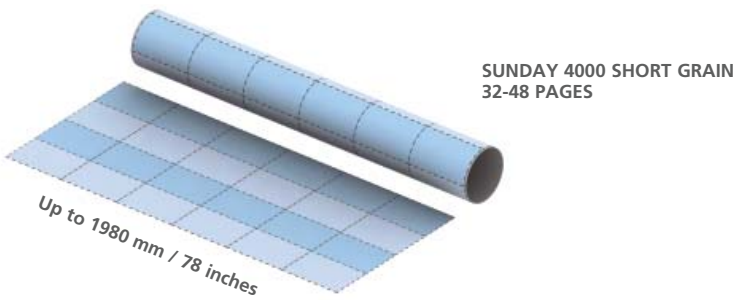
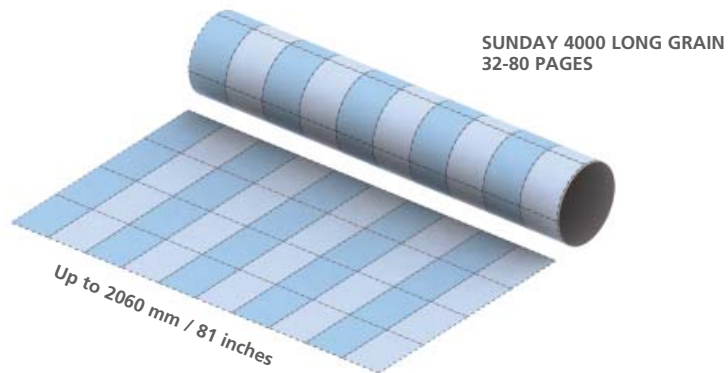
From the shortest to the longest runs

Even high-pagination printing applications are now often characterized by short run lengths and an increased emphasis on versioning and product personalization. The Sunday 4000 and Sunday 5000 presses give the printers serving these markets some impressive advantages. Makeready and waste reduction features provide the agility to compete at run lengths that were previously the exclusive domain of sheetfed printers, while producing high-pagination finished signatures.

Long or short grain 32 to 96 pages

From a similar platform, the Sunday 4000 and Sunday 5000 systems give printers exceptional options for producing high-pagination signatures. Distinct formats include long-grain 32-, 48-, 64-, 80- and 96-page models and short-grain 32-, 40- and 48- page presses. Pinless Goss® folders match the productivity and versatility of each specific model. Regardless of the format, the print quality, productivity and durability of the Sunday press is unrivaled in the double-circumference web offset market.

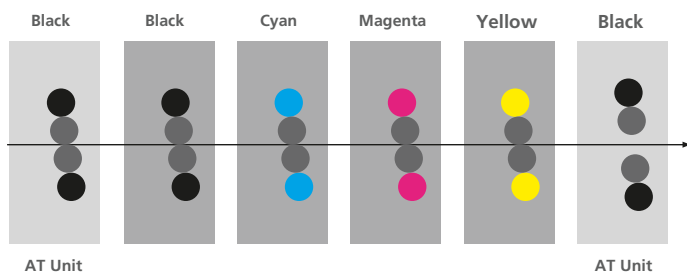
Choose long- or short-grain presses from 32 to 96 pages



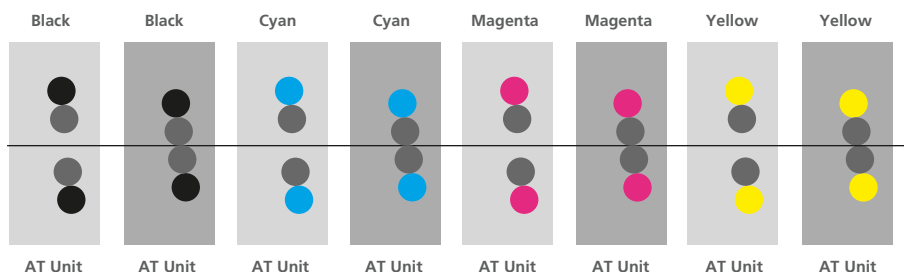
streamlined makereadies

10 SUNDAY 4000 AND SUNDAY 5000 FEATURES TAKE TIME, EFFORT AND WASTE OUT OF THE PROCESS.

Non-stop printing with Automatic Transfer



A press with two Automatic Transfer units can complete single-color job changeovers – such as edition, language, address or pricing changes – on the run.



