

All-in solutions for primary and auxiliary processes **used in BrewDog Brewery Expansion**



BREWDOG

BrewDog

The company's founders started to brew small batches of craft beer in April 2007. The founders with a lot of determination and passion for making great tasting craft beer have grown the business significantly.



ZIEMANN HOLVRIEKA

ZIEMANN HOLVRIEKA was founded in 1852 and is now located in Ludwigsburg. The company provides individual and tailor-made solutions for Brewery Plants and the services are offered worldwide.

BrewDog Brewhouse and Cellar Project for Craft Beer Plant

KSB received an order for supplying all of the pumps for a new brewing house which is part of the expansion of the Scottish Brewery BrewDog. German contractor Ziemann Holvrieka is responsible for the entire production block from the malt intake system right through to the bright beer tank. They awarded KSB the contract for delivering pumps for the craft beer system. Selection, installation and maintenance of KSB hygienic pumping equipment and pumps for the auxiliary process was a smooth process, especially as any product used in the food and beverage industry needs to satisfy the highest standards of hygiene. At the same time, the gentle handling of beer is an important feature. High-quality materials suitable for hygienic applications, CIP and SIP capabilities make KSB pumps key components of the BrewDog production processes.

Due to the strength of demand for BrewDog craft beers in 2014, it was recognised that the then current brewhouse and fermentation capacity was likely to be maxed-out by the end of 2015. Therefore plans to extend the high-tech Ellon BrewDog HQ were made to build a 4,500 m² building, which would join onto the existing brewery building. This new building was finished at the early part of 2016 and now contains

a new 300HL brewhouse. Construction started on the new building at the end of 2015 with a completion date of April 2016 and includes various pumps from the KSB hygienic range.

The new plant is split into the brewhouse and the cellar. The brewhouse is involved in the processing of the beer and KSB Etachrom, Etabloc, KWP and Movitec pumps were installed. The cellar process handles the final product and must meet the strictest of hygiene requirements. Vitachrom, Vitacast, Vitaprime and Vitalobe pumps have been installed and commissioned successfully in the newly expanded cellar. The KSB non-hygienic pumps in the cellar pump cool glycol to adjust the temperature. A large proportion of KSB Vitachrom and Vitaprime pumps in the cellar are being used in BrewDog's CIP process, allowing the brewing equipment to be cleaned to sanitary specifications without dismantling the equipment. This allows optimised batch operation and reduces the subsequent downtime to an absolute minimum.

Several KSB Vitachrom pumps are being used in the beer mashing process where the fermentable sugars are drawn from the grain. This process adds colour, flavour and sugars to the 70 °C water. Pumping wort and water around becomes a necessity

for most brewers and KSB hygienic pumps are used to transfer wort and water between the various components in the BrewDog brewing system. The installation and commissioning of all the KSB pumps in both the brewhouse and cellar took place in April 2016.

The KSB Vita pump product range comprises a total of five type series, which have been used for many years in high-end applications in the Food and Beverage industry. The KSB Vita pumps can be cleaned without leaving any residues and are made of materials which meet specific hygienic requirements of the European Hygienic Engineering & Design Group (EHEDG) and the U.S. Food and Drug Administration (FDA). KSB's Vita range was an excellent choice for BrewDog in this instance as pumps for all applications in the brewing process could be sourced from one supplier, in addition to the non-hygienic pumps KSB also supplied for the project.

Much is clearly demanded of the pumps, but importantly they must be sturdy and reliable. The support and servicing for the pumps contributes significantly to their reliability, and with KSB's longstanding establishment in the UK for over 120 years the customer can rest assured on continued support long into the future.



Processing of beer in the brewhouse with Etachrom and Movitec.



Vitachrom and Vitaprime meet the strictest of hygiene requirements in the newly expanded cellar.

Application:

Brewhouse and Cellar

Commissioned: July 2016

Scope of supply

12 x Vitachrom
4 x Vitacast
7 x Vitaprime
2 x Vitalobe

15 x Etachrom BC
1 x Etabloc
1 x KWP K
1 x Movitec F

Technical Specification

Q: up to 340 m³/h, H: up to 100 m
Q: up to 540 m³/h, H: up to 105 m
Q: up to 55 m³/h, H: up to 45 m
Q: up to 300 m³/h, H: up to 200 m

Q: up to 250 m³/h, H: up to 105 m
Q: up to 660 m³/h, H: up to 140 m
Q: up to 15,000 m³/h, H: up to 140 m
Q: up to 192 m³/h, H: up to 401 m



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