

Gyraton® mixer type GM

Homogenise large quantities of bulk material up to 70 m³ economically. Energy saving due to low drive power. Precise mixing for any type of bulk material: dry, moist or wet, free-flowing or poor-flowing, pasty, time-setting, ...

Mixing process and machine design

The mixing spiral rotates and conveys the mixing goods upwards. At the same time, the lower end of the mixer shaft moves on many circular paths over the base of the calotte dome bottom. Thanks to the superimposed movements, all sections are effectively mixed. Highest mixing qualities are achieved.

Usability

Mixing of all types of dry, moist or pasty bulk materials. The sizes are freely selectable from 10 m³ to approx. 70 m³. Mixing is particularly gentle with minimal energy input.

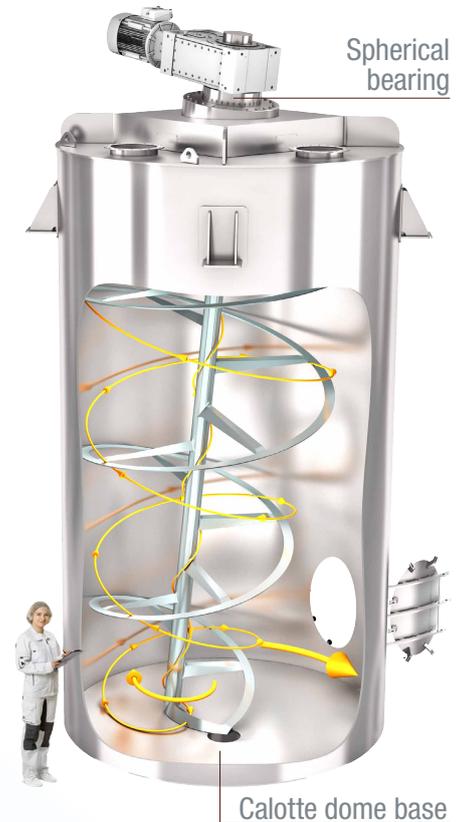
What distinguishes the Gyraton® mixer from other large mixers?

A mixing tool with a fixed bearing normally requires a minimum speed of approx. 4 to 7 rpm in order to effectively mix the center of the mixing chamber. If the rotational speed is reduced further, the mixing process would be inefficient. Vertical single-shaft mixers are therefore generally smaller than 15 m³.

The Gyraton® mixing tool ensures high mixing activity in all areas. The mixing tool constantly shifts its pivot point. The colour intensity indicates the flow velocity and the intensity of the mixing.

Quick commissioning, easy transportation

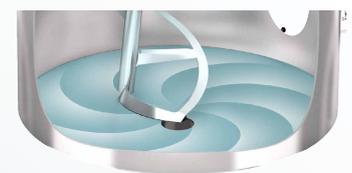
Gyraton® mixers are fully assembled at the amixon® factory to undergo quality control. The mixer is delivered almost ready for operation, including the drive, on a low-loader and brought into the building. Only minor work is required at the customer's premises.



Two small drive motors are enough to mix the entire batch of up to 70 m³ precisely and gently.

amixon® manufactures Gyraton® mixers to suit your individual batch size in 1 m³ steps. This table indicates a rough matrix for dimensioning the mixing chamber

Net volume	m ³	10	20	30	40	50	60	70
Diameter	m	2,8	2,8	3,17	3,17	3,45	3,45	3,63
Height	m	2,03	4,06	4,75	6,34	6,69	8,02	8,45



Gyraton® mixer: The dark areas indicate high mixing activity.

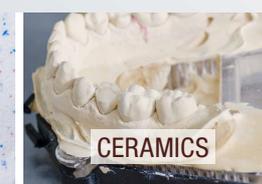
Further information can be found on our website:

Interesting questions and answers about the Gyraton® mixer

Continuous mixing of powders: Pipe flow versus boiler flow



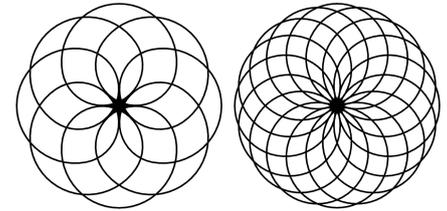
Mixing unit rigidly mounted: The center receives less flow. Therefore, the rotation frequency should be more than 4 to 7 rpm.



