

Grist for the Mill

To meet the requirements of Swiss company Bühler AG with regard to its MHSA huller, Turck certified its contactless Li linear position sensor for use in the Ex area

The milling of oats and related products such as spelt, soya and sunflower seeds requires high throughput with minimum breakage. The MHSA huller supplied by Bühler AG, the machine and plant builder headquartered in Uzwil, Switzerland, meets this requirement. The long-established company was founded as far back as 1860 and today has around 13,000 employees in 140 countries. As an innovative technology partner in the food industry, Bühler also demonstrates its expertise in this niche area with the MHSA huller.

Bühler AG develops and sells process solutions and sustainable value chains for a wide range of industrial sectors. The group's operations are divided into the Grains & Food, Consumer Foods and Advanced Materials areas. The solutions of Grains & Food, which also includes milling solutions, ensure the production of safe and healthy foodstuffs. Each year, Bühler invests up to five percent of its sales in research and development, and together with its customers and partners, forms a dynamic innovation ecosystem. Bühler strives to achieve market leadership in all its key industry segments. Its global market share in the milling sector is 65 percent.

Innovation and value creation

Bühler is a model Swiss company and continues to be a family-owned business. With its technical expertise and innovation capability it has gained an outstanding reputation among producers in the food and beverage industry, the automobile industry, as well as in several other sectors all round the globe. Bühler's strengths in the food and beverage industry lie in the fact that the company with its range of services can cover and optimize entire value chains for greater efficiency.

The seamless linking of subprocesses and the constantly increasing level of automation play a central role here. Bühler is pursuing some ambitious goals also with regard to sustainability: Major investments in digitalized solutions are designed to support customers in the reduction of waste, energy and water consumption in their value chains by 50 percent.

Demanding requirements for the suppliers

Procurement has a strategic importance for Bühler and is handled by its global supply chain network.



Stroke unit: Turck's Li linear position sensor checks the position of the impact ring and was specially Ex certified for this application



»In spite of the low order volume, Bachofen has obtained Ex certification for Turck's linear position sensor. This is what we call "partnership". Other suppliers wanted to help us but couldn't with this issue.«

Vincent Behrens | Project Manager Bühler AG

The company engages suppliers who share Bühler's passion for innovation and actively participate in development processes in order to make a substantial contribution to increasing Bühler's competitive strength in global markets. However, the willingness of a partner to offer more than expected can also be a decisive factor.

Explosion risk from flour dust

The process in which the MHS huller is used is an environment with a dust-laden atmosphere. Flour dust can be explosive if there is a potential source of ignition in this atmosphere. These ignition sources can come for example from electronic devices if they do not meet specific design requirements. The design engineers therefore required a contactless linear position sensor that is certified for the Ex zone 22. During the procurement process, Bühler's project manager Vincent Behrens discovered that most sensor suppliers were not able to provide an Ex certified sensor that was priced in the required range.

Bachofen: ready to give extra

It was then that Turck representatives Bachofen, a long-standing supplier to Bühler, presented Turck's Li linear position sensor. Although this sensor met all the stated performance criteria, it did not, however, provide at the time the necessary Ex certification. Bachofen encouraged Turck to take care of the necessary certification before the contract was awarded. This goodwill from their supplier was very well received by Bühler. Vincent Behrens: "Due to their experience with similar projects, the responsible product specialist at Bachofen predicted that certification would also be possible with this sensor type and took the necessary steps immediately. It was their flexibility as well as the professional and active advisory support that made this project so successful."

Robust sensor solution

The measuring principle of Turck's Li linear position sensors is based on oscillation circuit coupling between the positioning element and the sensor. An output signal is provided here that is proportional to the position of the magnet. Thanks to its contactless operating principle, the robust sensors are both



The MHS huller in the Milling Solutions Technology Center at Bühler AG: An impact ring moves up and down under the cover during the hulling process

maintenance-free and wear-free. They offer an impressive performance due to their optimum reproducibility, resolution and linearity over a large temperature range. The innovative technology also ensures immunity to magnetic AC and DC fields.

Author | Roland Fuchs is Product Manager at Turck's

Swiss representative Bachofen AG

Customer | www.bachofen.ch

Users | www.buhlergroup.com

Web code | more12151e

QUICK READ

Swiss technology company Bühler AG is a major player in the production of quality fine food and modern health products made from oats. The MHS huller is an important module in the process – a high-performance device that ensures the high-precision separation of the chaff from the oat kernel. Turck's Li contactless linear position sensor ensures the reliable positioning of the impact ring in Ex zone 22.