A press with eight Automatic Transfer units can complete four-color job changeovers without stopping for a traditional makeready.

The Sunday™ press family excels at short and medium run lengths, when makeready speed and waste reduction are critical profitability factors. Goss International has attacked the makeready process with proven technology aimed at automating, simplifying or even eliminating the steps. The powerful, easy-to-use Goss Web Center™ control modules complete the picture, reducing start-up waste.

Automatic Transfer

This optional breakthrough eliminates conventional makeready requirements in some applications, allowing on-the-run print transfer from one printing unit to another. Operators can easily bring one or more Automatic Transfer™ (AT™) units on impression while simultaneously taking another unit or group of units off impression – essentially going from one job to another without stopping or even slowing down the press.



AT units include all of the printing capabilities of standard Sunday press units, and they can be positioned anywhere within a press line. Benefits include dramatic reductions in waste and makeready time and the viability of an entirely new realm of short-run or versioned web offset products.

Sunday technology is vital to the Automatic Transfer capability. Because they do not require bearers, Sunday press cylinders can be mounted in pivot boxes. This enables a wider blanket-to-blanket opening in the idle units so the web can pass through in a straight line, without being diverted. Multidrive motors for each individual printing couple also make it simple to start, stop and plate those couples independently.

Autoplate

The Sunday 4000 was the first double-circumference web press available with Autoplate, the patented and proven system introduced in 1995. This fully automated plate changing technology is particularly impressive and beneficial with the Sunday 4000 and 5000 presses, making it easier for operators to handle large plates. Automatic or semi-automatic plate changes can be completed with the web still in the press. Plate changing times and operator effort are significantly reduced. Registration is also more precise, and operators are free to complete other makeready tasks.

