

### **Latest developments in flexo printing technology: Uteco's Kiss&Go, SmartMatch and G.I.M.**

In the last 15 years consumers' habits have changed as regards their behavior towards packed products. The increase of women at work, with less time to prepare food at home, the growing demand for food portions for "singles", the attention to better looking of packaging and many other features bring consequently to an increasing need of more packaging, with better looking and efficiency.

This means a must for companies in quicker change of image of the packing, with short runs, keeping a special attention to reduction of costs, wastes and delivery times.

Flexography is the ideal printing technology to reach these purposes, granting at the same time reliability of the whole production and minimizing the environment impact and the energy consumption.

In order to facilitate the production jobs of converters, Uteco have been dedicating some skilled resources of the R&D department to the project of solutions able to satisfy two essential topics that are reduction of changeover times and the eco-compatibility of our machines.

For the first purpose, reduction of changeover times, some innovations have been introduced, like the already tested Kiss&Go® and SmartMatch® (for the Color Matching), and the prospect improvement of the system G.I.M.® (General Image Management).

The unique Uteco system Kiss&Go® has been studied to perform the automatic set-up of the printing pressures at the start-up of every new job. Its uniqueness is due to the fact that it works directly by reading the printed color on the substrate, using any type of printing sleeve and anilox sleeve, without the need of printed marks. It permits to reach the printing pressures final target adjustment with high accuracy and constancy regardless of the operators capabilities (fixing an univocal standard of quantity and regulation). Consequently the material waste is considerably reduced, in comparison with the manual printing pressures adjustment.

The Kiss&Go® consists of a compact "reading unit" which is installed after the last printing deck of the CI group and of a "processing unit". The "reading unit" scans the print of all the colors and sends the "information data" to a dedicated software which processes them and calculate, after few repeats, the optimal printed dot by acting on the print unit servomotors (both the anilox as well as the plate axes) through a high speed ethernet interface.

The achievement of this project has been obtained thanks to a strict cooperation between Uteco and Grafikontrol, its partner in this project, through a series of tests carried out in the last months in order to obtain the highest performance and results reachable today with this system.

Further than the adjustment of pressures and registers at job set-up, also color matching is an activity which costs time and waste to the operator, since, when starting each new job, it is necessary to find the correspondence between the reference color and the printed color, within the given tolerances. This result can be achieved both with manual and semi-automatic formulations, but the ideal and faster solution is the automatic color matching, that the new Uteco system SmartMatch® offers.

The Uteco SmartMatch® allows the reduction of time for on-press color correction and at the same time the setting of the right color without the color-man, by the use of an automatic dosing of colors thanks to a portable kitchen, the SmartKitch®.

The system is user friendly. The operator just needs to read the reference color through a spectrophotometer and compare it with the color obtained on the printed substrate; the data are then sent to the automatic dosing device which carries out the necessary corrections.

Also for the development of SmartMatch, Uteco have counted on the cooperation of some key partners, such as Sunchemical, X-Rite and Inkmaker, that have concurred to the success of this project.

But let's talk also about the future project of Uteco: the G.I.M.® (General Imaging Management), to which the company is dedicating its main commitment. The system, part of which has already been developed, integrates the production process with the transfer of data and it gives solutions for the optimum printing. It manages both the peripheral equipment dedicated to the printing process and the choice of anilox and plate sleeves available according to the needs of the printer. Through this procedure, the system can generate, for each new job, a proposal for the selection of the anilox and plate sleeves at disposal to obtain the best print result, suggesting also all the steps and sequence of job preparation. Not only does this system help in the preparation of the jobs, but it also gives the corrections needed to prepare the ink recipe according to the parameters detected on the press and the data to the plate mounting machine for the plate mounting.

The result is the top optimization of ink usage, the best selection of sleeves and anilox and a correct guideline for the operator to prepare the jobs.

These projects, along with many others that are on stage of realization, have been implemented thanks to the all-time records achieved in 2010 by Uteco Group in terms of sales volume, profits and finance, which have permitted massive investments of R&D resources, top quality 6Sigma plans, working groups with the most important worldwide multinational companies of food and beverage industry, special and advanced developments in a wider range of possible future technologies, i.e., nanotechnology.

All above mentioned innovations have univocal and precise goals: reduction of preparation and changeover times as well as waste reduction, with an appreciable increase of the daily productivity of the machines, of the accuracy of the jobs thus keeping a special eye for sustainability.

This last issue is of utmost importance for Uteco philosophy... but this is another story.