

Pursuing a Common Goal

"Printing is still a very dynamic process today," says Kosh Miyao, senior VP of Komori America Corporation, Rolling Meadows, IL, "with suppliers like us always looking for new tools to help printers meet their customers' needs. I think the best tools produce repeatable results so that printers are better prepared to work with any variables they encounter."

In just about every case, Miyao notes, manufacturers join with other suppliers to serve this common need. "We've worked with Baldwin Technology for a long time to provide printers with the right accessories for our presses," he says. "For blanket washing, we fully support our customers' use of Baldwin's PREPAC cloth technology on Komori's blanket cleaning system. For applications that require water in the cleaning process, this can be achieved by use of our factory-installed spray systems."



Doug Schardt sees the benefits of running Baldwin blanket-cleaner cloth rolls on Komori presses.

New demands, new solution

UV-cured inks and hybrid printing systems pose new demands, Miyao adds, including the use of special lamps on press and new solvents for wash-up. "That's what makes the new presaturated PREPAC system such a great solution for printers, whether they're after process gains or environmental benefits," he says. "And when the low-VOC roll is used up, printers simply throw it in the trash instead of worrying about collecting and disposing of solvent and cleaning cloths."

Several thousand Komori presses in the U.S., he says, could be converted to utilize Baldwin's PREPAC cleaning rolls if the printer's situation required it.

Adds Doug Schardt, Komori's national product manager for press equipment, "I've run the PREPAC rolls in our showroom and seen what's possible using this system. It's ideal for general commercial printing, of course, designed to operate nicely with our blanket cleaners on multicolor Komoris. Operators can clean all the blankets simultaneously in just a few minutes and get up and running again quickly."

Beyond conventional printing

He adds that the Komori/PREPAC combination can be especially useful for blanket washing applications beyond conventional printing. "Shops printing UV inks and using open spray-type systems have always had to allow more time for blanket washing because of any potential risk posed by hot lamps and solvent mist," he explains. "Waiting for lamps to cool down could take five, six or seven minutes, then later another three minutes for the lamps to come back up to full power. Since the PREPAC rolls use so little solvent, this waiting time is totally eliminated so productivity can go way up."

Simple & Effective Conversion

Sheetfed printers seeking new productivity gains, significant cost savings and dramatic environmental benefits in their pressrooms can now convert their OEM or aftermarket blanket cleaning systems to use high-performance Baldwin PREPAC cloth-roll technology.

Their own plant personnel can perform the changeover in a few hours with a new PREPAC conversion kit (shown here), without need for a technical service call from Baldwin or the press manufacturer.



"That's how we envisioned this product line from the beginning," says Walter Cano of Baldwin Technology Company who, with Bob Gasparrini, also of Baldwin, led the company's blanket cleaning development and with whom he shares several patents on the technology. "This is a very straightforward conversion for anybody who works on a press. Typically the operation takes about half an hour per press unit, including

Walter Cano (shown) is Baldwin Technology's senior development engineer for cleaning consumables.

set up of the PREPAC cloth roll."

Provided in the kit, says Cano, is the appropriate PREPAC cloth-roll for each press unit, all conversion components and complete instructions.

Once the press has been PREPAC outfitted, he adds, achieving "hands-off" blanket washing on most newer presses is just a matter of shutting off the solvent spray system and updating the press software and/or adjusting system parameters for the correct wash program.

Reports from the field

Joining Baldwin in its North American distribution of PREPAC cleaning technology is Prisco, a leading manufacturer and distributor of offset pressroom chemistry, coatings, blankets, supply items and process control equipment. Prisco field technicians report high printer



interest in PREPAC and operating success in accounts that have already converted their equipment.

In Massachusetts, says Prisco process specialist Mike Rogers, high-end shop W.E. Andrews converted two of its multicolor Komoris to use PREPAC cloth rolls and has improved its productivity and print quality while eliminating the need for costly solvent mixing.

In Los Angeles, Prisco's Dave VanWongerghem reports conversions of Komori and Mitsubishi sheetfeds. "Managers describe the process as very straightforward," he says. "Once they installed the Baldwin equipment, they used the touch screen to turn off the spray system, then set the amount of cloth usage by changing the software. They said 'The system really works' and were happy to get rid of blanket washing practices that were messy and wasteful."

