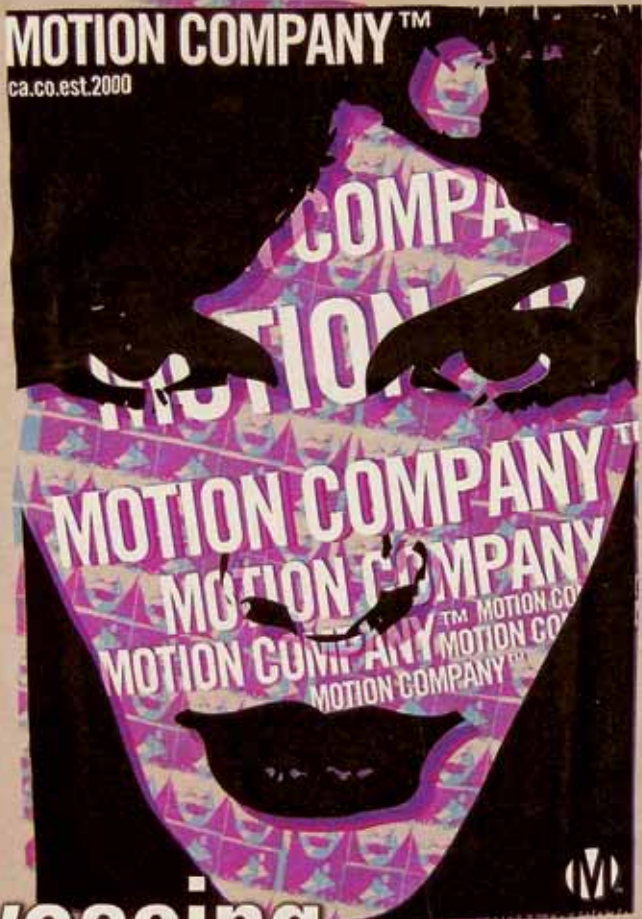


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Don't Stop at Sticker Price When Shopping Automatic Presses

Which automatic press has the best features and fastest payback for your shop? Here's a hint: It's all in the setup.

In no other industry is the adage "Time is money" truer than in the world of screen printing. The faster you can get jobs done, the more money you can make — and perhaps the most critical element in achieving higher revenues is using an automatic screen printing press.

But how can you tell if one automatic press is faster than another? Some decorators mistakenly assume the fastest press is the one with the fastest-turning carousel. Seems logical, right? The faster the pallets move, the more shirts you should be able to crank out.

However, nothing could be further from the truth.

In reality, the determining factor in how much money you make at the end of the day is the speed at which you set up and tear down your press. These time-consuming tasks have always been important, but they've become even more so in

the last five years as monster-sized print jobs have moved offshore, leaving domestic printers with runs mostly in the 48- to 1,200-piece range vs. the 10,000- to 50,000-piece range of yesteryear.

In the golden days of producing mostly long runs, a screen printer might set up two or three jobs a week on his automatic press. In today's economy, the average automatic shop is setting up two to three jobs a day — and possibly more, depending on the market.

"How fast does the machine go? It doesn't matter," says Rick Roth, owner, Mirror Image, Pawtucket, R.I. "Setup time is a more important factor than the original cost of the machine. When shopping, some people say, 'Well this press costs 15% less than that one.' You know what? Do the math. If you set up just 10% faster, you'll make your money back in less than a year."

Consider this hypothetical scenario: An automatic press runs at a pace of 500 shirts an hour. Let's say a shop that buys this press typically does three setups during an eight-hour day with six-color designs on runs of 500 shirts at 50 cents per print. A more expensive press can save you up to 30 minutes per job, which could add up to \$90,000 in savings during the year (see "The Value Proposition" on p. 42).

In this scenario, the faster press pays for itself quickly — possibly in about six months. The key, then, in choosing the press that will make you the most money is understanding which features translate into faster setup and teardown times.

Let's look at the features that have the most impact on setup and teardown.

- **Learning Curve:** One important intangible to consider is a unit's learning curve. Whether you're a first-time buyer or a seasoned veteran, you'll still have a learning curve when purchasing a new automatic press. That said, the faster and easier it is to learn and use a press, the faster you'll get up to speed, crank out T-shirts and generate revenue. That's even more important in a larger shop, where you have employee turnover and continually need to get new people up to speed quickly.

