

## Byk Pharma, Poland, top-quality pneumatics and electronics in response to high demands

One hundred kilometres from the Polish capital Warsaw travellers will find the up and coming city of Lyszkowice. Here Byk Pharma, a pharmaceutical company, decided to build a production site complying with the most modern of requirements. In Byk Pharma's fully equipped, ultra-modern laboratories and production facilities some of the world's best-qualified and experienced personnel are preparing medicines and active agents in liquid and tablet form. Even the company's wide range of packaging shapes and sizes are designed and manufactured internally. Close co-operation with Byk Pharma's German parent company ensures operating continuity, but also makes it necessary to produce only top quality and strive for perfection.



### Tasks entrusted to Sauter

Sauter was chosen to ensure automated supervision of all building management systems in the edifice's three wings (all of which are pointing in different directions). The order involved a special feature in that it required that very stringent air qualities and pressure levels be adhered continuously in the production units. If needed, and in case of deviations, all control information can be registered. Of particular importance were the temperature, humidity and pressure ratios having an effect on production.

The large number of clean room areas made it necessary to install very precise measuring and control methods which, in combination with the air-volume controllers, would guarantee the required pressure level.

### Solution

Sauter's EY3600 novaPro was chosen to perform PC-based overall building management. There is a separate alarm printer which registers all important data (e.g. breakdowns), plus a colour printer that prints out all system diagrams with the actual values of the individual data points, thus serving to document work processes. The entire

series of building automation software and hardware is controlled by this system. Examples include time programmes, on-off functions, setpoint values, function processes, energy management as well as alarms and protocols. Any important data will be long-term archived (historic database). The building management system controls some 1.500 data points, operating the entire measurement and control system. It also controls and monitors all static heating systems (which includes the heating centre), all cooling circuits plus the hot-water supply system. One of the most outstanding features of the system involves primary air treatment of all production rooms with variable air quantities.



To solve the very complex task of controlling overpressure and negative pressure in individual rooms Sauter decided to install a pneumatic control system. Pneumatic sensors ensure highly accurate measurement of pressure in the rooms. Pneumatic controllers and regulating units then correct the values through the air-volume controllers. Over many years of active service this type of control system has proven to be very safe and accurate. An outdoor connection equipped with a damping container serves as zero reference against which the required plus or minus condition of the room is measured.

To increase 'fine-tuning' of the pressure control system, Byk Pharma could still install multiple feedforward controls which will, for example, act on the air-volume controllers to automatically maintain room pressure at the required value during disturbances, such as vacuum cleaning.

### Co-operative service provision

Sauter Basle provided planning support for this highly complex project. Project engineering and detail planning were performed in co-operation with the Austrian company responsible for ventilation. Sauter specialists from Vienna ensured supervision of installation and systems commissioning as well as training of the on-site operating personnel. The project thus also served to underline the success that can be achieved in international projects.

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Air supply and extraction unit of a clean room area. Pneumatic-electronic controllers and converters are brought together in a single panel and linked through electrical as well as pneumatic circuits to the other measurement and control units.

Byk Pharma in Lyszkowice, Poland