PARTNERSHIPS WITH CUSTOMERS

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PARTNERSHIP WITH CUSTOMERS Bühler Annual Report 2019

THE REAL

INNOVATE TO GROW

Wudeli Flour Group, China

Flour-based foods are a staple diet for hundreds of millions of Chinese people. The world's biggest flour enterprise, the Wudeli Flour Group, has joined forces with Bühler to continuously optimize flour-milling, improve automation levels, and build digital factories for the benefit of customers, farmers, employees, the state, and business.

The Hebei flour mill in Daming County, near the eastern city of Handan, is situated in one of the world's biggest wheat-producing regions. The plant is among the most advanced flour mills operated by the world's largest flour manufacturer, the Wudeli Flour Group. Rows of enclosed Bühler machines operate in a dust-free environment overseen by just three operatives in any single shift. Each day 5,100 tons of flour leave the plant for Hebei, Beijing, and the Northeast region's restaurants and steamed bun shops producing the flour-based delicacies that make up China's most-eaten staple foods.

By any standards, the growth of Wudeli Flour Group from a family mill to a global manufacturer in just 30 years is impressive. Zhiguo Dan was just 17 when he opened his first mill with his sister, brother, and father in 1989. Today, he is president of a company that operates 19 plants with a daily wheat processing capacity of 45,000 tons. Under existing expansion plans, daily output is set to rise to 80,000 tons a day in the coming years, sufficient to supply one-third of China's flour needs.



Zhiguo Dan is the President of the Wudeli Flour Group which owns 19 mills with a daily wheat processing capacity of 45,000 tons. This makes the Wudeli Flour Group one of the world's largest milling companies.

Zhiguo Dan acknowledges that this sort of growth was only possible under China's recent policy of economic reform. But he believes it is also a result of some core values being established early on: "2019 marks the 30th anniversary of the founding of Wudeli. Over the past three decades, we have been focusing on one thing: making the best flour."

Benefit for all

Zhiguo Dan's father believed that to achieve sound and steady growth a company must "benefit all" by satisfying the needs of customers, farmers, employees, the country, and the enterprise. Customers must be supplied quality flour and efficient service at a reasonable price. Farmers have to be able to sell their wheat at a profit and be paid in cash upon delivery, while employees should enjoy high and stable wages, generous benefits, training, promotion opportunities, and a pleasant work environment. The business needs to be allowed to make profits by applying strict management criteria and allowing economies of scale to facilitate large-scale, low-cost operations. Finally, the country should be allowed to benefit the people by collecting reasonable taxes.

"When the five sides combine into a community of shared interests where customers are willing to buy, farmers are ready to sell, employees are full of passion, and the country shows support, a virtuous circle will be formed," Zhiguo Dan explains. "When Wudeli becomes better, all sides will reap more profit, and this is our beautiful vision and ultimate goal."

Wudeli Flour Group has built its factories in the main regions for wheat production and by coordinating with local governments. With this, the company has been able to establish a sound demand-supply relationship with local farmers. Gener"We believe Bühler will always be there for us on our way to remain the world's largest flour manufacturer and will be our close ally forever."

ZHIGUO DAN President of the Wudeli Flour Group

ally, the company buys wheat through independent purchase and auction based on the principle of setting a price on quality. "I just want to sell my wheat to Wudeli, regardless of the distance of transport," explains one wheat farmer. "That's because Wudeli is well-known for its integrity. They offer a favorable price and pay me in cash." By winning the trust of farmers, Wudeli has secured a continuous supply of wheat.

Another guiding principle has been to drive expansion through innovative development. At the heart of this is the principle of quality control. Wudeli applies a simple rule in all its plants: "Unqualified wheat shall be banned from entry, and substandard flour shall never leave the factory."

