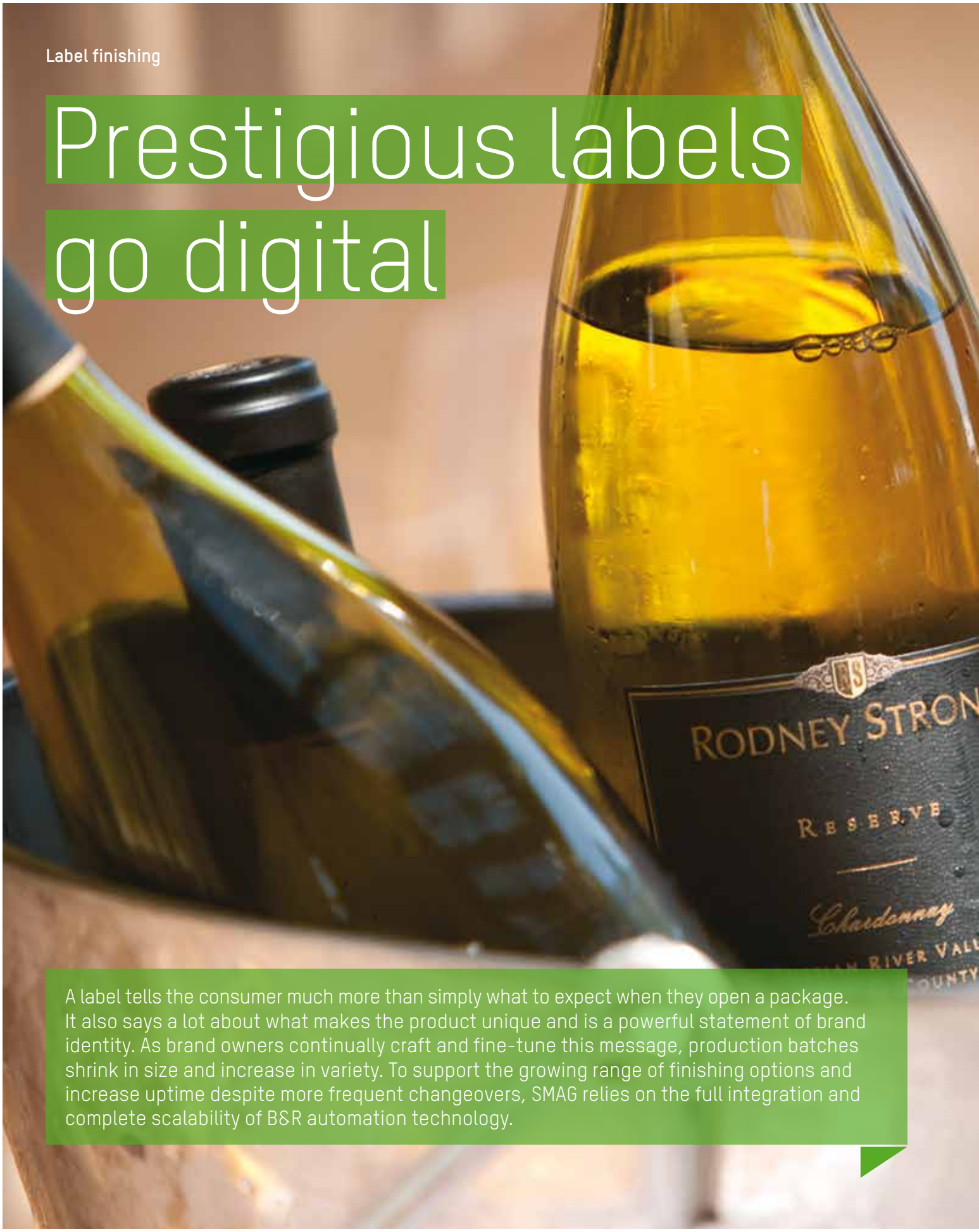
Prestigious labels go digital



A label tells the consumer much more than simply what to expect when they open a package. It also says a lot about what makes the product unique and is a powerful statement of brand identity. As brand owners continually craft and fine-tune this message, production batches shrink in size and increase in variety. To support the growing range of finishing options and increase uptime despite more frequent changeovers, SMAG relies on the full integration and complete scalability of B&R automation technology.

Photo: Rodney Strong vineyards

SMAG's new Galaxie Digitale is an ideal complement to digital label production equipment that features unwinding, cutting, slitting and rewinding processes as well as finishing options ranging from flexo and screen printing to cold foil, hot foil, embossing and lamination – all automated by B&R.

As brand owners strive to create labels that effectively communicate the quality and uniqueness of their products, label producers are switching to digital printing and finishing equipment that offers both greater flexibility and higher output in small batch sizes. "Over the past decade, digital presses have brought the number of labels our machines convert per batch from thousands down to a few hundred," explains Pascal Mercier, technical manager and co-owner of SMAG, a French manufacturer of post-digital label finishing equipment. "We've adapted our label finishing machines to allow users to change jobs very quickly. We also offer them all types of finishing options so they can select exactly the decoration and customization effects they need to differentiate their products."