- **Electronic Control Panel:** While it's difficult to put a finger on which other features make one press easier to use than the next, one critical feature for most shops is the control panel. Generally, machines with graphical displays are easiest for operators to learn how to use. Machines with fewer sub-menus required to get to print head or flash parameters are not only easier to learn, but certainly faster to use.

- **Pre-Registration Systems Reduce Setup Time:** Aligning screens is a big part of setup time, so look for a machine that offers a pre-registration system. While just about any pre-registration



PRESSES VARY WIDELY in how many steps are involved in changing out pallets, which can greatly impact press setup times. Some machines allow you to touch an icon on the control panel, and the pallets unlock.

system will save time, some are better and faster than others. Carefully evaluate the number of steps involved with using the system and any additional ongoing costs, such as carrier sheets.

- **Quick-Release Squeegees and Screens:** Most manufacturers offer some type of quick-release squeegee and flood-bar system, as well as a quick-release screen clamping system. These are standard features on some presses. If sold as options, they may cost up to \$500 per

head, possibly more. Some manufacturers use pneumatic clamps, while others offer mechanical systems. Consider the maintenance of air cylinders and fittings that may be used by various systems. Look carefully at the number of steps that each requires, and compare how much time various brands mean when sales materials describe a procedure as “quick.”

- **Changing Pallets:** If your shop prints a wide variety of garments, take a look at the speed and convenience of changing pallets.

THE VALUE PROPOSITION

Below are some real-world estimates of potential savings that certain press features can provide based on an informal survey of some large-volume screen printers who own automatic presses. The survey looked at savings provided from a single automatic press doing three setups of six-color designs in a single day, with each run consisting of 500 shirts at 50 cents per print. These results are averages and provide just one example of potential real-world savings. We recommend you conduct your own informal survey; the information will be invaluable to you as you shop for a new automatic.

FEATURE

- **Screen-holding system**

A pin-locating screen-holding system eliminates frame movement — a common problem with the air-clamping method.

- **Fast squeegee and flood bar installation**

A pull-pin system is faster and easier than mechanical or air clamp systems.

- **True XY micro-registration**

A good micro-registration system will provide fast, accurate XY adjustment without the operator having to lock or unlock the controls.

- **Print and flood stroke-length adjustment**

This feature saves time by letting you slide a plate to the desired travel distance without locking or unlocking.

- **Adjustment of squeegee/flood bar angle**

This “no-tools required” feature allows you to make adjustments by moving a lever in five-degree increments, without locking or unlocking.

- **Automatic adjustment of quartz flash units**

Make changes to the flash-cure unit from a control panel, without stopping the press.

- **Access to screens**

Some presses allow you to clean screens during production by simply touching an icon on a control panel. This is quicker than stopping the machine, holding down a reset button to disengage the pallet drive, manually moving the pallets, and so on.

TIME SAVINGS

4 minutes

4 minutes

5 minutes

4 minutes

4 minutes

2 minutes

7 minutes

TOTAL TIME SAVINGS PER SIX-COLOR JOB

30 MINUTES

At three setups per eight-hour shift, that’s a savings of 90 minutes. Based on average responses and the assumption that the press stays busy, you will free up enough production time to generate an extra \$375 in revenue per shift.

During a 50-week year, that increased productivity adds up to \$93,750 in additional revenue.



AN INTEGRATED FLASH reduces setup time by eliminating the need to walk around the machine to change flash times. Integrated flashes can be controlled from the master control panel.

This functionality varies from one press to another. Does the press require re-leveling each time you change pallets? It may be as quick as the flick of a switch or you may need to get out your wrenches for a more time-consuming process.

- **Screen Accessibility:** Production can stop when you get lint on a screen or simply run out of ink on one head. How well does a machine deal with this type of routine production problem? Does the press remember where it was when production re-starts? Or is it necessary to disengage the indexer and manually rotate it back to the proper position? How easy is it to add ink? Does the head lift up or do you need to add ink from the side?