In late June, VanWongerghem adds, one LA shop was scheduled to replace dry rolls with PREPAC presaturated cleaning rolls on its Heidelberg Speedmaster 74 and Speedmaster 52 presses.

Slashing VOC Emissions

Example: IMPACT/PREPAC vs. Conventional vs. Manual Blanket Cleaning on 28" Presses

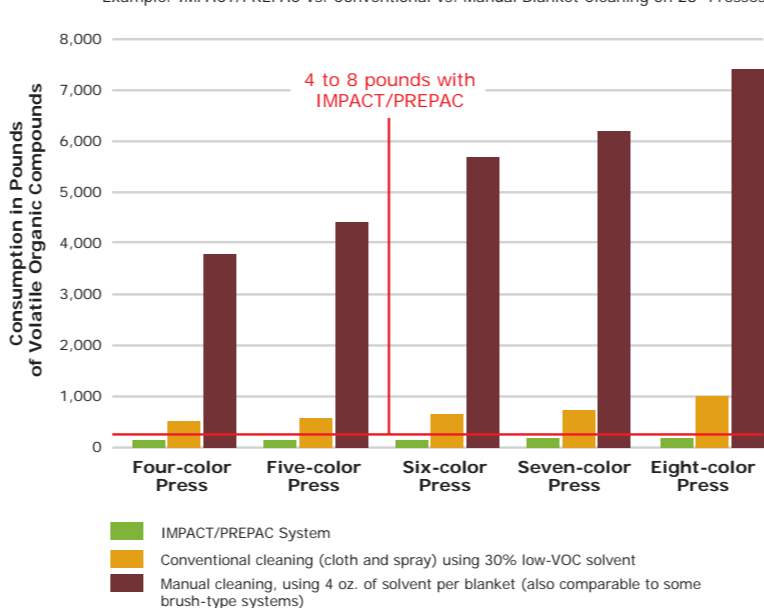


Chart shows pounds of consumption of volatile organic compounds for blanket cleaning for a period of 320 days, at 15 cleanings per day. Baldwin's IMPACT/PREPAC system yields 98.5% VOC reduction vs. conventional cleaning and 99.9% VOC reduction vs. manual cleaning.



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Compliance Without Compromise

Baldwin applies its patented PREPAC cloth-roll cleaning technology to popular sheetfed models.

To help printers meet if not exceed challenging customer demands, rising productivity requirements and tightened VOC emission limits, the industry's leading press-accessories innovator is working with manufacturers to make its patented PREPAC automatic cloth-roll cleaning technology available for use on thousands of presses equipped with cloth-type blanket and/or impression cylinder washing systems.

Already, reports Baldwin Technology Company, Inc., Komori, KBA, Mitsubishi, Ryobi and Sakurai utilize PREPAC technology as standard on their new sheetfeds or selectively on existing equipment on a model-by-model basis.

For many presses in operation, including Speedmaster 52 and Speedmaster 74 models from Heidelberg, Baldwin designed a special PREPAC conversion kit, provided on a unitized basis, containing the appropriate cleaning roll, replacement pressure pad assembly (if required), all necessary installation parts and complete instructions. A printer's own shop personnel can install the PREPAC cleaning components, which typically takes about 30 minutes per press unit and does not require a service call from Baldwin or the press manufacturer.

Blanket cleaning and much more

Studies show that Baldwin's cloth-roll technology removes ink and paper residue from blankets faster, better and more consistently than conventional cleaning, thereby improving print quality, minimizing waste sheets, reducing maintenance and eliminating any need for hand washing.

Best of all, PREPAC can reduce printers' blanket cleaning

solvent usage by more than 95%, slashing their total emission of volatile organic compounds and helping them stay well within VOC limits.

Baldwin's newest PREPAC development, engineered to perform across all ink platforms including conventional, UV and hybrid, uses special DuPont-made nonwoven cloth rolls presaturated with a precise amount of a cleaning formulation containing 5% VOC content. This PREPAC "wet-cloth" system is called ideal for application-specific uses, including interdeck UV processes and hybrid.

Proven on 7,000 press lines

At present, notes Baldwin, PREPAC cleaning technology is successfully running on more than 7,000 sheetfed and web press lines in North America equipped with both Baldwin and non-Baldwin cloth-type cleaning systems.