To guarantee that the highest quality wheat is used for production, Wudeli has developed its own system to provide automatic sample surveys. This data is then used to set a price for the raw material, eliminating any chance of human error. An automated receipt and weighing system is in place to provide highly efficient and accurate warehousing. In the unprocessed wheat testing laboratory, Wudeli uses Bühler solutions to accurately test for moisture within a minute from starting analysis, by using LED lamp technology to detect imperfect wheat. According to the relevant state provisions tolerance for insects, mildew, sprouts, and other impurities in the wheat should not exceed 6%. Wudeli has set a much higher standard and rejects all wheat that contains more than 1% foreign matter.

After the inspection, unprocessed wheat is categorized and enters the cleaning section where it goes through 15 processing steps, including using vibrating screens for selection and surface cleaning using wheat scourers. Later, the wheat enters the grinding section which consists of 17 steps with each step following strict operation specifications and technical standards.

Readiness for change

Each finished product leaving the factory undergoes more than 20 quality control measures including moisture, ash content, gluten, processing precision, sand content, and magnetic metal content. "The testing equipment is worth hundreds of millions of yuan. The purpose of making such a huge investment is to ensure the safety and stable quality of the flour," explains Zhiguo Dan. "Overall, we rely on systems and equipment to eliminate the influence of any human factor to meet all standards satisfactorily." Wudeli has reached a first pass yield higher than 99% and an ex-factory pass rate of 100%. "Innovation is the source for the thriving of an enterprise," points out Zhimin Dan, Chairman of Wudeli Flour Group and the elder brother of Zhiguo Dan. However, innovation should not just be limited to the manufacturing side of the business but also be applied to research and development, management, and to business philosophy.

When it comes to innovation, talent is a primary resource. In addition to eight senior flour engineers and 130 professional flour technicians, Wudeli also employs well-known food experts as regular technical consultants for the company. It also works in collaboration with several higher education institutions including the Henan University of Technology.

Over the years, Zhiguo Dan has asked his technical team to conduct independent research and development to upgrade capacity and increase profits. One example is the installation of bran brushing machines that has increased the flour extraction rate by over 1%. The introduction of bran drying technology has helped to tackle issues such as short storage life and the transportation of wheat bran in summer. Since applying the new solutions, profits generated by bran products have increased. With the help of automatic warehousing and loading, the storage and handling of finished products is no longer necessary.

Wudeli has found that the flour produced using European techniques is more suitable for making western foods. Eastern flour-based foods are mainly prepared by boiling and



The Wudeli Flour Group produces the specialty flour needed for many delicacies, such as steamed buns and noodles. Flour is one of the most important food staples in China.



steaming, so western techniques tend to result in dumplings or noodles sticking, affecting appearance and taste. By drawing on wheat milling practices from Korea and Japan and taking into account Chinese eating habits, Wudeli has developed an innovative processing method to provide its customers with flour products that are both appealing and tasty.

With the rapid growth of the Chinese economy has come the need for food manufacturers to shift their focus from satisfying people's hunger to satisfying their taste buds. Wudeli has begun to produce a variety of specialty flour used to make dumplings, steamed stuffed buns, fried bread sticks, stretched noodles, and sliced noodles, among many others. The company is also speeding up its efforts to research and develop products that can better meet people's nutritional needs. An example is the use of whole wheat bread flour containing the wheat germ and aleurone layers that are rich in micro-elements.

Wudeli has transformed itself from a family business into a modern corporation. The process has meant a radical change in management by developing a horizontal organizational structure in which there are no deputy posts. By doing this, each subsidiary or department has greatly cut down management costs and improved efficiency. Under the leader-

