

## CASE STUDY PHILADELPHIA BREWING COMPANY



**Industry:** Beverages  
**Application:** Printing on bottles  
**Material:** Glass

# NOT YOUR 'EVERYDAY' PRODUCT CODING



### CLIENT

The Philadelphia Brewing Company is a microbrewery in the USA that produces craft beer for a regional market in smaller quantities and with regional ingredients. The portfolio includes close to 15 types of beer – from classics to varieties brewed with caffeine or chocolate.

The PBC Brewery was founded in 2008 and took over a brewery building built in 1885 and abandoned for decades, reviving the old flair in a modernized look.



### REQUIREMENTS

The beer bottles used to be coded with a piezo inkjet printer, which was often defective and caused interruptions in production. The brewery's management therefore began its search for an alternative. The marking of the best-before date and LOT number also had to be more visible on the brown beer bottles. Another requirement was that it would have to be possible to convert one line from one type of beer to another more flexibly in the future.



### SOLUTION

The brewery opted for the Leibinger JET2neo with a yellow soft-pigmented ink, which is clearly visible on the brown bottles. In the event of a production changeover, the print job can be initiated or changed with just a few clicks on the user-friendly touch display. Thanks to Sealtronic technology, the ink in Leibinger printers does not dry out and the printer is always ready for use. Printer-related production stoppages are now a thing of the past.



The Leibinger JET2neo inkjet printer codes beer bottles with a best-before date and a LOT number before they are filled.

Leibinger Sales Manager Greg Jenkins

## Leibinger inkjet printers master production breaks in microbreweries

**Like all sustainable foods and beverages, craft beer is experiencing increased demand. Craft beers are brewed by hand by independent breweries whose philosophy is to brew beer in a way that is different, varied and creative – with natural ingredients. The Philadelphia Brewing Company, a microbrewery from the home of American craft beers, produces about 15 different ale and lager varieties. Since none of the beers are mass-produced, the production lines at the PBC brewery need to be adapted regularly to another product. The beer bottles are printed with a best-before date and a LOT number using a “made in Germany” printer from the Leibinger company in Baden-Württemberg.**

According to the American Brewers Association, craft beer now accounts for over 24 percent of total beer sales in the USA. Microbreweries, such as the PBC brewery, have managed to transform the image of watery, tasteless US beer and are enjoying great popularity. Their guiding principle is to produce full-tasting quality beers for a regional market in smaller quantities, brewed with the best, largely regional ingredients, and according to European tradition. This is also the philosophy of the Philadelphia Brewing Company (PBC). The microbrewery in Kensington near Philadelphia has close to 15 different types of ale and lager in its range, about half of which are seasonal beers. The brewery, owned by the “Weisbrod

& Hess Oriental Brewing Company” and initially closed down in 1939, has been producing beer under a new name since 2008 with a focus on local sustainability.

While the creation of the beer varieties – from classics to those brewed with caffeine or chocolate – quickly brought success, the product coding of the bottles, cartons and six-packs presented brewery owner William Barton with a challenge: “We had a piezo inkjet printer for printing the best-before dates and LOT numbers, which functioned unreliably at best. The black ink on our brown bottles was hard to read and easy to wash off.” The Philadelphia Brewing Company therefore replaced its coding device with the JET2neo small character ink jet printer from the German Paul Leibinger family business.

### Sealtronic prevents ink from drying

The irregular filling of the beers was the main reason why the microbrewery opted for the JET2neo industrial inkjet printer. Thanks to the Sealtronic automatic nozzle seal in all Leibinger inkjet printers, the ink does not dry out even during longer downtimes. For the PBC brewery, where short production interruptions of up to day or even week-long interruptions are completely normal, this is an absolute prerequisite. During production bre-



The Philadelphia Brewing Company is a microbrewery from the USA that values high-quality, flavorful beer.

To this day, the Philadelphia Brewing Company's historic brick building, built in 1885, has lost none of its original charm.

aks, the gutter and the nozzle form an airtight circuit, so that ink cannot escape from the circuit and air cannot enter. The ink therefore always remains liquid, as in the case of a sealed paint can. The inkjet printer can be started with just one button and is immediately ready for use. No time-consuming cleaning is necessary beforehand.