Baldwin offers its IMPACT and IMPACT Flex automatic blanket cleaning systems for sheetfed and web presses and automatic impression cylinder cleaning systems for sheetfed equipment. Prisco (Printers' Service), Newark, NJ, is Baldwin's exclusive non-OEM distributor of PREPAC consumables products in North and South America, Mexico and the Caribbean.

Inside, read how four printers rely on PREPAC "compliance without compromise" performance to score both process gains and environmental benefits.

Shown at top: PREPAC cloth roll and pressure pad assembly.

Those VOC Levels

When it comes to allowable VOC emission levels, "Printers everywhere should keep an eye on Southern California," advises Gerry Bonetto, VP of government affairs for Printing Industries of America/Southern California. Long concerned about area printers' ability to comply with ever-tightening VOC standards for everyday solvents, Bonetto just won an 18-month extension from local regulators for an allowable VOC level of 500 grams per liter of solvent.

He says, "This gives us time to work on systems that comply and really work, such as the Baldwin PREPAC solution that meets these new, strict requirements." Adds Dave VanWongerghem, technical and process specialist for Prisco, Inc., Ontario, CA, "The limit here on VOC evaporative content used to be 800 gpl but some regulators were actually considering a new level of less than 100 gpl, which could cripple industries like printing." He explains, "A gallon of solvent

weighs about eight pounds, which means that, at the 800-gpl level, 6.7 pounds can be VOC. At 500 gpl, this drops to 4.15 pounds, but at just 100 gpl, the amount of evaporative solvent is only eight-tenths of a pound. This would mean that more than seven pounds of the gallon could not be content that evaporates in a reasonable amount of time." He concludes, "Besides being practically useless as a cleaning agent, this low-VOC mixture could cost three to four times more."

Complying with VOC Rules

Printing companies in California "are being driven crazy" by air quality regulators aiming to greatly reduce allowable VOC content levels of pressroom solvents, says Lithographix manufacturing VP George Wolden.

He advises managers throughout the country to stay current with developments there simply because their own areas will be affected sooner or later.

"Shops in the five southern counties of California already operate in the nation's toughest non-attainment area," Wolden says. "Now the LA area AQMD [Air Quality Management District] wants to lower the allowable VOC content not by just a little but by a very large margin, from the present level of 500 grams per liter to just 100. This will have a tremendous impact on our manufacturing operation."

Lithographix, recognized as one of the nation's most progressive and successful printing companies, is as far ahead of the curve as possible.

Now Wolden is looking for the next creative solution for continuing to put ink on paper using a process based on the principle that oil and



George Wolden seeks ways to lower VOC emissions.

water don't mix.

"As long as we print oil-based inks at very high speeds, we'll need a solvent and a process lubricant that give us maximum versatility," he says. "For example, we run 60 to 70 different papers on our web presses, twice that on our sheetfeds."

Wolden thinks the answer may lie not in the inks but in the water part of the equation.

Special surfactants or additives in fountain solutions that help keep the non-image area free of ink and fountain solution buildup may be

an answer in developing a water-based spray solution now used in conjunction with automated blanket washers.

As lower-VOC solvents are used, which leave an oily residue after a wash, Wolden says printers need to take a close look at water spray systems and work with water solutions incorporating surfactants that will enhance the "lifting" power and removal of blanket wash solvents.

Solvents with lower VOCs are generally harder to remove and can create misting and contamination to both water fountain solution and inking systems, which ultimately cause more waste and lost production time.

He explains, "If we're blocked on the solvent side because of VOC levels, one option is to treat water, with a little chemical help, as part of the overall solvent cleaning solution."

Lithographix is equipped with five eight-color Mitsubishi sheetfeds, one of which is devoted full time to UV and a second that switches between conventional and UV, plus three Mitsubishi web presses, two eight-colors and a six-color. All press units are equipped with Baldwin automatic blanket cleaners.

To serve clients requiring large-format printing, the company is presently installing a "Gigantix" press, a 59x81" KBA 205, configured with six units plus coater, fully outfitted with Baldwin cleaners and presaturated PREPAC rolls.