- **Ease and Speed to Re-set:** Calculate the time required by how easy or difficult it is to set print heads, off-contact, micro-registration, squeegee angle, etc. to the “home” position. Do you have to lock and unlock micro-registration or stroke-length adjustments? Do you have to reinvent the wheel every time you rerun a particular job, or are there clearly defined reference numbers to re-set the press quickly and efficiently? Some control panels will store each job’s particulars, including squeegee strokes per head, flash-cure unit position and dwell time, micro-registration and more. This can be a huge time saver — eliminating the need to manually write down or, worse yet, memorize a particular job’s settings. “You get this pit crew mentality, where the job is up and down quickly, instead of people taking a smoke

or going to the bathroom while they're waiting for changeover," Roth says.

▪ **Integrated vs. Universal Flash:** Another time saver is whether the flash-cure unit can be integrated to the press or if it's a universal style of flash-cure unit that uses sensors to detect pallet movement. With a universal style, when the pallet moves, the flash-cure unit essentially says, "OK, I'm ready to go." If you have the unit set to four seconds, it stays on for four seconds and switches off without any communication between the unit and the press. An integrated flash-cure unit can be controlled from the master control panel, eliminating the time necessary to walk around the machine to change a flash unit's dwell time and temperature settings. "It's an important feature, especially when you're starting out," Roth says. "You need to adjust the flash on the fly, and how the flash is integrated and how easy it is to change while on the fly is very important."

GOING FOR A DRIVE

A key consideration in choosing a fast automatic press is its type of drive system. Essentially, there are three systems: pneumatic, servo-electric or electric-mechanical. Presses with air drives (a.k.a., pneumatic) will likely have more maintenance problems — not because they're inferior machines but because moisture inevitably gets in the air lines, which leads to moisture in the press cylinders. Pneumatic presses cost less up front, but that savings may disappear in the long run due to higher maintenance costs.

Pneumatic presses also involve seals and air cylinders for the movement of the print heads, and more maintenance issues on fittings, air clamps, valves and more. Both servo-electric and electric-mechanical presses use parts that will have fewer problems, although you will need a technician to repair problems with these presses.

Look for an automatic with closed drive components, as it will have fewer issues

with dirt, adhesive and lint getting inside — and, thus, fewer maintenance problems. That's because the bearings, shafts and other key parts are covered and sealed, making them less susceptible to spray adhesive and other particles. Remember, maintenance costs hit you three ways: lost revenue because of press downtime, labor hours to perform the maintenance and, finally, parts and materials.

Other things to consider: While servo indexers are fast, they're expensive to maintain; and pneumatics also require much larger, and therefore more expensive, air compressors. The initial savings of a pneumatic can get eaten up quickly just by the cost of replacing the compressor.

STAYING CURRENT

Remember when that old computer seemed really fast? You didn't know what you were missing until you tried a newer, faster one. When you consider productivity and maintenance, it may cost you more to

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own and operate the old computer than to buy a new one.

Many owners of older automatic machinery have the same "a-ha moment" when they discover how much more profitable they can be with a new automatic press that sets up faster. In other words, it is important to consider the cost of owning the press rather than just the price.

"With our old press, we constantly had to re-level pallets," says Jacob Edwards, co-owner, Jak Prints, Cleveland, Ohio. "I started doing the math. Our business does a lot of setups — about 100 screens a day on about 30 jobs that vary from baby dolls to T-shirts to full-zip hoodies. With our new presses, we now set up a 10-color job in about eight minutes. When you're paying a couple of thousand dollars a week for employees, it's a world of difference."

Let's say you've paid the lease or financing on the press and you own it outright. It runs smoothly, and it doesn't give you many headaches, but it's six to 10 years old. Some simple numbers-crunching will quickly reveal that the additional time you save by getting a newer press with faster setup will completely offset the cost of that new unit.

For instance, you might garner \$1,500 in additional revenue each month by using the faster, newer equipment, which offsets the lease payment of \$1,100. You could be losing money by not investing in new equipment that allows for faster setups and higher profits.

"You actually should upgrade to a more modern, efficient press," Roth says. "Even though you're spending money to buy the new press, you're going to make a lot more money because of the efficiency."

