

premium line

Planetary Mills



premium line

- The new planetary mill generation
- Revolutionary in performance, operation and safety
- The reference class

milling **sample**
 preparation

planetary ball mills

for your lab

FRITSCH

Concept and realisation

The Concept

FRITSCH, the market leader in planetary mills, considered the ever increasing demands of the sample preparation laboratory and decided to expand the existing classic line of FRITSCH planetary mills. FRITSCH now offer the **premium line** - a new generation in the planetary ball mill range. With this advanced technology, we meet even the highest demands of the current requirements but also take a step into the future.

The Realisation

The new planetary mill generation FRITSCH **premium line** is revolutionary in all its features and represents the new reference class in the sample preparation laboratory.

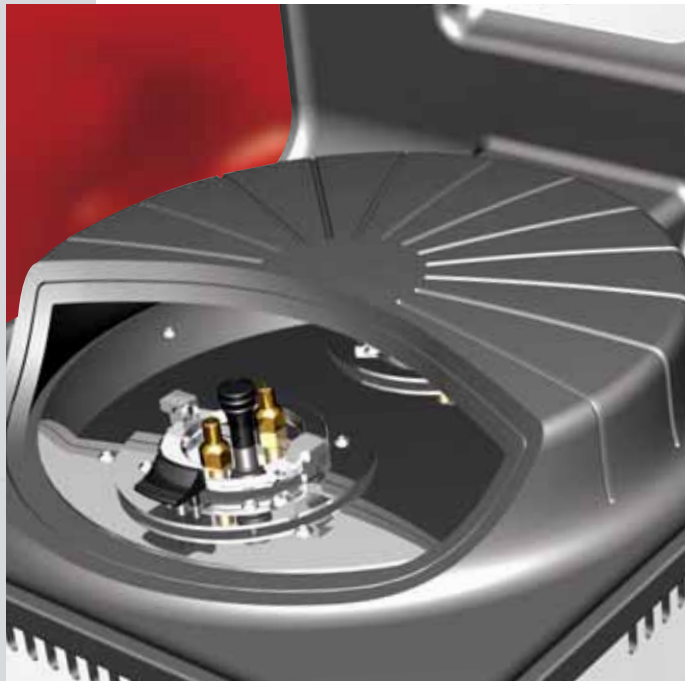
- Higher performance
- Improved operation
- Greater safety

For the first time, planetary mills are as easy and safe to operate as laboratory centrifuges. Grinding bowl and lid form a unit already outside the mill and they are completely anchored in the planetary mechanism and securely locked.

This allows speeds up to 1100 rpm to be achieved for the first time. The associated grinding energy leads to finer grinding results in a shorter time.

The grinding chamber opens and closes automatically. The grinding bowls position themselves for removal and charging. A parameter check identifies and corrects operating errors. The grinding tools used are also automatically detected and the power optimised.

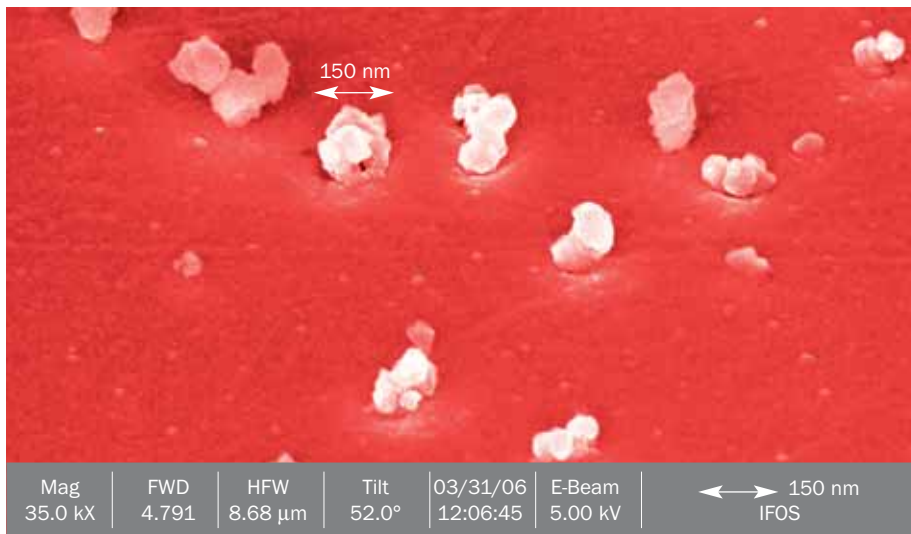
Operating modes, performance data and operating options are displayed on the central touch screen display. The user-friendly menu structure offers multi-lingual information and indicates maintenance intervals and functioning faults.