Lithographix Inc. Hawthorne, CA

Activity: premier service company serving clients in the film, retail, automotive and apparel industries

Primary products: portfolio ranges from in-home lithographic division to out-of-home digital and super-large division

Sales: \$120 million

Employees: 380

Plant area: 260,000 square feet

W.E. Andrews, an RR Donnelley Company Bedford, MA

Clientele: leading corporations in fashion, jewelry and education; design firms and advertising agencies

Primary products: brochures, annual reports, catalogs, booklets, museum-quality posters, newsletters, direct mailers

Sales: \$48 million

Employees: 175

Plant area: 75,000 square feet

Big Steps, Right Direction

When sheetfed press manager Jim Gallant pinpointed the cause of a subtle falloff in press performance, he figured it was time for change at W.E. Andrews. "I knew our productivity was suffering because we were losing uptime," he recalls, "and everyone knows you never regain lost time on press."

Careful study traced the cause to routine blanket washing on two of the plant's multicolor Komori sheetfeds, a six-color with coater and eight-color with coater. "Our operators were making extra efforts and taking extra time to compensate for minor hitches involving contact pads and solvent dispensing units," says Gallant. "These were unproductive delays we just had to correct."

Gallant decided to convert the blanket washers to use Baldwin's PREPAC presaturated cloth rolls. The effect was immediate. "Overnight, blanket washing on the presses became efficient and predictable," he says. "The cloth rolls cut cleaning time from several minutes per press unit to about 90 seconds for all the units at the same time, so we're picking up extra time

on each job changeover. The PREPAC conversion allows us to bypass use of the spray bar, which can overspray and drip solvent onto the transfer cylinders if not set properly."

Baldwin engineers showed Gallant that a new contact pad design eliminated the shortcomings of previous washers. "I just know we no longer have to mix solvent solution nor spray it onto the blanket cylinders. Instead, we're using a prepackaged cloth roll that's been factory-saturated with just the right amount of solvent, which incidentally has much lower VOC content than the solvents we normally use with the spray bars."

As a result, he adds, W.E. Andrews has righted its press performance levels and cut its VOC levels to boot.

The sheetfed pressroom also includes a straight-eight Komori Lithrone and a two-over-



Blanket washing benefits please Jim Gallant.

two MAN Roland 700. In the web department are two six-unit machines, an M-300 and M-600; it's not surprising that both are equipped with Baldwin blanket cleaners.

Observes Gallant, "The enclosed design of the Baldwin PREPAC blanket cleaning approach gives us real benefits compared to solvent spray systems using dry cloths. We cut solvent storage and VOC effluent levels and reduce the costs of insurance, blanket washing and waste, along with the risk of

using the wrong solvent type. The result is faster, more efficient blanket washes, typically 40% better."

He concludes, "Today, when printers are striving for tiny gains in productivity or cost control, we're taking pretty big steps in the right direction."

To produce quality printing that exceeds customer expectations—and regularly wins national graphic arts awards—Pictorial Offset is racking up a breadth of experience while reaping the many benefits of automated blanket cleaning and low-VOC washing on both sheetfed and web presses.

"I'm a great believer in automated blan-



Ike Schechter is a believer in blanket washing.

Exceeding Customer Expectations

ket washing," says Ike Schechter, senior VP of manufacturing. "It gives us more productivity, lowers our costs and improves operator safety and environmental efficiency whether we're running conventional, UV or hybrid on our newest press or conventional-only work on two of our other machines."

Pictorial Offset is running PREPAC presaturated cloth rolls from Baldwin Technology on two of its sheetfed presses, plus just three months ago it installed a complete state-of-the-art system on one of its half-size M-110 heatset webs.

The dividends are dramatic, starting with ROI that in three-for-three cases is about a year.

"We get perfect quality with less downtime and no solvent use in printing conventional or UV and hybrid on our Roland straight eight-color equipped with PREPAC," reports Schechter.

He continues, "We cut blanket washing time in half, plus we gain about five minutes not having to wait for the UV lamps to cool down. Picking up an average of 10 minutes per hour really adds up in our 'round-the-clock operation."

For Schechter, the safety issue is foremost when it comes to Pictorial Offset's web presses. "None of our press operators have to handle solvent or cleaning cloths or touch blanket cylinders anymore," says Schechter.