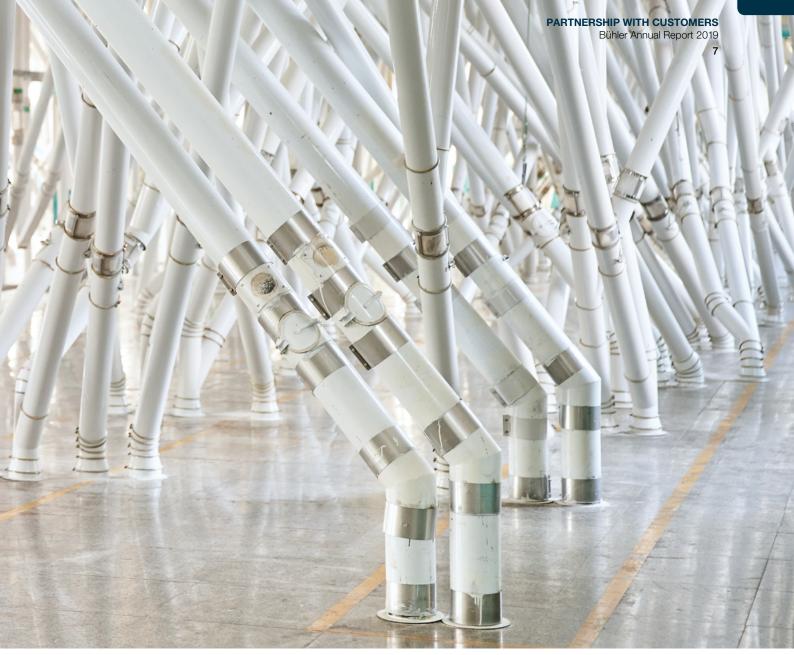
"Innovation is the source for the thriving of an enterprise."

ZHIMIN DAN Chairman of the Wudeli Flour Group

ship of Zhiguo Dan and other family members, the Wudeli Flour Group has over many years formed its own corporate culture. Employees are encouraged to be creative, pragmatic, united, and entrepreneurial. Everyone is expected to adhere to the corporate values of integrity and diligence. The company's attitude to wealth creation and profit is guided by an old Chinese adage: "A nobleman properly acquires wealth; diligence is a money-spinner, and thrift fills the cornucopia."

Partnering with Bühler

In 1996, Wudeli took a major step when it installed Bühler flour production technology. Today over 80% of the Wudeli Flour Group's products are produced on thousands of Bühler machines including 2,740 flour mills, 1,307 purifiers, 647 screen-



Employees of the Wudeli Flour Group are encouraged to be creative and entrepreneurial.

ing machines, 232 de-stoning machines, 130 TAS cleaning machines, and 1,189 flow balancers, among other equipment.

"As a global leading supplier of milling equipment, Bühler has not only provided strong support for us in terms of equipment but also helped us to foster a global vision," explains Zhiguo Dan. "In 2008, Bühler arranged a tour to Japanese and Korean enterprises for us, which has contributed a lot to promoting the overall quality of our products."

Inside one of Wudeli's new flour mills stands a roller mill of special significance. On it is engraved: "No. 10,000, June 8, 2019". It is the 10,000th Dolomit roller mill manufactured by Bühler. "This machine is witness to the long-term cooperation between Wudeli and Bühler and a symbol of the glory jointly forged by both companies," says Zhiguo Dan.

It is important for both the Chinese flour industry and Wudeli to keep growing in an automated, digital, and smart way. Today, the daily capacity of Wudeli's newest flour mills is at least 4,000 tons. Increased automation means that while Wudeli's business keeps expanding its reliance on human resources is decreasing. In August 2019, Wudeli and Bühler signed a cooperation agreement to build a digital factory capable of achieving total automation by integrating all of its information systems into the whole process management. In line with the "German Industry 4.0" and "Made in China 2025" initiatives, Wudeli aims to be a trailblazer in the transformation and upgrade of the Chinese flour industry.

Becoming a trendsetter

"Wudeli and Bühler have deepened their relationship from simple business partners to strategic business allies in an all-round way, with their collaboration areas ranging from equipment to digital factory and from additives to research and development, promising a broader prospect for cooperation," says Zhiguo Dan. "In the beginning, we were wondering who would be there for us when we set out to forge the largest flour enterprise and who would remain our strategic partner in the next 10 years, 20 years, even 50 years, or 100 years. Now, we believe Bühler will always be there for us on our way to remain the world's largest flour manufacturer and will be our close ally forever."