How does the Gyraton® mixer benefit the customer?

In principle, precision mixing with vertically mounted helix mixing tools is nothing new. amixon® can look back on a 40-year tradition. Nevertheless, we have developed the Gyraton® mixer for an important market niche: when large quantities of products such as spices, tea, coffee, rare earths, ores, metal breeze, battery masses, metal powders, carbon masses, ceramic masses, nanostructured mass products, plastics, stabilizers, thickeners have to be homogenized precisely, gently and economically!

- ✓ Gyraton® always achieves ideal mixing qualities that cannot be further improved in practice. This happens a) quickly with increased drive power or b) slowly with minimum energy input and rotational frequency.
- ✓ Gyraton® can be used flexibly. The mixing process is particularly gentle at minimum speed. This preserves energy resources as well as the particle structure of the bulk goods.
- ✓ The Gyraton® mixer is an all-rounder for heterogeneous material compositions: Coarse and fine particles, different bulk densities, different flow properties, different moisture contents. The goods may be dusty, moist or pasty, dust-explosive or flammable. Problems such as lump formation and product solidification can be overcome.
- ✓ The Gyraton® mixer can also reliably discharge poorly flowing products. The ideally mixed goods can be discharged almost completely using ComDisc®.
- ✓ Saving of encased space. The Gyraton® mixing chamber is compact and space-saving. It requires only a third of the height of a conical screw mixer.
- ✓ This way, the mixing goods only have to pass a third of the height to be conveyed into the mixer. This too translates into permanent energy savings.
- ✓ The filling level in the Gyraton® mixer can vary between nominal filling and approximately 5 % filling level.
- ✓ The Gyraton® mixer meets the highest hygiene requirements. It is irrelevant whether the cleaning process takes place wet or dry.
- ✓ Optionally, the Gyraton® mixer can also be operated continuously. This means that quality fluctuations can be gently balanced out during ongoing production. Selecting a higher filling level for the Gyraton® mixer increases its efficiency. It can also be loaded batch-wise. The discharge of the product can take place continuously or in a stop-and-go process.



The mixing tool of the Gyraton® mixer allows many movement variants.



The base has the shape of a dome segment. The mixing goods are mixed without dead space. If desired, they can even be completely discharged using ComDisc®.

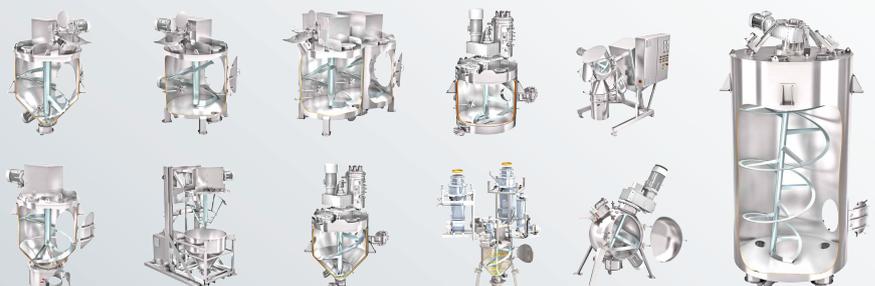


The Gyraton® test mixer is suitable for batches of up to 3 m³. Gas-tight, hygienic, universally applicable.

A visit and the performance of trials at amixon® ensure a high gain in information and knowledge. You are welcome to bring your problematic products with you. We are sure that you will achieve the highest mixing qualities. the highest mixing quality. The amixon® team is looking forward to your visit and will provide you with a lot of know-how.



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amixon® manufactures high precision mixers, vacuum mix-dryers, synthesis reactors and granulators with maximum fabrication depth. All components of the amixon®-mixers are made in Germany. The production of the machines takes place exclusively in the amixon®-factory in Paderborn, Germany.

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