Innovative rice processing equipment and solutions.

Leading in optimised rice processing.
Bühler. In partnership with processors.
An integral part of the rice processing industry.

Why choose Bühler.

Over 150 years in grain milling
Drawing on over 150 years of experience, our knowledge in rice processing is second to none, with many successful processing and milling projects designed and installed in every major rice processing geography.

Comprehensive machine portfolio and turnkey solutions
Our comprehensive machine portfolio, supported by our turnkey capabilities ensures unprecedented levels of processing capacity and product quality.

Dedicated rice research and Competence Centres
Dedicated rice centres, located in every major rice processing country, house some of the world’s experts in rice processing, developing unique, value-added innovations and solutions to bring processors smarter, lower cost and more sustainable processing.

Global coverage, local support
With presence in over 140 countries, our global reach gives you unparalleled access to our wide range of capabilities, successfully delivering equipment, service and support locally.

Since 1860.
There are plenty of good reasons for Bühler’s success:
Personal commitment, clever entrepreneurial decision-making, a high level of sensitivity to the changing needs of the market, and a core business that has become a byword for quality and consistency, founded on the distinct power to innovate.

Tackling the challenges of the period and of the market have always played a role in shaping the direction of the company.
This is simply something that Bühler has always done, and when it comes to generating benefits and added value for our customers, we have always been a step ahead.

Picture: Adolf Bühler - Founder
Bühler. Committed to rice processors across South East Asia.
Content.
Comprehensive machine portfolio and turnkey solutions.

**Paddy Handling, Pre-cleaning, Drying and Storage Systems**
Bühler's comprehensive pre-milling solutions such as conveyors, pre-cleaners, dryers and storage systems, available for all capacity requirements, minimise and protect against product damage, breakage and delivers a more hygienic operation.

**Milling Solutions**
Bühler’s full range of milling equipment adds value to your rice, at every phase of the processing stage. We optimise each process to ensure you meet food safety standards, deliver high product quality and reduce brokens – maximising your yield to the fullest.

**Electrical and Automation Solutions**
Bühler automation systems deliver ease of operation in processing plants. Processors can opt to incorporate a modular or fully automated system to control and monitor plant production – improving plant processes, efficiency and machine performance.

**Engineering, Technology and Project Execution**
By working in close partnerships with customers in South America, our engineers have the process know-how and local in-depth knowledge to advise on how you can utilise your processing plant to the fullest and even project manage the full commissioning of a new processing plant.

**Research & Development Support**
Our leadership in rice processing stems from our continuous research, equipment, technology and consultation services. We invest in the future, developing the latest solutions from our world-class research facilities from the heart of Asia to Latin America to give our customers the competitive edge.

**Processing of By-products**
A Bühler breakthrough in innovative solutions - maximising product value through deep processing of brans and brokens. A range of solutions including rice bran stabilization, rice reconstitution, rice fortification and rice grinding delivers significant return on investment for Bühler customers.
Pre-Cleaning solutions.

Drum Sieve
Efficiently separates coarse impurities such as pieces of straw, bag tapes, paper, pieces of wood and leaves, successfully protecting downstream processing and conveying systems from machine damage.
- Available in three models with a capacity range of up to 95 tonnes/hour
- Fast and easy drum change
- High degree of self-cleaning

Aspiration Channel MVSG/I
The MVSG/I aspiration channel accurately separates light particles such as dust and hull fragments from rice. Depending on the model, the MVSG/I can be used as a standalone machine or combined with a Separator MTRB/C.
- Available in three models with a capacity range of up to 50 tonnes/hour
- Controlled air flow for optimal separating performance
- Safety grid available as option

TAS LAAB Cleaner
High separation efficiency, removing coarse, small and light impurities to maximise silo storage capacity, improve process flow and enhance process reliability.
- Available in four models with a capacity range of up to 150 tonnes/hour
- Heavy-duty, designed for round-the-clock operation
- Convenient air volume regulation
- Low vibration, no need for extensive structural platforms
- Wear protection
Pre-Cleaning.

Drying, Paddy Handling and Storage Systems.