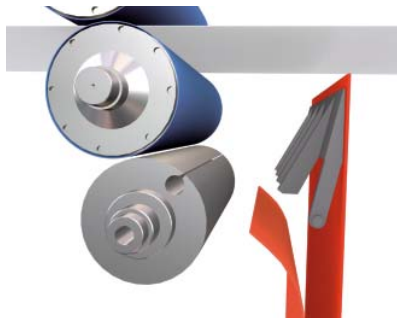


The Autoplate sequence

1. Cylinder unlocks plate



2. Plate is rotated off the cylinder



3. New plate is prepared



4. Lead edge of new plate is inserted and plate is loaded

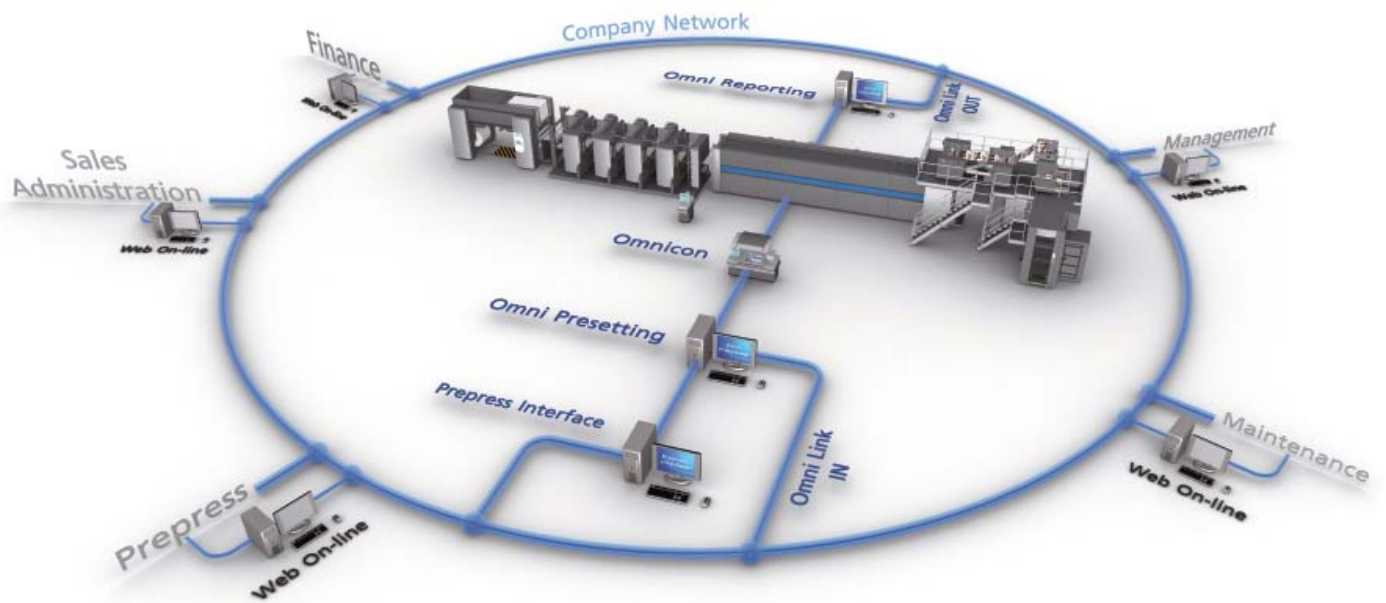


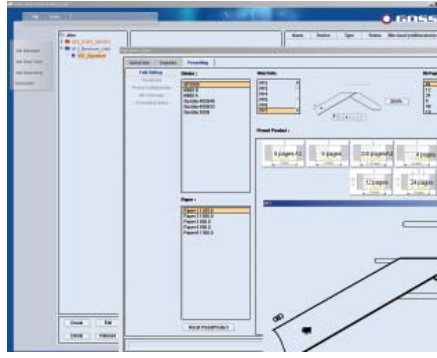
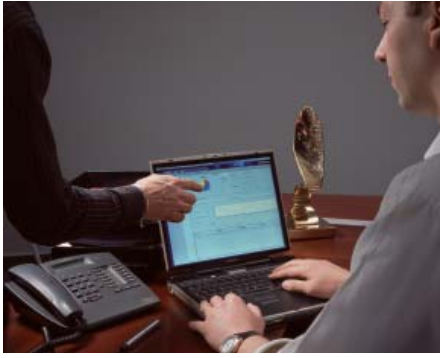
5. Automatic lockup



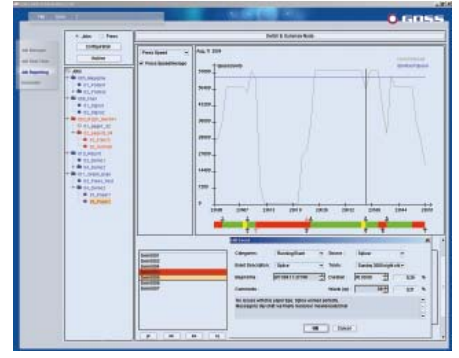
workflow & controls

- 12 THE GOSS WEB CENTER TAKES THE CONCEPT OF PRESS CONTROL TO A NEW COMPREHENSIVE STANDARD.





Omni Presetting



Omni Reporting

The CIP4/JDF-compliant Goss Web Center™ workflow system delivers all the advanced features web printers need to automate processes, maximize efficiency and integrate press systems within a comprehensive digital workflow. The modular system is built on a Windows® operating system and includes the software, the hardware and the connectivity for complete, customized control. An open architecture also makes it easy to link prepress, production, auxiliary and management components from Goss International and other suppliers.

Omnicon

Omnicon™ press controls form the foundation of the Goss Web Center. From large touchscreens, operators can retrieve digital files, monitor presets and production data, and initiate automated sequences. They can also remotely control ink, water, and every other motorized function throughout the press and folder all with speed, precision and ease.

The Omnicon controls accommodate all leading closed-loop systems and include built-in learning algorithms to continuously increase preset accuracy. Distributed processing simplifies installation and operation, and an on-line connection creates a link with service personnel for continuous remote monitoring and troubleshooting.

