Efficient packaging with the latest Vacuum 4.0 technology

Vinzenz Murr GmbH has been producing meat and sausage products for almost 120 years. Company founder Vinzenz Murr opened his first butcher shop in Munich in 1902.

Today, the company is not only one of the largest producing butcheries in Munich and southern Bavaria, but with over 2,000 employees is also one of the largest employers in the industry.

Since 1970, Vinzenz Murr GmbH has been producing its meat and sausage products in the Munich district of Obersendling. Products are sold almost exclusively through the 270 branches in Bavaria.

**by The Technical Team,
Busch Vacuum Solutions.
www.buschvacuum.com**

Since 2004, the company has been using a central vacuum system from Busch Vacuum Solutions to supply vacuum to all the packaging machines in the butchery plant in Obersendling.

This central vacuum supply consisted of a vacuum system with three R5 rotary vane vacuum pumps and a total of three vacuum boosters. The vacuum system was operated using a cascade control unit.

This means that only as many vacuum pumps were in operation as were necessary for the current demand. This involved pumps being switched on or off as required.

A vacuum chamber with a volume of two cubic metres served as a buffer so that the necessary vacuum level was immediately available in the respective packaging chambers when needed. So far, four large thermoforming machines have been supplied with vacuum.

When moving the vacuum system to another room, Managing Director Alexander Brandl decided to swap the rotary vane vacuum pumps equipped with standard motors for frequency-controlled rotary vane vacuum pumps in order to be able to adjust the performance of the vacuum system more precisely to the actual demand. This is because the packaging machines are used to package products ranging from several kilos in weight to small portion packs for self-service counters.

Modern vacuum technology with the latest PLUS Master Control unit from Busch Vacuum Solutions offers efficient central vacuum supply according to actual demand.

This means that very different tools are used for packaging and therefore the volumes of the packaging chambers vary considerably. Due to relatively small quantities, the total volume of all packaging machines changes frequently and therefore also the vacuum system's power requirement.

Impressive ease of handling

Alexander decided on the latest generation of intelligent vacuum pumps: the R5 PLUS from Busch Vacuum Solutions. The reasons for this were obvious. Not only has he had good experiences with Busch products over many years, he was also impressed by the easy handling of such systems via touchscreen.

The new system has now been in operation since June 2020. Thanks to pressure control, each individual R5 PLUS can precisely maintain the specified vacuum level and compensate for changing pumping speeds via the rotational speed. The individual integrated primary control units in each R5 PLUS communicate with each other via a higher-level secondary control unit – the PLUS Master Control.

In this way, the overall performance of the vacuum system adapts precisely to the actual demand. The central vacuum system can be easily operated via the PLUS Master Control touchscreen.

After several months of operation, it became apparent in practice that the vacuum system's control unit responds much more finely than with the previous system, which also responded to changes in demand by simply switching individual vacuum pumps on and off, but in coarser steps.

Guaranteed compliance

The converted vacuum system can now guarantee compliance with cycle times and a precisely defined vacuum level in each individual package.

The new R5 PLUS rotary vane vacuum pumps are larger than the vacuum pumps previously used. This is because in the future, even more thermoforming machines will be connected to the central vacuum supply.

However, the proven old R5 rotary vane vacuum pumps are not to be abandoned in the future. One or more will be used on tumblers as a single unit. ∎