# Press release

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**Optimal production conditions for nature’s beauty**

**Weiss Klimatechnik has planned and built a state-of-the-art cleanroom with a ventilation system for the Bahnhof-Apotheke pharmacy in Kempten in the Allgäu region. The laboratory is used for the in-house production of natural cosmetics and essential oils based on raw materials sourced from across the globe.**

Aside from the production and sale of pharmaceuticals, pharmacies are also increasingly relying on their own production of homoeopathic products as well as natural cosmetics and care products.

**Nature’s power in wild plants and medicinal herbs**

In the Bavarian Alpine region, the cultivation and processing of wild herbs and medicinal plants is an ancient tradition. The still unspoilt and natural mountain meadows boast countless herbal varieties and offer numerous possibilities in terms of further processing. Essential oils, sprays and natural perfumes are produced on site in specially built production rooms. According to its philosophy of the highest possible quality and a careful handling of natural materials, the Bahnhof-Apotheke pharmacy employs manual filling in its production chain.

“Environmental awareness and sustainability are not just buzzwords for us, we also live by them. At the same time, we want to make natural healing methods and aromatherapy available to our customers. So fitting our production area with high-quality laboratory equipment was essential for us,” explains Dietmar Wolz, owner of Bahnhof-Apotheke.

Since there is always a risk of skin intolerances with cosmetics, a careful manufacturing process plays a key role. Weiss Klimatechnik planned and built a Class D cleanroom for Bahnhof-Apotheke in Kempten in order to guarantee a consistently high level of quality in accordance with the Cosmetics Ordinance.

As a specialist with many years of experience, Weiss Klimatechnik has extensive know-how as well as many reference projects in the area of equipping cleanroom laboratories in pharmacies and pharmaceutical production facilities. This resulted in decisive advantages in the joint consideration of production processes and material and personnel flows and a significant benefit to cleanroom construction.

**Turnkey cleanroom ensures optimum conditions**

The result is a cleanroom in compliance with EU-GMP guidelines with a clear room height of three metres which guarantees an adjustable basic temperature of 20 - 26 °C. With the new rooms, the production, filling, labelling and shipping of cosmetic oils are now all under one roof and, in addition, to an improved product quality, this also offers economic advantages by way of increased efficiency within the value added chain. Furthermore, microbiological tests of particularly important ingredients are ensured at all times.

In this case, the air guiding in the cleanroom was designed in such a way that turbulent mixing ventilation occurs inside the room. Air is supplied into the production area via two-stage filtration and ceiling swirl diffusers which can be retrofitted with airborne particle filters. As a result of dilution with indoor air dust concentration is lowered to the desired minimum. Filtered air is extracted directly at the workplaces and after passing heat recovery section it is discharged as exhaust air.

In the cosmetic production area air passes through ventilation louvres in the table area back into the return air duct from where it is fed to the air-conditioning unit for treatment.

An outdoor and exhaust-air unit from Weiss Technik with heat recovery was installed for air conditioning located outside the cleanroom area in the equipment room where the air is filtered in two stages, cooled and humidified or dehumidified depending on the situation and the requirements.

The air-conditioning unit used in the first expansion stage has a capacity of 16,000 m³/h at a constant flow rate. It supplies the cleanroom area including the ancillary areas (storage, offices) with a total area of 455 m².

The cleanroom is accessed through a double-door system. This ensures that the work area which is critical in terms of cleanroom climate, is safely sealed off from the environment. The reliable double-door system control guarantees a safe usage of the cleanrooms.

The airlock outside of the production rooms for aroma mixing is an important mechanism that protects high-quality production from contamination. The cleanroom is protected by a pressure cascade. Pressurisation causes the air to flow from areas with a higher air purity to areas with a lower air purity. These airflows from clean to unclean areas prevent contaminants from entering areas of higher air purity.

The potential risk of cross-contamination has been assessed and considered unlikely.

The new light-flooded production rooms with height-adjustable work surfaces offer a lot of space for the technical personnel perfectly adapted to the requirements. A sound insulation concept adapted to the individual work areas ensures a pleasant working atmosphere.

**Easy operation of the unit**

The entire control system is integrated in a compact control cabinet. It is operated via the Weiss Technik control system “Process Control 3 plus” (PC3+) with a user-friendly touch screen technology and a 5.7-inch monitor on the unit. Dietmar Wolz draws an all-round positive conclusion from the partnership with Weiss Klimatechnik: “It was important for us to have an experienced and competent partner at our side who would be able to provide us with the optimal climatic conditions for the production of our aroma blends, guaranteeing reliability of the production process at all times. Weiss Klimatechnik expertly met the complex requirements with their provision of high-quality air conditioning technology.”

Weiss Klimatechnik focuses on individual customer solutions in the areas of hygienic climate, cleanroom air-conditioning systems, measuring rooms and process climate. As an on-site specialist the company puts its engineering know-how, many years of experience and forward-looking technology to use in order to ensure safe production processes and procedures for man and machine. The company offers tried-and-tested system solutions for demanding applications from planning to turnkey realisation.

**Weiss Technik companies**

In line with the slogan – Test it. Heat it. Cool it. – the Weiss Technik companies provide solutions that are used around the world in both research and development as well as in production and quality assurance for numerous products. Our expert employees in over 22 companies in 15 countries at 40 sites provide ideal service support and ensure the high operational reliability of your systems. The products that bear the **weiss**technik® brand include environmental simulation, heating, air-conditioning and containment solutions.

Weiss Klimatechnik provides reliable air-conditioning solutions wherever optimal climatic conditions for man and machine are required: in industrial production processes, cleanrooms and measuring rooms, hospitals, mobile operation tents or in the information and telecommunication technology fields. As one of the leading providers of professional cleanroom and air-conditioning systems, we provide you with effective and energy saving solutions, and support you with our expertise from the planning to the implementation of your projects. The Weiss Technik companies are part of the Schunk Group, which is based in Heuchelheim, close to Giessen. www.weiss-technik.com

**Schunk Group**
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