Media Release

30% less space, 30% shorter installation time, 10% less energy, and blockchain technology

Bühler revolutionizes industrial milling with Mill E3

Uzwil (Switzerland), August 26, 2019 – It is a completely new approach to the plant, processes, and machinery of industrial mills. With Mill E3, Bühler revolutionizes the milling industry and sets new standards in cost-effective building investment, project realisation time, and energy consumption. "After the introduction of automation 40 years ago, Mill E3 is the next big step forward in milling," says Johannes Wick, CEO of Grains & Food at Bühler Group. The first customer to rely on Mill E3 is also testing a pilot of Bühler blockchain technology to trace grain for more transparency and food safety.

For decades industrial milling concepts have focused on optimizing machines and processes, but the basic design concept remained the same, based on buildings with a minimum of five to six floors. With the completely new approach of the Mill E3, Bühler now optimizes the entire arrangement and construction concept. At the Networking Days 2019, Bühler shows that it is possible to build flour mills with latest technology more cost-effective, install them quicker, and operate them more environmentally friendly.

Shorter installation time, faster commissioning, smaller building

Mill E3 stands for advantages on three efficiency levels: space, time, and energy. In the optimal case a Mill E3 building can be 30% smaller in volume than a traditional mill of the same size. The construction of the Mill E3 building not only locks up less capital, it is also completed more quickly. By using pre-assembled modules, Mill E3 is installed 30% faster than conventional flour mills. "It's basically a plug-and-play mill," says Stefan Birrer, Head of Business Area Milling Solutions. Accordingly, Bühler customers can start up their Mill E3s earlier and generate revenues. It significantly reduces infrastructure cost, construction time and complexity.

Up to ten percent less energy

With the same output, Mill E3 reduces energy consumption by up to 10%, without compromising yield or quality. This is down to the compact mill design and innovative process solutions such as the newly developed integrated grinding system Arrius. Arrius has an integrated drive, which saves up to 10% of energy compared to conventional roller mills. The TUBO Tubular Push Conveyor replaces specific pneumatic transport passages in order to save energy. TUBO is much more efficient and makes food production even safer. The product is transported gently, loses no weight due to drying out, and the conveyor system is more hygienic because the pipelines are self cleaning.

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"Be it space, time, or energy: On all these levels, we were able to show that the plant will be better than anything other mill builders have on the market," says Stefan Birrer. "The design, the new grinding system Arrius and the IoT and Blockchain applications are revolutionizing the milling industry once again," adds Johannes Wick, CEO of Bühler's Grains & Food business. Bühler customers can order Mill E3 now.

First customer uses Bühler blockchain pilot for food traceability

The UK's largest milling company, Whitworths Holdings Ltd. incorporating Whitworth Bros. Ltd. and Carrs Flour Mills Limited, operates 17 mills on 9 sites. It is the first company to rely on Mill E3. "Besides the obvious mechanical benefits E3 offers, we were also convinced of the digitalization approach. Bühler is definitely on the forefront in this respect," says Mike Peters, Managing Director of Whitworth Bros. Ltd. "For us, Mill E3 offers more than just a new technology approach. It will enable us to create complete transparency for our customers in the future," he adds. Together with Mill E3, Bühler has proposed increasing transparency along the value chain by adding connectivity features, digital services, and blockchain to help guarantee the end product quality.

Connected to the Bühler Insights cloud

"With systems in place to trace the grain back to farms, Whitworth was in a good position to do a blockchain pilot project," says Stefan Birrer. "What we have done is transform paper-based tracking into blockchain tracking." Mike Peters explains the reason behind the idea to introduce of blockchain as follows: "If we don't embrace these new digital technologies and embed them within our business now, in the longer term that could be a bar to entry into certain markets as pressure comes from the end consumer and eventually from regulatory for increased transparency." The new mill is due to be completed towards the end of 2020. After that the monitoring phase begins. "IoT and blockchain (will) give us the opportunity to push the bar for food safety, food security, and transparency through our supply chain," says Mike Peters. Data from the fully connected mill will be monitored with Bühler Insights, Bühler's secure cloud service powered by Microsoft Azure. For milling companies which want to monitor and benchmark various production sites, Bühler developed the digital service Yield Management System. It also makes deviations between different recipes visible and comparable, from anywhere at any time. Yield Management System is also connected to Bühler Insights.

For more information on the Mill E3, please visit http://www.future-of-milling.com.

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About Bühler

Billions of people come into contact with Bühler technologies to cover their basic needs for food and mobility every day. Two billion people each day enjoy foods produced on Bühler equipment; and one billion people travel in vehicles manufactured with parts produced with our machinery. Countless people wear eye glasses, use smart phones, and read newspapers and magazines, all of which depend on Bühler process technologies and solutions. Having this global relevance, we are in a unique position to turn today's global challenges into sustainable business. We want every human being to have access to healthy food. We want to do our part to protect the climate with energy-efficient cars, buildings, and machinery. Our motto is creating "innovations for a better world."

Bühler invests up to 5% of turnover into research and development. In 2018, over 13,000 employees generated a turnover of CHF 3.3 billion. As a Swiss family-owned company, Bühler is active in 140 countries around the world and operates a global network of 30 production sites.

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