Omni Makeready

Omni Makeready™ hardware and software functions create a specialized communication link with closed-loop controls for color, register and cutoff. Unique software algorithms also calculate and automatically adjust target density, ink film thickness and other job change functions. Data travels automatically and precisely to the press for faster start ups and reduced waste.

Prepress Interface

The Prepress Interface accepts CIP3 or CIP4/JDF data from digital prepress systems, converts area coverage values for individual ink zones, and sends the calculations directly to the Omnicon console for automated presetting of ink keys. One common Prepress Interface can serve multiple Goss® presses within a single location.

Omni Presetting

A powerful addition to the Prepress Interface, this module makes it fast and easy to preset ink keys, motorized folder functions and some auxiliaries. Operators can initiate automatic presets based on standard job formats and stored data or they can easily create new parameters. The Omni Presetting™ functions reside on a standard PC within the network, allowing off-line job preparation prior to the run.

Omni Reporting and Omni Link

Omni Reporting™ reports press status in real time and on a cumulative basis. Data ranging from speed, job duration, consumption of consumables and waste, to events like splices, web breaks and blanket washes can be accessed on site or remotely. Omni Link™ communicates this performance data directly to a management information network, creating an efficient link between production and management functions such as estimating, billing, job planning and purchasing.

full integration

14



INTEGRATED SYSTEMS DELIVER MAXIMUM PRODUCTIVITY, AND GOSS SPLICERS, PASTERS AND DRYERS COMPLEMENT ANY SUNDAY SYSTEM.

Choosing a single supplier also gives printers the added advantages of complete mechanical integration, seamless controls, coordinated purchase and installation processes and a 24-hour on-line link for service and monitoring.

Zero-speed splicers and flying pasters

The Contiweb™ CS splicer is available for presses running up to 14 meters per second (2,800 feet per minute) and 1450 mm (57") web widths. The Contiweb FD™ flying paster is designed to match the speed of the Sunday™ 4000 and Sunday 5000 presses and fully automate the splicing process.

Operator involvement is limited to applying a linear adhesive tape for the straight-tape splice. The Contiweb FD paster also offers an option to accommodate rolls up to 1524 mm (60") in diameter for longer intervals between splices. The unloading and loading cycles are fully automated, and splicing can even be completed while the press is idle.

A combination of user-friendly central and localized controls makes it easy to set, operate and monitor all Goss® splicers and pasters, while integrated infeeds and web guides maintain exact web tension and alignment. These features combine with a shaftless drive system to prevent web breaks and ensure high print quality.





Ecocool dryer

The Ecocool® is the first dryer to fully integrate the chill roll section, as well as other important functions. Positioning the chill rollers immediately after the dryer prevents condensate from occurring on the rollers. Significantly reducing the diameter of the individual chill rollers further improves print quality, turning the web at sharper angles and creating tighter contact.

Goss International has also integrated silicone application and optional remoistening capabilities within the Ecocool, uniquely positioning these functions to optimize print quality. Additional features to improve uptime and simplify operation include integrated web guiding, tension measurement and web break detection.

Ecocool dryers use evaporated solvents to partially fuel the burners. Unique technology controls and regulates the use of available solvents to maximize efficiency. In dryers with integrated afterburners, this active solvent concentration control can reduce energy consumption by up to 30 percent when compared with a conventional dryer.



A combination of low circulation air temperatures and high air volume also ensures that printed products exhibit higher gloss and less fiber lifting. The patented crossjet airbar system allows the web to float smoothly through the dryers, adding lateral stability and decreasing the risk of web breaks.

pinless folders

16 **ADVANCED, VERSATILE TECHNOLOGY FOR HIGH-SPEED SIGNATURE HANDLING.**

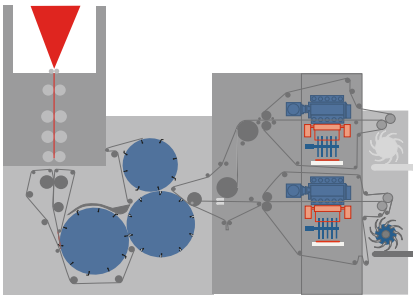
Pinless folding is the perfect complement to the productivity and paper saving advantages of the Goss® Sunday™ 4000 and Sunday 5000 presses. Goss International offers several models that incorporate close to two decades of design experience with pinless technology and deliver maximum speed, versatility and reliability.

