

High Performance Horizontal Mixers



Versatile Technology for Individual Use In Industry

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GRIESER's high performance horizontal mixers can be used in various applications ranging from dry, pourable solids to the processing of pasty, highly viscous masses. In addition to the classic mixing task they are also suitable for wetting, drying and reaction processes with optional pressure and temperature control. They manage the most difficult of tasks, such as the homogeneous mixing of different grain sizes and bulk densities, or the mixing of very small mixing ratios of 1:100,000 and smaller.

In principle, there are three mixing processes which are suitable for both batch and continuous operation:

Push Mixer

Slow-running mixers are used for particularly sensitive and for large mixtures.

Throw Mixer

Less sensitive products are mixed in the medium speed Throw mixers. These are mostly winged mixing tools, which draw the mixture from the contents and distribute it in crossed trajectories along the mixing axis.

Ring Layer Mixer

The mixture forms a closed ring layer along the inner wall of the mixing vessel as a result of the high mixing speed. The mixing effect is caused by the shear within the ring layer, which is caused by the acceleration of the mixing tools and the braking friction of the vessel wall.

The reliable, safe and economic operation of our Horizontal Mixers in numerous industrial fields proves the technical quality of our machines and the flexibility of their application.

Together with our customers across various industries we are constantly working on new technologies and looking to steadily improve our existing products.

We will find the right solution for your requirements, whether it be a standard or customized configuration - from a single state-of-the-art machine to a fully integrated turnkey solution.

We are pleased to advise you.

**Designed and
made in Germany**

System Benefits

According to the loading range of the mixture, various mixing tools may be used. The machines can be deployed in various product-friendly modes from working with very sensitive goods through to high-intensity mixing processes. Other system benefits include:

- Depending on product requirements, the system can be set up with the appropriate mixing tool and speed for the mixing, disagglomeration, dispersing, kneading, dissolving, wetting, granulating, gassing, drying, or speeding up of chemical reactions.
- Ideal for mixing of solids with different particle sizes and bulk densities.
- Available for batch or continuous operation.
- Optional vacuum operation for complete degassing of the product or as a reactor for pressure and temperature-guided processes.
- Upon request, temperature controlled mixing tools, double jacket and double walls for efficient heat transfer.
- High wall effect mixing tools and dead space free mixing and emptying zones.
- Easy and quick cleaning through smooth surfaces.
- Operationally safe and robust construction.
- Easy maintenance and repairs.
- Safety standards in accordance with the latest European Machinery Directives and safety standards.



Horizontal...

Applications

The machines have various applications in the building, chemical, chemical, plastics, dental, paint and lacquer as well as in the pharmaceutical industrie.

Typically used for the production of:

- Free-flowing powders, granulate materials
- Putty and sealing compounds
- Adhesives and sealants
- Casting and filling compounds
- Colour batches
- Animal feeds, gelatine masses, etc.



...Mixers

Your Specialist for Mixing and Grinding Technologies

Versions

- On request with additional knife mills or rotor-stator systems to accelerate the mixing process as well as to crack agglomerates.
- Mixing vessels in different materials and different surface qualities:
 - Laboratory version up to 20 litres with either steel or glass vessels and feed hopper.
 - 5 to 1,000 litre versions with an overhung shaft for one-sided opening and easy cleaning.
 - 20 to 10,000 litre version with shaft bearing on both sides. Thrust is neutralized by symmetrical loading and emptying.
- Individual discharge systems with manual, pneumatic or hydraulically operable emptying flap.
- Optional vacuum system depending on application with strainer, cyclone, fine filter or condenser.
- On request with automatic vessel cleaning (CIP)
- Optional dust filter with cleaning through the use of compressed air or nitrogen, as well as automatic dust return to the product space if required.
- Depending on requirements Ex -protection available for all zones according to ATEX 94/9/EG.





Laboratory

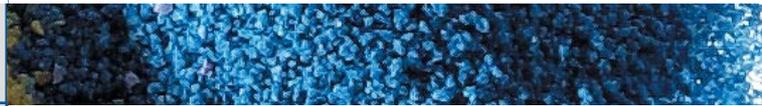
GRIESER has a well equipped laboratory at its Lampertheim site in Germany.

Here we offer the implementation of mixing experiments and the optimization of industrial processes. The results can be transferred to full-scale under real production conditions. Over decades we have established an extensive know-how in the areas of mixing and milling.

Our customers have the opportunity of borrowing a machine from our lab for a certain period of time, in order to study the advantages of our machines under their production conditions.



Horizontal...



...Mixers

Operation and monitoring

Safety and ease of use are of great importance to us.

- Highest safety through the covering of all rotating parts.
- Display of process parameters
eg. power, speed, pressure, temperature, etc.
- Freely configurable machine monitoring
with optional remote analysis for
e.g. speed, torque, vibration,
bearing-temperature, etc.
- Step-less speed control through use of
frequency converters.
- Programmable mixing times on demand.
- PLC control with recipe management and
connection to storage management systems.

Service

We are your reliable, fast and professional partner for a variety of services and many companies are provided with maintenance services in six monthly or annual intervals. This also applies to any machines not manufactured by GRIESER.

The results are documented in accordance with DIN ISO 9001:2008. With this methodology any necessary repairs are spotted on time and cost as well as downtime can be kept at a minimum.

Should an operational problem occur, we will be on hand to fix it within 24 hrs (within a 1,000 km radius). We supply all kinds of spare parts, including those from other manufactures. In addition we are also specialised to refurbish and rebuild your existing machinery.



**A professional,
fast and reliable partner for the**

- **Paint and lacquer industry**
- **Adhesive and sealant industry**
- **Building chemicals industry**
- **Chemical industry**
- **Pharmaceutical industry**
- **Food industry**

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