**Drying Systems: Eco Dry™**
Extremely gentle handling, significantly reduces thermal stresses to paddy.
- High capacity and reduced drying time through an optimised multiple-stage process
- Low heat impact on paddy, reducing losses through product breakages as a result of stress cracking
- First in-First out delivers uniform and consistent drying results
- Elimination of variations in moisture levels in tempering bins

**Paddy Handling: Conveying Systems**
Bühler supplies a wide range of transportation systems such as bucket elevators, chain, screw and belt conveyors.
- Suitable for a capacity range of up to 300 tonnes/hour
- Flexible modular system to suit every plant requirements
- Heavy-duty, stable off-track detector and speed monitor
- Designed for hygienic operation
- High product reliability with long service life


**Paddy Handling: Storage Systems**
Bühler can supply a range of storage systems to suit individual requirements; environment and conditions, steel silos or flat storages.
- Flexible configuration to suit requirements
- Suitable for both free and non-free flowing products
- Maximised storage capacity
- Reduced foundation work
Comprehensive machine and turnkey solutions.

Fully automated rice processing plant equipped with state of the art processing technology engineered to maximise yield, minimise product breakage and deliver consistent product quality.

A typical Bühler high capacity milling plant.
<table>
<thead>
<tr>
<th>No.</th>
<th>Equipment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Aspiration and conveying</td>
</tr>
<tr>
<td>2</td>
<td>Automation</td>
</tr>
<tr>
<td>3</td>
<td>Mill cleaning (Classifier and Destoner) (not visible)</td>
</tr>
<tr>
<td>4</td>
<td>Huller</td>
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<tr>
<td>5</td>
<td>Paddy separator</td>
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<td>9</td>
<td>Optical sorter</td>
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<tr>
<td>10</td>
<td>Storage bins</td>
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<tr>
<td>11</td>
<td>Weighers (not visible)</td>
</tr>
<tr>
<td>12</td>
<td>Packing equipment (not visible)</td>
</tr>
</tbody>
</table>
Cleaning Solutions.

**Separator MTRB/C with Aspiration Channel MVSH/L**
Efficiently removes both coarse and fine impurities such as straw, wood, stones, soil and sand. An aspiration channel is fitted to remove low-density particles such as dust and loose husks.
- Available in three models with a capacity range of up to 13 tonnes/hour
- Fast and easily changeable sieves, exchangeable wear parts and absence of lubrication points
- Closed machine design prevents dust and safeguards food safety

**Magnetic Separator MMUA**
The MMUA has a high magnetizing force removing metallic particles such as nails, wires and screws. For maximum detection, the MMUA is designed to ensure an even distribution of material stream.
- Available in three models with a capacity range of up to 14 tonnes/hour
- Magnets can be easily lifted out together with the separated iron parts without interrupting the product flow
- A dust-tight closed unit

**Drum Magnet DFRT**
Effective in removing ferrous metal or compounds for optimal food safety. The high capacity magnet is self-cleaning and requires minimal maintenance. The material detector can be cleaned automatically or manually by using an actuating lever.
- Available in seven models with a capacity range of up to 200 tonnes/hour
- Two lateral access doors for easier inspection
- Permanent magnets stored inside drums ensure that the magnetic force is retained at optimal level for maximum food safety
Destoner MTSC/D

Designed to meet food safety requirements, the MTSC/D efficiently removes stones and other high-density impurities such as metal and glass.

- Available in three models with a capacity range of up to 12 tonnes/hour
- Enclosed machine design for reduced dust emissions
- Sturdy design, can withstand the abrasiveness caused by paddy
- Most efficient destoner available in the industry. Double-deck models offer even better results for stones and glass removal
TopHusk™ Huller and Husk Separator DRHE/DRSD

1. Not visible in picture. Located directly behind machine, the high performance drive system with hybrid belt lowers power consumption
2. User friendly touch pad for easier operation
Hulling Solutions.

Hulling: TopHusk™ Huller and Husk Separator DRHE/DRSD
Efficient hulling and separating performance with a focus on delivering maximum yield of head rice for optimal profitability. Equipped with long roll life.
- Capacity of up to 5 tonnes/hour
- Automated pressure control
- Precise self-centering vibro feeding system for longer belt life

1. TopHusk™ Huller and Husk Separator DRHE/DRSD
2. Semi-Automatic Huller AVHE

Hulling: Gravity Paddy Separator DRTA
Excellent separating efficiency, suitable for all variety of rice. High throughput capacity but compact in size. Available with on and off control with infeed sensors for easier operation.
- Capacity range of up to 8 tonnes/hour per machine (intake)
- Easy to operate and maintain
- Enclosed machine design for reduced dust emissions
- Sturdy drive system for minimal maintenance

Width Grading: Rotosort™ Drum Grader DRGA
Incorporates a unique Bühler patented design to provide an even product distribution with high precision slot width for accurate grading even during high capacity processing.
- Modular design, with capacity of up to 2 tonnes/hour per drum (depending on application)
- Efficient adjustment of screen revolutions for optimised separation - using the gear motor with frequency converter
- Shaftless peripheral drive for easier control and changing of screens
- Cleaning brush rotates with drums for continuous cleaning
- Easy to maintain - drums can be easily removed and replaced
Whitening & Polishing Solutions.