The PCF-3 pinless combination folder includes several innovative technologies for high-speed signature handling.





PCF-3



The PCF-3

Goss International's most advanced pinless folder produces a full range of magazine, delta fold, digest, tabloid and slim jim products at up to 15 meters per second (3,000 feet per minute). Automated presetting, push-button changeovers and on-the-run adjustments speed up the makeready process and prevent unnecessary stops.

The PCF-3 folder also includes three breakthroughs for high-speed signature handling. A Double Cut process separates signatures in two steps to maintain continuous, positive control. A Dynamic Diverter positioned in-line with the product flow minimizes jams when splitting the stream. And a unique Speed Matched Slowdown feature in the quarter folder slows signatures down smoothly, without marking.

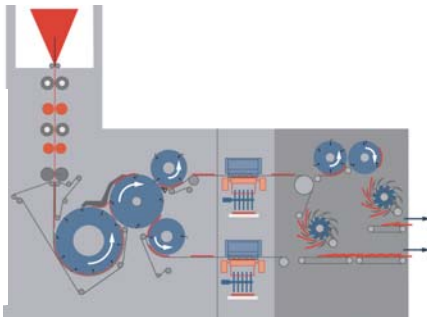
The PCC-2

Long-grain Sunday 4000 and Sunday 5000 presses can also be matched with Goss PCC-2 pinless combination folders to produce a wide range of magazine, digest, tabloid and slim jim products. This folder features full presetting, semi-automatic changeovers and a top speed of 14 meters per second (2,800 feet per minute).

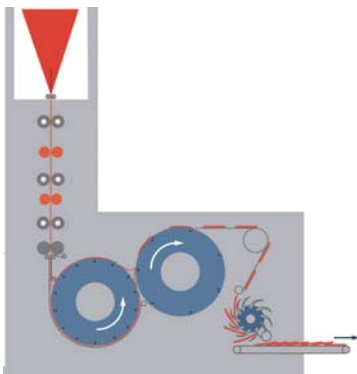
Short-grain folder

Short-grain Sunday 4000 presses are equipped with the SG-3 folder. This high-speed jaw folder matches the fastest press speeds and delivers magazines and mini-book products in a spine-first orientation. All presetting functions are motorized, changeovers are semi automatic, and numerous adjustments can be made on the run. Optional modules for double-delivery, a second former and two chopper modules provide additional signature versatility.

PCC-2



SG-3



customization

18

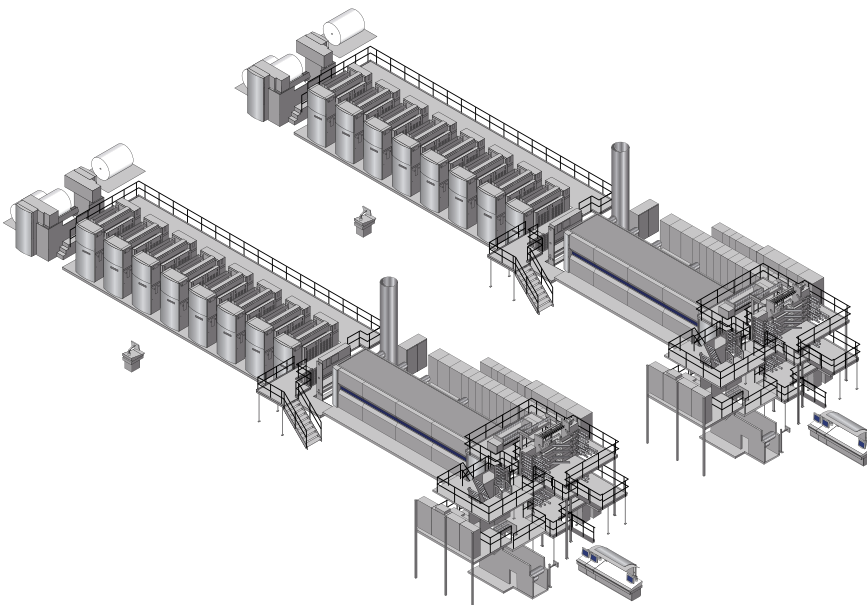


EXTENSIVE FORMAT OPTIONS AND OPEN CONTROLS MAKE IT EASY TO CUSTOMIZE A GOSS SUNDAY 4000 OR SUNDAY 5000 SYSTEM TO ANSWER ANY MARKET NEEDS.