Another plus of keeping your equipment current is the tax benefit. The Economic Stimulus Act of 2008 contains two key business tax incentives that are designed to encourage investment in new equipment. This legislation grants companies a 50% bonus deduction on new equipment that would normally be depreciated over many years while also raising the limit on expenses that small businesses can deduct from annual income to \$250,000 (IRS Section 179). Equipment must be placed into service between Dec. 31, 2007 and Jan. 1, 2009 to qualify for the deduction.

Ultimately, you're buying a new automatic press because you're looking for more revenue. Just remember that a faster press isn't all about carousels spinning quickly. Rather, it's about finding the press that handles setup and teardown quickly, allowing you to move from one job to the next at the fastest-possible speed. It's also about finding a machine that costs you less in terms of maintenance.

By focusing on these key features, you're sure to find an automatic that does what it's really supposed to do: Earn you more money. ▲

Mike McEvoy, vice president of marketing for Hirsch Intl., has been involved in the decorated apparel industry since 1979. Gavin Kidd, who has been in the screen printing industry for 25 years, is national sales manager for MHM, a division of Hirsch.

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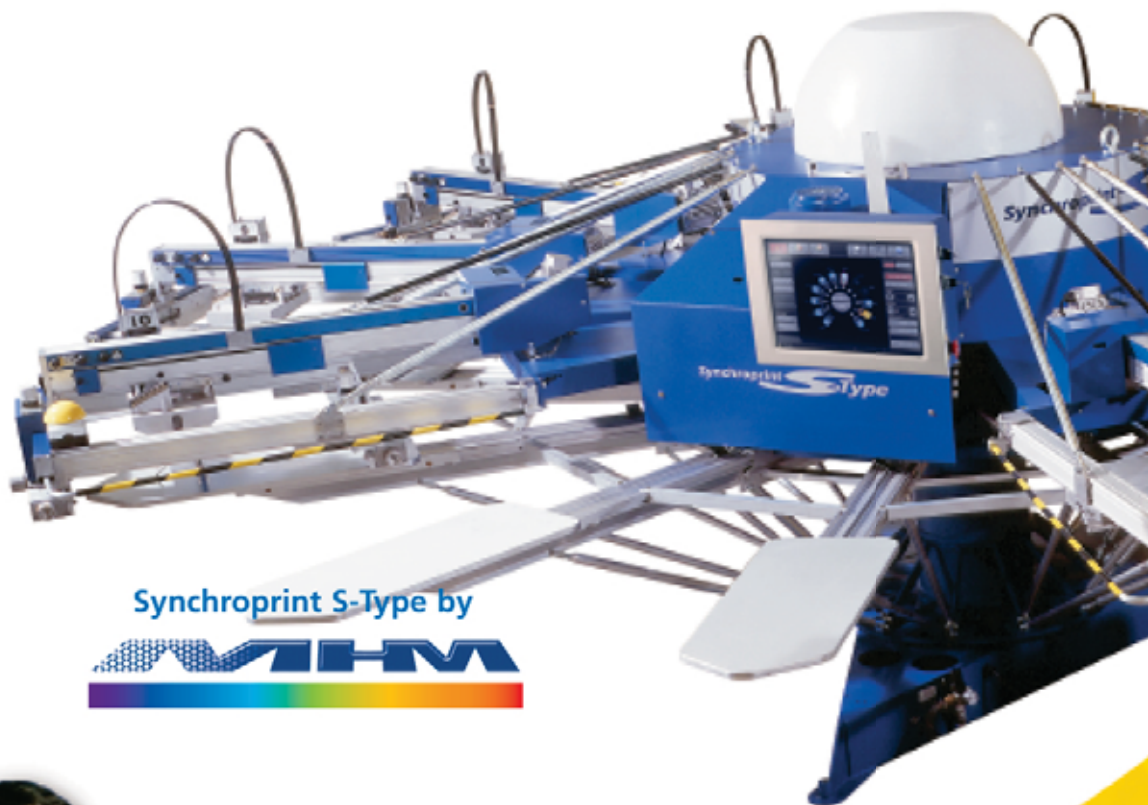


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