Whitening Solutions
Our range of whitening solutions are all designed to meet every requirement on rice finish and capacity. Delivering optimum whitening performance with maximum count of head rice and yield whilst offering a low processing cost per tonne.

- A range of solutions for capacities of up to 12 tonnes/hour
- Multiple aspiration points to optimise bran removal
- Easy access to milling chamber for cleaning and maintenance
- Multiple Bühler patented features reduces broken, increases energy-efficiency and delivers a hygienic operation for maximum food safety
- Low aspiration requirement


Polishing Solutions
Bühler’s range of polishers delivers rice with a smooth, dust free and shiny surface with maximum count of head rice whilst offering an extremely low processing cost per tonne.

- A range of solutions for capacities of up to 12 tonnes/hour
- Accurate water-dosing system for precise control of water addition
- Highly effective aspiration keeps the working chamber clean
- Easy access to polishing chamber for swift cleaning and maintenance
- Hygienic and reliable operation

Polishing Solutions: DRPI Rice Pre-conditioner
An optional unit, our pre-conditioner is used to decrease bran streaks and improve polishing performance. Manufactured from stainless steel for hygienic processing.
Grading Solutions.

**Tip Separator MTRB/C-DL**
Engineered to operate with reduced dust emissions for a dust-free environment. The MTRB/C-DL also has a double-deck separator that removes tips from head rice and larger brokens.
- Capacity range of up to 7 tonnes/hour
- Enclosed machine design for dust-free plant environment
- Fast and easily changeable sieves, wear parts and absence of lubrication points

**Supersift™ Plansifter DRAA**
Highly efficient solution for classifying white rice by its kernel size and configured to adapt to requirements. Machine also decreases moisture content and temperature of output.
- Capacity range of up to 7 tonnes/hour
- Three output fractions as standard
- Sturdy design for minimal maintenance and reduced wear

**Indent Cylinders LADB**
Machine delivers high precision of separating brokens by size fraction, even at very high capacity processing. Available in different sizes and configurations, either serial or parallel drums to meet plant requirements.
- Capacity range of up to 7 tonnes per drum per hour
- Most efficient Indent Cylinder available in the industry
- Pure fractions

1. Indent Cylinder LADB single drum
2. Indent Cylinders LADB with 2 drums
3. Indent Cylinders LADB with 3 drums
Optical Sorting Solutions.

Optical Sorting: SORTEX S UltraVision™
The SORTEX S UltraVision™ is a revolution in rice sorting. Never before has so much capacity, precision, flexibility and simplicity been made available, with control over each individual defect.

Incorporates our latest developments in every aspect of optical sorting: accuracy of detection, throughput, usability, stability and hygiene to deliver the best sorting performance available in the industry.

- Highest ever Bühler capacity - available in 3, 4, 5 and 6 modules
- Patented feed system delivers an even higher capacity per chute
- New SORTEX ProSort™ operating software - only three steps away from producing export quality rice - no lengthy manual set-up and configurations
- Pinpoint accuracy with Crosshair Targeting™ - accurately targets defects from the most subtle (yellows, white bellies, pecks) to obvious (rottens, unshelled grains) defects
- Textured LED lighting™ system ensures optimum defect separation and delivers a stable and durable performance

Optical Sorting: SORTEX B
Incorporates a combination of new and improved technologies in the design of its lighting, inspection and ejection systems, the SORTEX B range offers the functionality and proven performance of the SORTEX brand.

- High capacity optical sorter, available in 2, 3, 4 and 5 modules
- For a range of sorting solutions, from high performance defect removal to everyday mainstream sorting
- LED lighting system for stable illumination
- Flexible configuration with up to 3 different divisions enabling millers to sort head rice and brokens on different modules using the same sorter
- Product-tracking and Automatic-calibration delivers consistent performance and reliable operation
Milling.

Weighing, Blending & Bagging solutions.