opened grinding chamber with grinding bowl

sample
preparation

high
performance
premium line



Size reduction down to the nano range

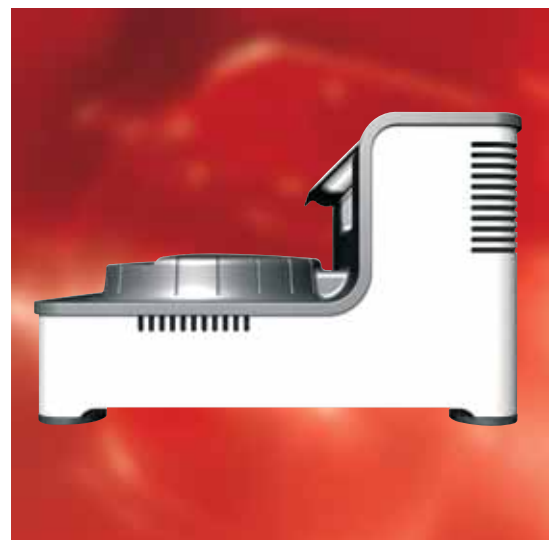
The Technology

premium - performance

- Maximum grinding energy thanks to speeds up to 1100 rpm
- Astonishingly short grinding time = rapid results
- Acceleration equal to 95 times earth gravity
- 250% higher energy application than conventional planetary mills
- Size reduction down to the nano range
- Exchange of the grinding bowls in seconds

premium - operation

- Grinding bowl mount with **SelfLOCK** – one-hand operation without additional locking elements
- Automatic opening and closing of the grinding chamber
- Bowl positioning to enable simple removal
- Automatic detection of the grinding bowls via RFID
- Touch screen
- Programmable start times
- USB, Bluetooth and Ethernet



premium line

premium - safety

- Unique **SelfLOCK**-safety concept – embedded grinding bowls
- Safe grinding bowl locking
- Safety de-activation in event of imbalance
- Faulty operation not possible
- Parameter check before every grinding
- Low noise level
- Automatic compensation of imbalance in the mono mill

nano grinding
WWW. rapid results
fritsch.de

Application and accessories

Field of Application

Classical planetary mills are the universal tools for sample preparation in the laboratory. They are suitable for rapid, loss-free fine-grinding of laboratory samples.

The grinding may take place dry, in suspension or in an inert gas atmosphere. Soft to hard, brittle and fibrous samples can be ground. Planetary mills are also used for mixing and homogenising of emulsions or pastes and in material research for mechanical activation and alloying.

The Instruments

The following **premium line** models are offered:

- Planetary Mill pulverisette 5
2 / 4 grinding bowls, 150 ml – 500 ml
- Planetary Mono Mill pulverisette 6
1 grinding bowl, 150 ml – 500 ml
- Planetary Micro Mill pulverisette 7
2 grinding bowls, 20 ml – 80 ml

Accessories

premium line grinding bowls

The newly developed grinding bowls with **SelfLOCK**-technique are part of the **premium line** concept. After putting on the lid, the grinding bowl is already closed and locked even before inserting into the mill. When inserting the grinding bowl into the grinding bowl holder, the grinding bowl snaps into place without manual locking. Pressure changes caused by temperature during the grinding are avoided. 20, 45 and 80 ml as well as 150, 250 and 500 ml grinding bowls have all the same inner diameter. Grinding results with different bowl sizes can be compared directly.

- Grinding bowls with **SelfLOCK**-technique
- RFID chip with programmed grinding bowl parameters
- Grinding bowl with lid as unit
- Grinding without pressure changes
- Special lid for pressure-tight grinding with all grinding bowls
- Easy opening without tools
- Steel casing with label field
- Clear labelling (material and volume)



grinding bowls with **SelfLOCK**-technique



special lid for pressure-tight grinding

EasyGTM

EasyGTM is a special grinding bowl lid. With this active gas pressure and temperature measurement system, the process parameters of temperature and pressure in the grinding bowl are processed online in the control unit of the mill. The mill stops automatically if the limit temperature or -pressure are exceeded.

