Industrial Atta flour production with PesaMill™
Industrial Atta flour production.
For a higher yield and improved hygiene.

The Atta process with PesaMill™:
a better alternative to traditional stone mills.

Bühler’s Atta process with PesaMill™ is the first industrial process technology for the production of Atta flour with a completely authentic taste under perfect hygienic conditions. With this fully integrated all-round process, just one PesaMill™ can replace as many as twenty traditional stone mills – with a whole load of further advantages: higher yield, reduced energy consumption and the possibility of producing several types of flour qualities in the same plant.

Maximum food safety.

The use of steel rollers rather than stones for milling means that hygiene standards are very much higher. Contamination by stone abrasion or chemicals becomes a thing of the past.

Protected investments.

Thanks to innovative technology and a robust design, backed up by the highest standards of manufacturing quality, the Bühler Atta process with PesaMill™ guarantees a long service life and the best possible protection for your investment.

Lower energy consumption.

Thanks to the effective, integrated and energy-efficient process technology, by using one PesaMill™ rather than a lot of isolated traditional stone mills you can save up to 10% of the energy costs.

Reduced operating costs.

In traditional stone mills, by contrast, the millstones need to be redressed or replaced frequently. Hence downtimes are minimized, productivity is raised and the system can operate reliably 24/7. Following a power outage, the machine can resume operations immediately – without any loss of product quality.

Greater flexibility in production.

PesaMill™ provides the basis for flexibly adjusting the properties of the flour to individual requirements. Starch damage, water absorption and granulation can be simply and swiftly adjusted for different types of flour qualities (e.g. North Indian Atta, South Indian Atta etc.).
Holistic processing techniques.
For a perfect result.

For the efficient production of Atta flour, a seamless processing technique has been specially developed – with the PesaMill™ high-compression mill as the key component of the system. The process includes every link of the processing chain: from pre-cleaning and cleaning of the wheat to milling and packaging and quality control of the flour. The Atta process is based on an effective circulation system. This increases the yield by around 1.5% compared to traditional stone mills. That part of the product which has not yet reached the desired size is simply returned to the milling process for further processing. The seamless integration and Atta-specific design of all components guarantees reliable functionality, the highest standards of product quality and food safety as well as maximum efficiency.
Integrated machines.
For an efficient overall process.

The Atta process relies on highly efficient and ideally coordinated machine components, from the cleaning of the raw material to the packaging and quality control of the finished product. The end-to-end automation of the process overall increases productivity, ensures consistent product quality and reduces energy consumption.

The key to the system: PesaMill™
As the central component of the process, the PesaMill™ high-compression mill has been specially developed to meet the requirements of Atta flour production. The powerful drive combines high throughput with energy-efficient operation. The frequency converter ensures the machine restart following a power outage without any loss of product quality. The machine has been specially designed to meet maximum hygienic standards.

Milling.
In order to achieve the best possible milling performance, Diorit roller mills are used – resulting in a consistently effective and thorough milling of Atta flours.
Sifting.

An Arenit plansifter is responsible for the efficient sifting and sorting of the product. The Arenit is notable for its exceptionally robust frame structure and low energy consumption.

The NOVA generation of sieves is distinguished by a greater sifting area and optimal utilization of space. That means maximum throughput, while a minimum of space is needed. Ultra-dynamic acceleration increases the intensity of the sieve motion, consequently improving the sifting effect.

Separation.

The AirEco Sifter is a compact solution for separating bran particles from semolina. The result is an optimized color of the Atta flour. The integrated air-recycling system reduces the energy consumption to a minimum. The compact design and the complete emptying fulfill highest hygienic standards.

The advantages of the Atta process with PesaMill™:

- Higher yield
- Reduced energy consumption
- Improved food safety
- More flexible production processes
- Less maintenance required
- Lower operating costs
Proven performance and quality.  
For successful Atta flour production.

Training courses and tests at the Academy.

As long ago as 2010, Bühler India opened its Test and Application Centre in Bangalore as a leading institution for product and process development in the Grain Milling sector. Being equipped with the most modern machinery, along with integrated automation and control systems, it is also an ideal venue for practical training courses aimed at employees.

The Test Centre includes a complete Atta processing system with PesaMill™. This offers Atta producers a unique opportunity of milling their own Atta wheat with individual parameters, and so checking out the effectiveness of the process overall and convincing themselves of the consistently high product quality.

CFTRI has confirmed the supreme quality.

Along with the PesaMill™, Bühler’s process technology guarantees supreme product quality and an authentic experience of taste, which is in every way the equal of products made with the flour from traditional stone mills. Comprehensive quality tests by the independent Central Food Technology Research Institute (CFTRI, based in Mysore, India) have given documentary confirmation of this.

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<thead>
<tr>
<th>Process parameter*</th>
<th>min.</th>
<th>max.</th>
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<tbody>
<tr>
<td>Starch damage AACC</td>
<td>%</td>
<td></td>
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<tr>
<td>Water absorption dry base</td>
<td>%</td>
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<tr>
<td>Residual moisture</td>
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<td>Temperature</td>
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<tr>
<td>Granulation</td>
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<tr>
<td>Yield</td>
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* Raw material: Hard/semi hard wheat, 10.5% – 12% Protein, Ash content < 1.75%
Tailor-made automation and service.  
For safe and unproblematic operation.

Automation means reliable control of product quality.

As a market leader and process specialist, Bühler has comprehensive practical experience in the planning, commissioning and servicing of efficient automated solutions. Bühler automated systems improve system performance and availability, result in measurable improvements to efficiency and productivity, reduce energy consumption, simplify servicing operations and ensure that raw materials and end product can be traced all the way along the production chain.

Systems and production processes in top form.

To ensure unproblematic operation of the Atta process with PesaMill™, Bühler offers both individualized services and comprehensive all-round service solutions. More than 1000 highly trained Bühler service technicians in over 140 countries worldwide advise and support our customers on site – with customized service contracts, fast repair and support services and innovative modernizations or retrofits.

A selection of our services:

- **Retrofits**
  - Up-to-date technology and efficiency standards
  - Low operating costs
  - Longer life cycles
  - Fast adjustment

- **Repairs**
  - Short response times
  - Reduced downtimes
  - 24/7 global hotline

- **Wear and spare parts**
  - Longer machine life cycles
  - Maximum operating reliability
  - Bühler warranty

- **Consulting**
  - Process optimization
  - Productivity increases
  - Higher energy efficiency

- **Training**
  - Training and continuing education in Training Centers across the world

- **Maintenance**
  - Minimized downtimes
  - Top reliability and availability
  - Scheduled machine servicing