Looking to the future, Zhiguo Dan adds: "With great achievements comes great responsibility. In a spirit of pursuing perfection, Wudeli will strive to provide consumers with safe flour. Wudeli is determined as well as confident to become a trendsetter for all flour manufacturers and will usher in a new era of rapid development for the whole industry."

LET THERE BE LIGHT!

Saint-Gobain SageGlass, United States

The intelligent glass manufactured by Saint-Gobain SageGlass combines well-being, climate protection, and extreme efficiency. Bühler is not only the technology partner for the manufacture of these smart windows, but also a customer – the façade of its new CUBIC innovation campus in Uzwil, Switzerland, is fitted with a dynamic outer shell.

SageGlass is transparent, but controls glare; it is coated, but it's possible to adjust its tint; and it lets in sunlight on cool days, but blocks it on hot ones. It may cost a little more, but its extreme efficiency and ability to dramatically reduce energy makes up for it. It's unique. To make the distinction clear, CEO Alan McLenaghan says: "SageGlass is not just another type of glass. If people think of it that way they are not being imaginative enough. It's all about the dynamic benefits it brings to the people who are occupying the space."



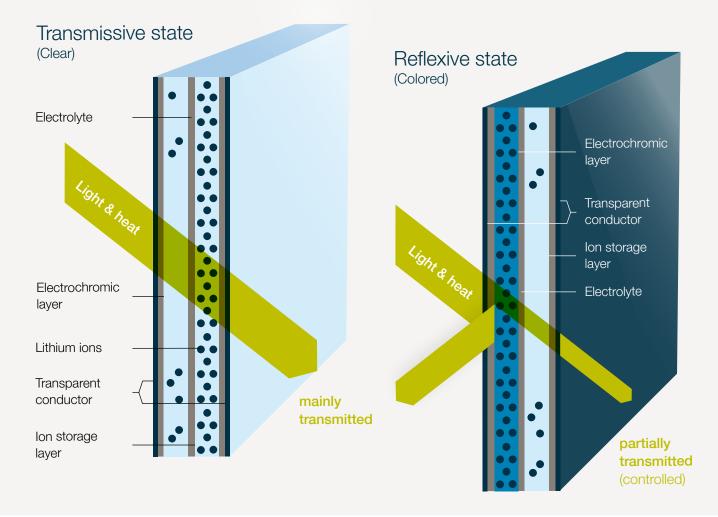
More about Saint-Gobain SageGlass Nanometer-thin coatings breathe intelligence into the amorphous, transparent glass body: equipped with sensors and software, the glazing adjusts its tint depending on the solar radiation and light, allowing an unrestricted view to the outdoors at all times and under any conditions. It automatically controls daylight, glare, and energy consumption entering the building – and it allows manual adjustment if the occupant wants to override the building management system.

With the advantage of SageGlass, curtains, roller shades, and blinds have become the glare protection of the Stone Age. "Using this as a basis, architects have the opportunity to use glass in ways and applications they previously could never have imagined," explains McLenaghan. Sage-Glass allows architects and designers to create buildings that "Our products are not a panacea for all problems, but they certainly enhance productivity, well-being, cognitive capability, and efficiency."

> ALAN MCLENAGHAN CEO, Saint-Gobain SageGlass

HOW ELECTRO-CHROMIC GLASS WORKS

Electrochromic glass works similarly to a battery: in the transparent/translucent state, lithium-ions are embedded in the storage layer. If voltage is applied, the lithium-ions are transported through the electrolyte to the electrochromic layer, and the glass darkens: heat and light are then reflected. The electrodes for application of the voltage are transparent in order to allow light to pass through. By applying counter voltage, the lithium-ions are transported back, and the electrochromic glass becomes transparent again.





