

## ■ Application report

### MONIN produces premium syrup with premium compressed air

Branch:	Food & Beverage
Customer/Location/Year:	MONIN, Bourges (France), 2018
Compressed air application:	Process Air
Installed operating material:	METPOINT OCV, EVERDRY FRA-V

The food industry wants safe products. An important influencing factor is the quality of the compressed air used at many points in the production process. The French syrup producer MONIN installed a new compressed air treatment unit from BEKO TECHNOLOGIES at its Bourges site. The system meets the highest demands, which go far beyond the usual requirements in the food & beverage sector.



At MONIN, compressed air comes into contact with the products at various points in the process chain.

MONIN is specialized in the production and marketing of syrups, liqueurs and fruit purees. Growing demand prompted the company to replace the historic production facility in Bourges with a new 20,000 m<sup>2</sup> building. There, six production lines now fill 150,000 bottles a day, which corresponds to an output of around 25 million units per year. The production facilities were largely taken over from the old plant. The compressed air station, however, only completed the relocation in order to serve as a back-up

for a new plant in case of an emergency. "Their performance no longer met our requirements," explains Camille Moreau, Head of Maintenance at MONIN.

#### A comprehensive catalogue of requirements

MONIN commissions MIB (Maintenance Industrielle du Berry), a **BEKO TECHNOLOGIES'** French distributor, to design a new solution for compressed air treatment. A complete system including dryer was required for the treatment of a maximum volume flow of 1,160 m<sup>3</sup>/h at a minimum operating pressure of 8 bar effective and a maximum inlet temperature of +38 °C in order to achieve a pressure dew point (DTP) of -40 °C. The requirement criteria in comparison with the disused plant also included lower operating and energy costs.

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In terms of food safety, compressed air of the highest quality was required, which was to be monitored and made traceable by measuring technology. In the food industry, compressed air comes into direct or indirect contact with products at various points in the process chain and should therefore be free of solids, oil, moisture and germs

### Clean compressed air made to measure

Following a thorough analysis on site, MIB and **BEKO TECHNOLOGIES** installed a tailor-made compressed air treatment system in 2018. The new station is composed of standard elements that are optimally matched to each other. An oil-free 110 kW compressor with variable speed and dry screw produces the compressed air. The heart of the **BEKO TECHNOLOGIES** treatment system is the heat regenerating adsorption dryer **EVERDRY FRA-Vplus ZERO PURGE**. In this model, desorption takes place in countercurrent to the adsorption direction with heated blower air and cooling in cocurrent flow. This ensures that there is no loss of compressed air for regeneration (**ZERO PURGE**).

Further components of the compressed air treatment are a **CLEARPOINT** filtration unit consisting of a water separator, an oil separator and a dust filter to remove water, liquid oil and solid contaminants. Several **BEKOMAT** steam traps discharge the liquid from the compressed air network.



The **EVERDRY** adsorption dryer is the central element of the compressed air treatment plant.

### Measurement technology for controlled processes

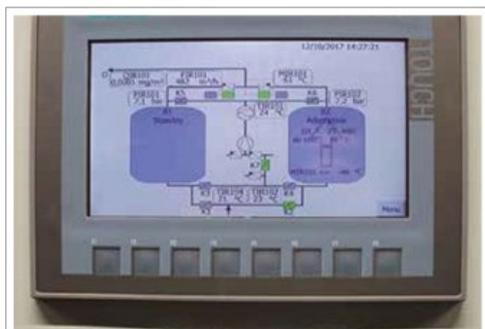
The basis for important analyses and documentation is sensor technology for recording the current volume flow and compressed air consumption. The **METPOINT FLM** flow meter offers precise point-of-use monitoring. The **METPOINT OCV** monitoring system permanently monitors the residual oil vapour content in the compressed air network and achieves an accuracy of approximately one thousandth of a  $\text{mg}/\text{m}^3$ . This ensures that the entire compressed air treatment chain does not allow any migration of hydrocarbons into the process. **MONIN** can thus permanently ensure the quality and purity of its process compressed air.

### More food safety and less

In the meantime, the new compressed air treatment plant has been in operation for more than two years. Camille Moreau is very satisfied with what has been achieved: "Volume flow, compressed air consumption, air quality - everything is under control and traceable. As soon as a critical threshold is exceeded, an alarm message is triggered".

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The information reaches the maintenance department in real time and corrective measures can be taken. By replacing the old dryer with a heat regenerating adsorption dryer **EVERDRY** from **BEKO TECHNOLOGIES**, **MONIN** saves more than 1 million m<sup>3</sup> of compressed air per year, which corresponds to a monetary value of approximately 15,000 Euro. The quality of the compressed air even exceeds the criteria of class 1/2/1 according to the ISO standard 8573-1 and meets the strict requirements of the manufacturer.



The EVERDRY adsorption dryer is easy and convenient to operate via touch screen.



The METPOINT OCV monitoring system monitors the purity of the compressed air and certifies

### About MONIN

GEORGES MONIN SAS was founded in 1912 and is today a world leader in syrups and liqueurs. The portfolio of the French family-owned company with headquarters in Bourges also includes fruit mix drinks, sauces, frappés and smoothies. The products are mainly used in the gastronomy sector in the production of cocktails. MONIN employs almost 700 people and operates a total of five production sites in Europe, the USA and Asia. It is estimated that 8 million drinks are prepared daily with MONIN products. ([www.monin.com](http://www.monin.com))

### About BEKO TECHNOLOGIES

**BEKO TECHNOLOGIES** GmbH develops, manufactures and sells components and systems for the processing and management of compressed air and compressed gas. The independent family-owned company with headquarters in Neuss was founded in 1982 and is today positioned worldwide with over 500 employees and 14 subsidiaries. The spectrum of competence and services ranges from the treatment of compressed air and compressed gas by filtration and drying, through the proven condensate technology, to instruments for quality control and measurement. **BEKO TECHNOLOGIES** advises manufacturing companies irrespective of industry to find the optimum solution for their compressed air treatment and to ensure that the required quality and energy efficiency in the process are maintained.

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