#### **Legibility on brown bottles**

It is just as important for the brewery that the printed LOT numbers and best-before dates are clearly legible on the brown glass bottles. In order for the marking to stand out clearly from dark backgrounds, it was clear that the printing had to be done with light colors. The Philadelphia Brewing Company therefore opted for the Leibinger JET2neo with a yellow soft-pigmented ink that is easily visible on the brown bottles. "White inks would also be very legible on brown, but cannot be used in standard printers because of the pigments they contain. We were therefore able to offer the customer an economical and effective solution," explains Leibinger Sales Manager Greg Jenkins. The customer was also entirely satisfied with the adhesion of the ink to the bottles.

For a microbrewery that produces largely with regional ingredients, sustainability was also an important issue. For the PBC brewery, the minimal consumption of ink, solvents and energy were strong arguments in favor of Leibinger. The JET2neo consumes only a third of the energy of a 100-watt light bulb.

#### **Coding during ongoing production**

The bottles at the PBC brewery are coded automatically during ongoing production. The bottles are transported on a conveyor belt past the printhead. A sensor gives the JET2neo a signal when a bottle is in the printing area. The best-before date and a LOT number are then printed without contacting the product and on the fly.

The contactless printing of the JET2neo works as per the continuous inkjet principle. In the inkjet printer's printhead, a continuous ink jet is broken down into tens of thousands of individual drops. The droplets, which, for example, have to represent a best-before date, are electrostatically charged and "shot" at the product without contact via a deflection electrode. Unused ink drops are returned to the ink circuit via the gutter.

#### **Optionally with protection class IP65**

By using solvent-based inks, the printed data on the bottles dries very quickly and can no longer be smudged immediately after printing. The bottles are only labeled, filled and closed after they have been coded. This is why the bottles at Philadelphia Brewing Company are marked in a relatively dry production environment. The JET2neo with protection class IP54 is therefore ideally suited for microbreweries. "Some of our customers, however, have a very wet production environment. Then they can use our JET3up PRO with protection class IP65 against water jets," explains Jenkins.

#### **German brewing culture and inkjet technology – both equally impressive**

"My employees and I are absolutely convinced of the reliability of the JET2neo," sums up William Barton. It goes without saying that a brewer like Bill, his nickname, is especially enthusiastic about the German brewing culture. He notes with a twinkle in his eye that the coding system now also comes from Germany. In keeping with German beer tradition, Barton does not use any preservatives. His beers also mainly contain ingredients from the region, as well as from Europe. Kenzinger, the best-known PBC beer, for example, is a combination of German Pilsner malt and American hops.



If the production line needs to be switched from one type of beer to another, the LOT number and the best-before date can be easily changed on the printer's color touch display. Using a Windows-based interface, the data can be conveniently configured in the text editor with just a few clicks and the filling of the next type of beer can begin immediately.

## Summary

The structure of the production lines in microbreweries is simple and clear. In contrast to large companies, where Leibinger often integrates several inkjet printers in the smallest of spaces and in the most complex of systems, microbreweries need a maximum of two coding devices for their product identification. The challenge, in addition to the brown beer bottles and the wet production environment, lies above all in the non-daily product marking – the JET2neo functions perfectly even after several weeks of downtime!

The best-before date and LOT number are printed with a yellow soft-pigmented ink.

## About Paul Leibinger GmbH & Co. KG

Leibinger is a global specialist in coding and marking systems headquartered in Germany. The third-generation family-run company, founded in 1948, develops and produces industrial inkjet printers at its site in Tuttlingen, Baden-Wuerttemberg, with close to 250 employees. The CIJ systems distinguish themselves through their high quality standard and a fully automatic nozzle sealing technology, which minimises the printers' cleaning requirements.

The global network with over 150 service partners and a subsidiary in the USA ensures that Leibinger maintains a close relationship with its customers all over the world.

Paul Leibinger GmbH & Co. KG  
Daimlerstraße 14  
78532 Tuttlingen  
Germany

Tel. +49 (0) 74 61 / 92 86-0  
Fax +49 (0) 74 61 / 92 86-199  
info@leibinger-group.com

[www.leibinger-group.com](http://www.leibinger-group.com)