Alan McLenaghan, CEO of Saint-Gobain SageGlass.

optimize the use of natural daylight while providing unobstructed views to nature and the world outside. For thousands of years, our forefathers lived mainly in the great outdoors. Still wild creatures from a genetic point of view, modern urbanites also need sunlight for their health and well-being. For office buildings, there is ample evidence that sufficient daylight brings improved satisfaction in the workplace, reduces stress and absenteeism, improves the quality of sleep and perceived well-being, and increases productivity. In hospitals, it has been observed that patients in rooms with a view and optimized daylight required less pain-relieving medication and their recovery was accelerated. For schools, it has also been proven that daylight and views to the outside promote concentration and attention in students, resulting in increased retention and improved test scores.

Enhanced productivity and well-being

Even our environment benefits from the intelligent SageGlass. Up to 35% less energy is required to heat and cool buildings regulated by SageGlass. This also has a CO₂ benefit of up to 10%. Operationally, SageGlass replaces the need for blinds or other solar shading devices, resulting in annual cost and environmental savings by eliminating maintenance and replacement of traditional materials. As a result, the value of the real estate and the rental income increases. Despite the higher initial investment of up to 1% of total construction costs, SageGlass calculates a return on investment of less than 10 years, based on energy savings alone. If other factors are considered, such as the glare protection that is no longer required, and the enhanced performance and well-being of the occupants, the return is realized even more quickly. "Our products are not a panacea for all problems, but they certainly enhance productivity, well-being, cognitive capability, and efficiency," says McLenaghan.

SageGlass was an obvious choice for Bühler in building its CUBIC innovation campus. "In the CUBIC, we want to connect people and let ideas flow freely in order to make those ideas become real solutions more quickly," says Bühler CTO lan Roberts. Equipped with SageGlass, the CUBIC is open, transparent, and filled with light – in and of itself a source of inspiration for the employees, project teams, and start-ups inhabiting its space.

The basic principles of electrochromic coating have been known since the early 1960s. It consists of molecules or atoms that can change their optical properties with a flow of electricity. In the case of dynamic glass, this involves lithium ions and electrons. Applying voltage of only 5 volts creates a low current, moving lithium atoms from one layer to another, creating a darkening effect. The actual art here, originating from this chemical and physical principle, is to manufacture



Bühler's CUBIC, with its SageGlass façade, is suffused with light. Sufficient daylight in the workplace improves satisfaction, reduces stress and increases productivity.



large high-quality products on an industrial scale to look exactly the same, function flawlessly for 30 years or more, and to work together like a fully synchronized water ballet. With more than 500 patents, granted over the past 20 years, Saint-Gobain SageGlass has taken this art to new heights – and Bühler has been a significant technology partner in this.

A close partnership

In 1989, John Van Dine founded the company in Valley Cottage, New York. Technology and processes were developed to market readiness, and the first product was launched - the starting point for rapid growth. The average rate of growth has been more than 50% a year; SageGlass is now installed in buildings in 30 countries. After a period of close partnership with Saint-Gobain, the global market leader for construction materials took over the company in 2012, complementing its own electrochromic technology with that of SageGlass. Since then, SageGlass has been a wholly-owned subsidiary of Saint-Gobain. In 2010, a close partnership was formed between SageGlass and Bühler. "SageGlass and Bühler had a symbiotic relationship from the beginning," says McLenaghan. The company's expansion required a new factory which SageGlass built in Minnesota - and with it, new coaters. "The first coaters used in our expansion were Bühler coaters." says McLenaghan. "We selected Bühler because of their technical advancement, the innovation that they bring, the similar culture of the companies and Bühler's willingness to work with us on design changes we needed in the coater."

The stringent requirements were not to be met with a standard system. In order to achieve the desired characteristics, a vertical arrangement of the machines was needed instead of the usual horizontal layout. An additional criterion was easier access to the key components of the machine to make maintenance and cleaning easier. The specially developed

"We selected Bühler because of their technical advancement, the innovation that they bring, and their willingness to work with us on design changes."

