

Why Use UV for Web Printing?

For printers in the narrow and wide web markets who already use UV flexo inks and coatings, the economic advantages are apparent. But for those printers contemplating a change to UV and still undecided, let us illustrate a few key advantages you may not have considered that can significantly increase revenues.

The following assumptions and calculations are based on one print station, operated one shift, five days per week, 52 weeks per year.

Ink Cost

UV inks cost approximately twice as much as water-borne inks on a pound-to-pound comparison. But because UV inks are 100% solids, there is no evaporation, so less ink is needed to achieve the same results. The result is increased ink mileage from the same pound of ink. This has been proven in practice. Since ink costs vary widely, and to be conservative, let's call this a breakeven and eliminate ink costs from the following economic calculations.

Increased Production Hours

As UV inks never dry until exposed to UV light, they can be left on the press in the ink pans overnight. This makes morning startup fast and easy, and the operators can quickly start printing. Evening shutdown is as quick, and the operator can run the press right up to shift end. Saving two hours per shift in startup and shutdown results in significant additional revenues as shown in the following calculation:

Revenue: 2 hours/day x 52 weeks = 520 hrs./yr., 520 hrs. x \$300/hr. revenue = \$156,000/year.

Scrap Reduction

UV inks do not evaporate during press stoppages or during the print cycle and retain their color strength. This helps the operator start up quickly. Printers have stated that they can produce salable product after only five to ten impressions on a continuing job, greatly reducing the amount of scrap generated to bring the ink up to full strength. At a cost of \$1.50/msi for film substrates, every 1000 feet of substrate scrap reduction of 10-inch film will increase revenues \$15.00.

Revenue: 2 jobs/day x 52 weeks x \$15.00/job = \$7,800/year.

Reduced Washups

As stated previously, UV ink does not dry by evaporation but polymerizes when exposed to UV light, hence it will not dry on the plates or anilox rolls during the print run. The result is fewer wash-ups required, again allowing the operator to run the press longer each shift. Assuming that a wash-up per color requires one hour, we can calculate the following additional revenue:

Revenue: 1 fewer wash-up/shift x 52 weeks = 260hrs.
260 hrs/40hrs. per week = 6.5 weeks additional uptime/year.
260 hrs x \$300/hr revenue = \$78,000/year

Increased Run Speed

Printers report increased press running speeds when using UV inks, resulting in sizeable additional revenues from even small speed increases. For example, increasing the press speed from 200 fpm to 250 fpm equals a 25% increase in overall speed. A 25% increase in the \$300/hr. revenue amount produces a \$75/hr. increase, or \$375/hr. Factoring this into the following equation, revenue increases yet again:

Revenue: 2,080hr./yr. @ 60% uptime = 1,248 hrs./yr.
1,248 hrs x \$75/hr. = \$93,000/year

Summary

Increased production:	\$156,000
Scrap reduction (two jobs per shift):	\$7,800
Reduced wash-ups (only one less per day):	\$78,000
Increased run speed (by only 50 fpm):	\$93,000
Conservative Annual Revenue Increase:	\$335,400

We have shown that printing with UV inks and coatings enables you to optimize four simple tasks involved in every job. The result – increased bottom-line profits! And remember, the amount of revenue increase calculated here is based on one ink station per press per shift. Multiply this number by the number of presses, print stations and shifts to get the total revenue increase estimate for your facility. Investing in UV curing systems for your press will provide a rapid return on your investment; in fact, it may be the best capital equipment investment you could make!