In-line and modular

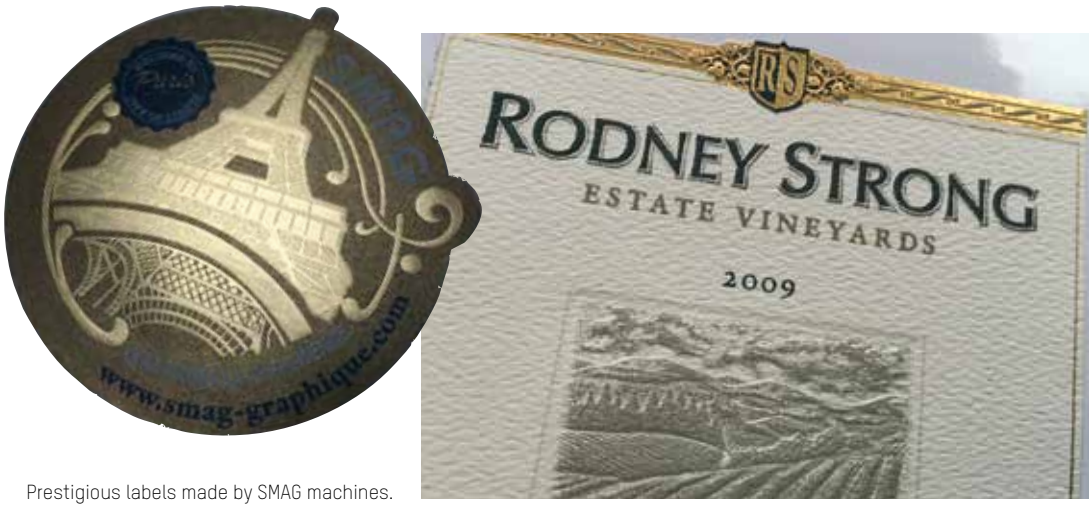
SMAG focuses on innovation to keep pace with the latest in post-digital printing technology and relies on state-of-the-art automation to make its label converting and finishing equipment more flexible. SMAG's newest creation – the Galaxie Digitale – is an ideal complement to digital label production equipment, featuring integrated unwinding, cutting, slitting and rewinding processes as well as versatile finishing options ranging from flexo and screen printing to cold foil, hot foil, embossing and lamination – all automated by B&R. The Galaxie Digitale owes its exceptional modularity to the combination of SMAG's mechanical know-how and the scalability of B&R's systems. Each process is performed by a module that can easily be added, removed or rearranged according to the user's needs. "This modularity enables us to meet our customers' requests more quickly," stresses Mercier.

The machine modules are all equipped with B&R's latest servo drive technology and linked via POWERLINK to each other and to a B&R Power Panel that serves as the central controller. The processes performed by the Galaxie Digitale operate in perfect synchronization with a minimum number of automation components. Having experienced the hard real-time performance and high bandwidth of POWERLINK, SMAG is now working on integrating vision equipment directly into the real-time network in order to automate inspection tasks currently being carried out by human operators.

Fast changeover through self-configuration

Depending on the exact layout of the machine, Galaxie Digitale users can complete multiple short runs with changeover times of only 5 to 20 minutes. This big step forward in changeover times is owed primarily to the application software developed in cooperation with B&R, which reduced line configuration and setup to no more than a few touch actions on the Power Panel.

Newly added machine modules set themselves up automatically, including automatic hardware definition, consistency checks and automatic axis initialization based on the operator's entries. In ad-



Prestigious labels made by SMAG machines.

Pascal Mercier
Technical Manager and co-owner, SMAG

"Continuous innovation is critical to keep a competitive edge in the fast-changing label industry. Thanks to our strategic partnership with B&R, we are able to keep a leading position in this industry and deliver best-in-class machines to our customers."

dition to rapid setup through self-configuration, the new machine software also brings substantial improvements in software maintenance, since all the machine variants and optional equipment in the SMAG portfolio are now managed in a single project. The success of the software engineering process was made possible not only by the modularity of B&R's integrated engineering environment, Automation Studio, and the autotuning capabilities of its ACOPOS servo drives, but also by the close partnership between SMAG and B&R's engineering teams.

Easy remote maintenance

SMAG also implemented the newest B&R solution for remote maintenance based on VPN networks, firewalls and specific gateways. Their service technicians can now support all customers all around the world remotely via a totally secure connection, while enjoying full access to the extensive diagnostic possibilities offered by the System Diagnostics Manager (SDM) web application. "With B&R's remote maintenance solution, we can successfully support a customer starting a line in Australia directly from our office using a simple Ethernet connection," reports Mercier.

Scalability+ for tool-free machines

SMAG has also begun implementing tool-free machine modules, representing yet another leap forward in the reduction of commissioning time. The newest version of the Galaxie Digitale features a laser cutting module from SMAG's new partner, Spartanics, an American laser converting equipment manufacturer. SMAG has also established a partnership with MGI, a French specialist in digital finishing solutions, in order to further expand its range of tool-free solutions.

Thanks to the modularity and scalability of B&R's automation systems, integrating these tool-free modules into the Galaxie Digitale is effortless. "Our newest digital converting and finishing equipment based on B&R's Scalability+ solution pave the way for smart and interactive label production," summarizes Mercier. ←

Automation Studio
Developed in close cooperation with B&R in the Automation Studio engineering environment, SMAG's new machine software provides self-configuring machine modules for rapid setup and changeover, as well as substantial improvements in software maintenance thanks to the ability to manage all variants and options in a single project.

Photos: SMAG