ALAN MCLENAGHAN CEO, Saint-Gobain SageGlass

behemoth of a machine, with dimensions of 75 x 15 meters, met the enormous demands with the highest reliability, and coats more than 1,500 square meters of glass per day with the precision of just a few atomic layers – typically up to six coats were applied for this. Temperature curves, vacuum, material deposits on the glass: all of this was controlled perfectly by the GLC 1850 V Large Area Coater from Bühler Leybold Optics. Although the factory and coater are still relatively new, it is already foreseeable that they will reach their limits. "We are already considering a new production location which would undoubtedly be somewhere outside the US," says Alan McLenaghan.

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AN APPETITE FOR THE FUTURE

M. Dias Branco Group, Brazil

When it comes to the challenge of maintaining a leading position in the Latin American pasta and cookie market, M. Dias Branco Group focuses on integrated solutions and automation for quality and efficiency. The Group's appetite to drive the food industry of the future remains insatiable – as does its goal to sustain its reputation as a benchmark producer on the continent.

Ceará is a Brazilian state recognized for the resilience of its people who are constantly facing economic and social survival difficulties, as well as for the beauty of its paradise-like coast of wave-swept beaches. In Ceará, another kind of wave beyond the seas has caused a swell of interest, and that's M. Dias Branco's exuberance for offering gastronomic pleasure in the form of delights such as pasta and cookies. From a business venture that emerged as a small bakery, this "wave" caused by M. Dias Branco has washed over Brazil, making it one of the top 10 manufacturers of pasta and cookies in the world.

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Piraquê in Rio de Janeiro, Brazil, is one of the most popular cookie brands in the country.





Roladinho Goiabinha cookies are a leading product for M. Dias Branco. Here they are cooled on a conveyor.

M. Dias Branco Indústria e Comércio de Alimentos S.A., headquartered in Fortaleza – the capital of Ceará – is a food company that manufactures, markets, and distributes pasta, cookies, wafers, cakes, snacks, toast, wheat flour, margarines, and vegetable fats. Publicly traded since 2006, the company has been growing organically and through major acquisitions, helping to position Brazil as the world's third largest pasta producer, according to the World Pasta Organization (WPO).

The Group currently has 15 industrial units in the northeast, southeast, and south regions. Among these are seven mills that meet the wheat flour demand for its own production facilities, as well as supplying the wholesale and retail markets. Currently, as one of the largest flour producers in Brazil, 60% of the production is used in the Group's own factories, and the remaining 40% of the flour is distributed to bakeries, other industries and also used for cake mix and household flour production. With over 14,000 employees, the company's 2018 net revenue was BRL 6 billion (approx. CHF 1.5 billion).

Lasting partnership

A venture of this magnitude is only built with partnerships that add value to the business. This is exactly the case of the cooperation between Bühler and M. Dias Branco Group, which has existed over 40 years. Beat Weilenmann, Milling Solutions Sales Director at Bühler, says that the installation of the automatic flour receiving and handling system for the Fortaleza factory in 1978 was the first project delivered to M. Dias Branco. He recalls with satisfaction: "In 1992, we put into operation the first flour mill at Port of Mucuripe, in Fortaleza. At that time, it was South America's most modern wheat pro"Bühler and Haas are the reference in technology, innovation, and, above all, in quality."

SIDNEY LEITE

Technical Director of Industrial Operations, M. Dias Branco Group

cessing plant. In the course of these more than four decades, numerous deployments were carried out in partnership, in addition to the constant updating of the operating industries, always aiming at improving operational efficiency and increasing food safety."

Another example of this synergy can be found in the Piraquê biscuit plant, acquired in 2018 by the M. Dias Branco Group. With a factory installed in the state of Rio de Janeiro, Piraquê is one of the most beloved brands of the southeastern consumer market (the biggest consumer market in Brazil), and the state's main biscuit manufacturer. The acquisition of the plant with 100% Bühler and Haas technology was an important step for the company to maintain and expand its national leadership, since M. Dias Branco Group is the largest biscuit producer in Brazil, according to market data from Nielsen Consultants. "Our goal with the acquisition of Piraquê is to refine the production with an increasing focus on quality, innovation, and healthiness, given these seem to be the major trends for the future. In addition, it allows us to offer premium products of a higher added value and price, accelerating our growth in the southeast and south regions, and thus helping us to develop national brands," says Francisco Ivens de Sá Dias Branco Júnior, Group President and Industrial Vice President of the pasta, cookies, cakes, snacks, and margarines division. And with Bühler's 2018 acquisition of the Austrian Haas Group – a centennial company and world reference in specialized wafer and biscuit equipment – another great opportunity to expand the historical partnership with M. Dias Branco emerged.

