

Flexible and wireless printing

A high throughput of cardboard boxes in packing lines with different labels requires a flexible marking system. What a sophisticated and nevertheless economical solution looks like shows the use of an ink jet printer of REA electronics in a winery.

Whether „Blauer Portugiese“ or „Spätburgunder“, „Müller-Thurgau“ or „Riesling“, this grape is only a small part of what the winery Vier Jahreszeiten in Bad Dürkheim has to offer. How large the company is, is shown by the 8,000 bottles, which are automatically filled, sealed and packed per hour. This is than an average of up to 900 cardboard boxes per hour, which are marked with item number, variety, EAN-code and lot number. Until approx. 4 month ago, this was done with self-adhesive labels which were printed and applied directly at the system. Now the company has a new system integrated - a REA JET ink jet printer from REA Elektronik, which communicates its print data with the PC in the office via WLAN . What was crucial for the decision to install this marking system?

Walter Brahner, executive committee says: “A simple calculation shows that the new marking system in comparison with self-adhesive labels with the additional print is significantly cheaper. For us the equipment will already amortize after 1.5 years. “In addition, a system with labels is very maintenance-intensive, since it is mechanically highly burdening. Moreover, it takes two materials, the labels and the conveyor belt. One of the basic conditions for the use of an ink jet printer on a conveyor belt, however, is a calm run of the cartons during the printing. Background is that the printed bar code must be perfectly readable. Since the winery had invested into a modern bottling plant a few years ago, it did not speak anything against this system change.

Print up to 100 mm height

What is the capability of the graphic marking system REA JET GK? The large character ink jet printer GK 768/256 used at the winery is produced for the marking on absorbent surfaces.

With 256 controllable channels, the print head can print at a height of up to 100 millimetres 42 lines at the same time - begun from texts over logos up to graphics and product pictures. REA offers a solution even for smaller print heights. The GK 384/128 prints with 21 lines up to a height of 50 mm. Both print heads are able to

print all usual linear and 2D codes as well as a 2D-DataMatrix Code (at the winery an EAN 13 is used).

The high-resolution ink jet printer is controlled by the software REA JET Print Commander. It provides the user with all functions with the ease of a graphical interface to the Windows standard. Here is another advantage of the new identification system compared to the label version: the flexibility. Because, depending on the batch size 4 to 5, different labels are printed alternately per day in this application. Overall, due to the variety of products at the winery, 250 labels are in use which are provided by the computer. The supply with wipe and scratch-proof ink takes place with cartouches from 125 and 500 ml, which can be changed even during the marking.

Communication with WLAN

For the user it is interesting that with this ink jet printer also WLAN can be integrated as a communication tool. "Especially for our application, this solution is ideal," said Walter Brahner, "because the cost for well 100 meters of cables and routes up to the next work station would have been clearly higher. Communication over WLAN is for us a fast and inexpensive solution. "Other interfaces are Ethernet10/100 Mbit, RS232/422 and four digital inputs and outputs. REA has also considered something concerning the maintenance. Thus the print head can be cleaned over an optional maintenance module, for example at a too high dust loading in the ambient air. Only once pressed the cleaning process runs off automatically. This reduces the maintenance to a minimum and increases the availability.

Positive is also that REA offers its customers complete-packages of larger extent and even install them ready for use - because ink systems, electronics and especially the software are developed and manufactured in-house.

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Image title:

image 1: (Aufmacher)

Up to 900 cartons per hour are marked by the REA JET ink jet printer with item number, variety, EAN-code and batch number.

image 2:

Up to 42 lines can be printed up to a maximum of 100 millimeters.

image 3:

depending on the batch size, per day are 4-5 different labels printed alternately.

Image 4:

The print head controls all usual linear and 2D code as well as a 2D-DataMatrix code.