As for cost reduction, Schechter expects VOC solvent savings on the six-color half-web that are off the chart: "Each year we'll eliminate approximately three tons of VOCs in solvent we previously needed just to clean blankets. We'll still need a small amount of solvent per year to wash the presses but it will be the low-VOC variety."

The highly automated web lends itself to super-efficient blanket washing. "We did the math," he says. "For us, washing blankets comes out to just a penny per color for 1,000 sheets, which is really incredible. And on the two sheetfed presses, it's just a little bit more."

Pictorial Offset Corporation Carlstadt, NJ

Clientele: automotive, pharmaceutical, telecommunications, health and beauty, luxury goods and financial

Primary products: annual reports, brochures, pharmaceutical inserts, catalogs, CPG inserts, newsletters, collateral materials

Sales: \$80 million

Employees: 285

Plant area: 200,000 square feet

Boutwell, Owens & Co., Inc. Fitchburg, MA

Activity: independent full-service designer and manufacturer of paper-board packaging products

Primary products: blister cards, folding cartons, skin and stretch packaging, diecut inserts, software packaging

Sales: \$25 million

Employees: 170

Plant area: 140,000 square feet

UV Fills the Packaging Bill

Boutwell, Owens has been capitalizing on UV curing for printed packaging for several years; as a direct result, folding carton work is now roughly equivalent to blister packaging, its longtime specialty.

"We bought our 10-color Mitsubishi sheetfed specifically for UV, hybrid and conventional printing so we equipped it with automatic blanket cleaning systems from Baldwin," says Mike Gavin, printing manager. "Now we're moving on to Baldwin's newest cleaning technology incorporating presaturated cloth rolls, which means we can handle all our needs and clean up UV and hybrid with low-VOC solvents."

He adds, "The best part is, we can get rid of separate solvent-mixing tanks, water sprays, drip pans, any shortcomings of dry-cloth systems and generally messy maintenance."

When it comes to satisfying customers' clamor for brighter, glossier, more durable images, Gavin notes, UV printing fills the bill; the bonus, however, is that UV ink curing enables press operators to rush jobs directly to the

bindery. "We can guillotine-cut jobs tonight, instead of having to wait 72 hours for inks to dry, as we frequently did not long ago," Gavin explains.

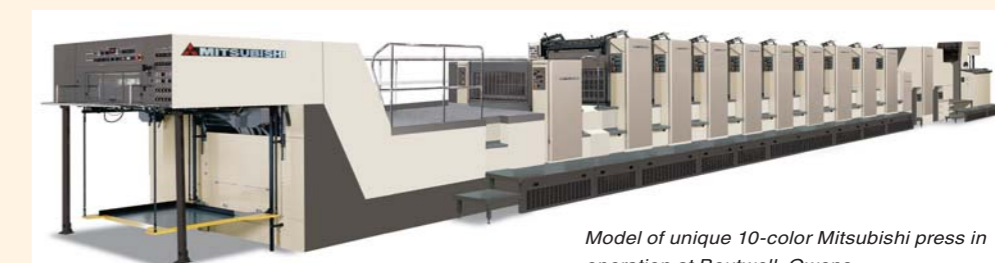
But there's a downside at the moment, he adds: while energy-cured inks cover and seal the sheet, providing very high image hardness and rub resistance, that hardness can prove to be actually too high for certain types of blister packaging work. "The hardness sometimes prevents proper bonding of the printed backing with the clear vinyl material that holds the product," says Gavin. "UV for blister packaging; that's what I'm looking for now."

The 10-color Mitsubishi press at Boutwell, Owens is a nine-over-one Diamond 3000. It joined two other Mitsubishi sheetfeds: an older

straight six-color and a conventional seven-unit 3FH model configured with a UV backside printing unit. All three machines feature automatic blanket washing, which pleases Gavin since that means no more messy clean-up.

"By using low-VOC solvent when washing blanket cylinders on UV units, we're now below our VOC allocation, but we'd like to go lower if possible," Gavin says. "Lower is always better."

Besides blister cards and folding carton work, Boutwell, Owens designs and manufactures packaging in which the clear protective layer conforms to the product shape like a second skin, clamshell-style packaging and diecut inserts, custom-folded cartons and a portfolio of products for packaging and mailing software and audio and video disks.



Model of unique 10-color Mitsubishi press in operation at Boutwell, Owens.