Jorge Botero, Director Consumer Foods of Bühler South America, explains the relevance of integrating production lines and the ability to offer complete, end-to-end solutions: "The Bühler Group's portfolio covered raw material handling, flour milling, ingredient handling, and the mixing of raw materials. With the acquisition of Haas, the biscuit manufacturing chain is now fully integrated. Bühler technology now offers the whole process, including dosing, baking, forming, turning, spreading, cutting, and cooling. The end product can later be enrobed with chocolate or other confectionery ingredients. That means our portfolio is 100% complete and we can cover the entire biscuit manufacturing chain with maximum synergies and optimized resources."

Botero believes this will give Bühler, and most importantly, its customers, a lot of room for growth in the coming years. The 100% portfolio also means that customers can operate

their plants at optimal efficiency. "Our equipment, especially for the biscuit segments, can offer a reduction of up to 30% in energy consumption and, for some applications, a reduction in carbon dioxide and nitrogen oxide emissions of up to 200% compared to standard technologies," Botero explains.

M. Dias Branco Group's Technical Director of Industrial Operations, Sidney Leite, sees great promise in the fusion of Bühler and Haas into what is now Bühler's Consumer Foods segment. "Bühler and Haas have always been two highly respected companies in the world market. They are the reference in technology, innovation, and, above all, in quality. We believe this business merger is beneficial because it forms a pool of solutions that complement each other, facilitating project implementation and reducing the complexity of systems integration," Leite explains. "We look forward to even higher food safety, operational performance, and greater support for our demands. For example, in terms of sustainability, our goal is to avoid the generation of waste, reduce energy and water consumption, and seek alternative energy sources."

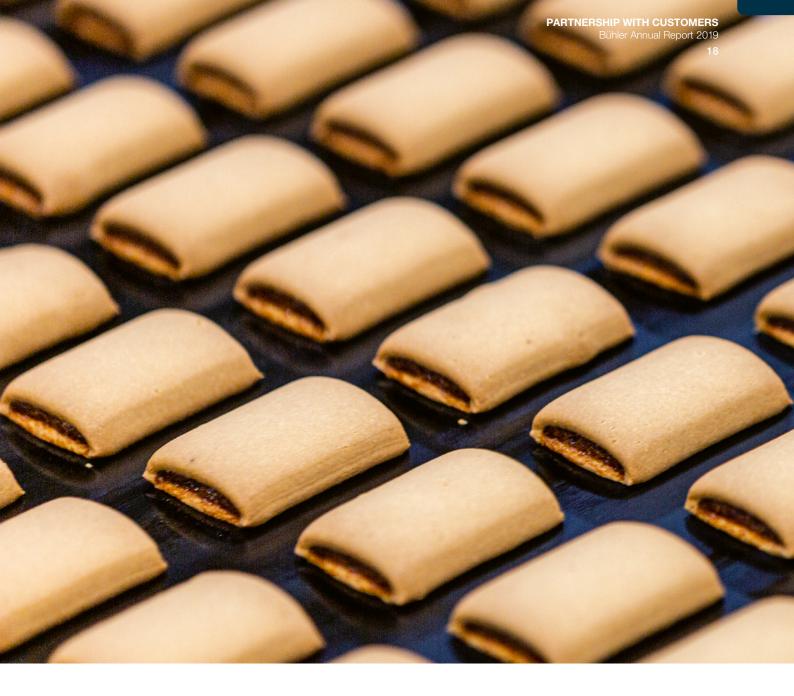
Among the major challenges of the milling sector are the constant search for higher energy efficiency and increased grain extraction, making operations increasingly more sustainable. Francisco Claudio Saraiva Leão Dias Branco, Industrial Vice President responsible for the Group's mill division,



Francisco Claudio Saraiva Leão Dias Branco, Industrial Vice President Mill Division for M. Dias Branco Group.