**Blending: Automatic Flow Balancer MZAL**
The MZAH/L is a gravimetric proportioning solution for accurate blending. Features a constant throughput rate.
- Available in four models with capacity range from 0.1 to 100 tonnes/hour
- Automatically maintains a pre-specified throughput rate
- Integrated system for monitoring low levels and proportioning data
- Easy and fast weight alignment
- Suitable for buildings with low height requirements

**Weighing: Automatic Hopper Scale Tubex MSDM**
The MSDL/M is an automatic hopper scale with a wide range of capacities - the ideal solution for precise final products and by-products weighing.
- Available in six models with capacities of up to 56 tonnes/hour
- Machine is designed for reduced dust accumulation
- Can be integrated into automation systems

**Bagging: Fully Automated Bagging Solution**
Suitable for paper, plastic and textile bags, this bagging solution offers a fast and simple bag size changeover with a completely integrated scale control system.
- Reduce manpower costs
- User-friendly operator interface
Aspiration Systems.

**Fans**
Bühler offers a wide range of high quality fans to ensure the optimal performance of our machines.
- Capacity tailored to customer’s requirements
- Energy-efficient to ensure low operating cost
- Ensures constant air pressure and volume

**Airlocks**
Our range of airlocks are designed to ensure optimal product discharge resulting in an excellent level of sanitation - hygienic plant operation.
- Applications: dust, flours, bran and husk
- Capacities of up to 200 tonnes/hour
- Sturdy and robust design

**Intermediate Separator MANB**
The Intermediate Separator MANB efficiently removes light particles such as husks and dust, ensuring minimum disruption to the milling process, whilst protecting the ducting.
- Easy to install
- Efficient removal of light particles; husk and dust
Filters

Wide range of high and low pressure air jet-filters ensures a dust-free processing environment.

- Applications: dust and bran removal
- Available for air volume capacity of up to 600 m³/min per unit
- Electronic pneumatic purging system
- Easy sleeve replacement
Automation and Process Control.

Control your business, shape the future.

**Electrical and Automation Solutions**

Bühler Automation Systems deliver ease of operation in processing plants. Processors can opt to incorporate a modular or fully automated system to control and monitor production, improve plant processes including its efficiency and machine performance.

- Maximum flexibility - choice of modular or fully automated plant
- Choice of features include preventive maintenance and quick fault diagnosis for minimum downtime, product traceability and energy monitoring
- Easy-to understand system with alarm management and remote access
- Worldwide 24/7 service support with various choice of service packages

**Engineering, Technology and Project Execution**

Providing a complete solution including equipment, technology, engineering services and execution is one of the key factors of our success. Our technologists and engineers have the process know-how and local in-depth knowledge to advise on how to fully utilise your processing plant to the fullest.

- Professional, process engineered plant design for continuous and trouble free operation
- Execution implementation in shortest time as planned
- Optimum routing of ducting, spouting and electrical cabling
- Plants designed to International standards with both food and employee safety in mind

**Research & Development Support**

Bühler’s leadership in rice processing stems from our continuous research, development, equipment technology and consultation services. We invest in the future, developing the latest solutions from our world-class research facilities to give our customers the competitive edge.

- Worldwide food and nutrition technologists
- Bühler research facilities are located in major rice processing countries
- Bühler Competence Centres offer application trials and customer visits
- Research and Development in cutting-edge technologies
Maximising added value through deep processing.

Bühler By-Product Processing
Bühler’s research and development programs work to deliver new applications and cutting-edge technologies. By-product processing is one such example. A complete range of solutions for stabilising bran and processing broken rice into rice flour, reconstituted rice and fortified rice, developed by Bühler offer customers maximised returns from raw product.

Rice flour
Bühler’s unparalleled expertise in flour milling brings significant return on investment for processors. Our extensive research into mill grinding has enabled us to offer complete grinding solutions which include equipment, plants, processes and automation engineering to provide consistent product quality and precise granulation whilst maintaining maximum hygiene.

Bran Stabilisation
Bühler delivers a full range of equipment and solutions to preserve rice bran, prolonging its shelf life to up to six months. The process involves deactivating the enzymes to prevent free fatty acids from decomposing. This Bühler process also makes bran and germ palatable and tastier.

Reconstituted Rice
Reconstituted rice uses cutting-edge technology to transform by-products such as broken rice into new grains whose appearance is remarkably like that of natural rice. This process requires the know-how and state-of-the-art technology. Bühler’s renowned success in this field is delivered through patented processes and equipment, applied at every stage of the processing line; grinding, blending, conditioning, extrusion, drying and sifting.
Rice Fortification: NutriRice™

Bühler’s NutriRice™ is a reconstituted rice, fortified with vitamins and minerals with properties such as colour, form, size, texture, cooking characteristics and cooking time determined by individual requirements. It is a patented production process and technology used successfully in the rice processing industry all over the world.
2. Image of fortified rice, showing no difference to regular polished rice.