Sunday™ press systems can be customized with Goss® splicers, dryers and folders that perfectly match each printer's unique requirements. The long list of Goss auxiliaries includes an advanced web catcher system to prevent downtime and cylinder damage, automated web-up to reduce makeready time and operator involvement, and integrated blanket washing and ink leveling.

Open systems

The Sunday 4000 and Sunday 5000 presses are specifically designed, mechanically and electronically, to incorporate components such as closed-loop control and auxiliary systems from all leading suppliers. Goss even goes a step further, forging in-depth relationships with these third-party suppliers to ensure full integration across purchasing, installation, service and production. Regardless of the specific components, independent a.c. motors and Goss Web Center™ modules link all the parts into a cohesive, efficient system.



innovation & execution

GOSS INTERNATIONAL DELIVERS UNIQUE OPPORTUNITIES FOR PRINTERS AND PUBLISHERS TO ADVANCE THE PRINT MEDIUM TO NEW LEVELS OF IMPACT AND VALUE.



19

Worldwide development and support resources are anchored by world-class manufacturing sites throughout the United States, Europe and Asia, enabling Goss web offset press and print finishing systems to set the standards for innovation, productivity and value.



Goss International's industry leadership position is built on intensive collaboration with customers and a proven ability to innovate and execute, making web offset a more effective way to communicate. In-depth process knowledge and expansive R&D efforts continue to deliver differentiating breakthroughs like gapless Sunday™ press, Autoplate™, Flexible Printing System™, Automatic Transfer™, DigiRail™ and Ecocool® technologies as well as advanced workflow and finishing systems.

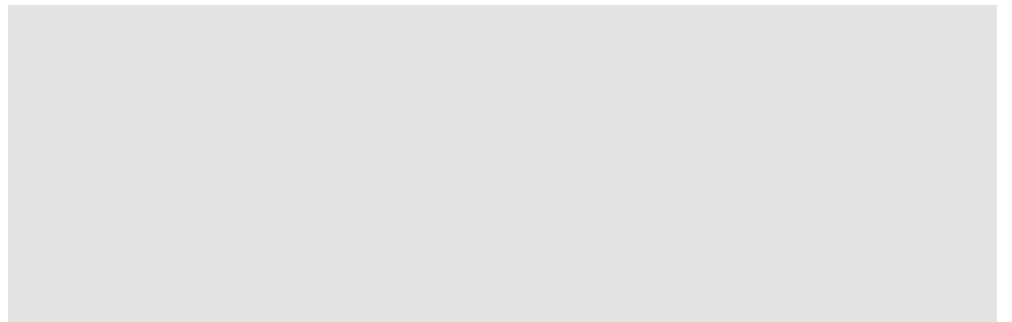
Lifetime Support

The Goss Lifetime Support™ program extends this level of innovation and execution throughout the life of every Goss system. Fast access and specialized experience define comprehensive parts, service, training, audit and rebuild capabilities. The direct link between development of new technology and ongoing support of existing products also drives a steady stream of valuable, market-driven enhancements.

Goss International advantages

- **Innovative technology**
- **Collaborative project management**
- **Expansive product options**
- **Integrated press, finishing and auxiliary systems**
- **World-class manufacturing**
- **Lifetime Support services**
- **Global resources and perspective**
- **Expertise and experience**

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Operating speeds for optimum production will vary with paper quality, size of product, number of webs and pressmanship.
To display product features, some safety devices may be omitted or shown out of position in photographs or illustrations.
Specifications and dimensions are subject to change without prior notice.

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