Francisco Ivens De Sá Dias Branco Júnior, Group President of M. Dias Branco Group.



summarizes the historical partnership: "We need to gain in volume and efficiency to adjust to the prices that are increasingly more dictated by the market. To this end, we have always counted on Bühler in order to grow based by increasing efficiency and quality."

In collaboration with its customers, Bühler has bold goals. "We are committed to making the maximum contribution to achieving our global goals of reducing energy, water, and waste in our customers' value chains by 50% by 2025. To this end, we are continually running studies at each of the M. Dias Branco Group's plants to deploy innovations and integrated solutions," Weilenmann explains.

Among mills operating with Bühler equipment, the unit in Rolândia in the state of Paraná, dedicated to wheat production, was the group's first in the south of the country. It was established to supply the pasta and biscuit factories located in the neighboring state of São Paulo. This mill is considered the most energy efficient in the group, with 66 kW per metric ton, and a benchmark for one of the highest overall operational efficiency rates, above 99%. Beyond the focus on operational excellence, what perpetuates the performance of the M. Dias Branco Group in an emblematic way, is its socially responsible "We need to gain in volume and efficiency to adjust to the prices that are increasingly dictated by the market. We have always counted on Bühler."

CLAUDIO SARAIVA LEÃO DIAS BRANCO Industrial Vice President Mill Division, M. Dias Branco Group

management approach. From the owners' perspective, the company's main contribution is in the training and development of its employees, and also of communities. The strengthening of the country's labor force is a great lever for prosperity. A good example is the recent inauguration in Fortaleza of the lvens Dias Branco School of Social Gastronomy, delivered as a gift to the community to be managed by the State



M. Dias Branco's goal is to refine production, with an increasing focus on quality, innovation, and health.

Government. With a capacity for over 5,000 students a year, the school features some of the country's most advanced infrastructure, comprised of a bakery kitchen, a confectionery kitchen, a kitchen for culinary fundamentals, library, computer lab, classrooms, events terrace, and a restaurant. The training center offers basic and vocational courses in cooking, baking and confectionery, as well as mentoring for product development and projects in creative laboratories.

Ensuring excellence with education

When asked about the main challenge for the future, the management of M. Dias Branco responds in unison: people! That is why the group maintains a corporate university and an industrial technical school. The company's long-term goal is to ensure excellence in knowledge management to provide solid support for the business and maintain its leadership into the future. Bühler is also a partner on this educational front for technical-industrial training, providing training in various production technologies with over 40 years of joint development. A recent example is the course attended by M. Dias Branco teams in late 2019, focused on technical expertise to perfect crackers and wafers.

The impressive trajectory of the M. Dias Branco Group can be summed up in a lesson on how to be creative, precise, and practical in running a business without ever losing sight of being courageous. The founder was the grandfather of the current senior leaders. The son of humble Portuguese farmers, Manuel Dias Branco immigrated to Brazil at the beginning of the last century with the dream of starting his own business. He became a legendary merchant in Ceará, entering the bakery market with the opening of the Imperial Bakery in the small town of Cedro and later the iconic Fortaleza Bakery, in the capital, in 1936.

It is clear that the family carries in its DNA an entrepreneurial drive that has flourished for three generations. Starting with the pioneering grandfather, Manuel; followed by the industrial expansionist father, Ivens, who raised the company to the level it has today; and currently with his two sons Ivens Júnior and Claudio, who are displaying the same business acumen.

Underpinning M. Dias Branco Group's recipe for success is a philosophy shared by Bühler: the belief that solid growth requires a clear vision of a sustainable future and a strong commitment to people and education.