

THE COMPACT PRE-CRUSHER

- Very fast, uniform comminution
- Feed size up to 95 mm, final fineness 1-15 mm
- Extremely fast and easy cleaning
- · Extremely robust even for very hard materials
- Especially simple crushing jaw removal
- Safe and dust-free operation
- Adaptable crushing jaw kinematics for higher final fineness

The compact FRITSCH Jaw Crusher PULVERISETTE 1 *classic line* is the ideal instrument for fast and effective pre-crushing of hard and very hard brittle materials – even ferrous alloys are no problem for this instrument! Choose according to your tasks: two different models for various feed sizes and sample quantities are available.

The powerful comminution of the sample takes place in the Jaw Crusher under high pressure between one fixed and one movable crushing jaw in an enclosed grinding chamber. The final fineness is easily set from the outside with the 10-stage adjustable gap width between the crushing jaws. The ground sample automatically falls downward – into a drawer for batchwise comminution or via a chute into a larger collection container for continuous operation or directly into a FRITSCH Disk Mill PULVERI-SETTE 13 *classic line* for further comminution.



Saves time and energy: **The especially simple crushing jaw removal** takes only seconds and requires only two hand motions to ensure particularly simple cleaning – fast and thorough.



The especially **simple cleaning** of the FRITSCH Jaw Crusher PULVERISETTE 1 *classic line* saves time and offers effective contamination protection for your samples.

The funnel of the FRITSCH Jaw Crusher PULVERISETTE 1 *classic line* is particularly **accessible, quickly and easily filled** even with larger sample quantities and **easy to clean.** Its design enables the crushed material to be automatically conveyed into the crushing chamber – blockages are practically impossible.

> A practical **plexiglas cover** for optical inspection of optimum material flow.

> For **simple and fast releasing** of the fixed crushing jaw. The crushing jaw can be removed for cleaning quickly and easily with just 2 hand motions.

Gap width adjustment for setting the distance between the crushing jaws – and therefore **setting the final fineness.**

The **kinematics** – in other words, the movement between the movable and fixed crushing jaws – of the FRITSCH Jaw Crusher PULVERI-SETTE 1 *classic line* can be easily adapted to the breaking characteristics of the respective sample: Select the upward and downward movement of the movable crushing jaw relative to the fixed one in order to receive a sample in a narrow particle size range. For a fast comminution, please select the nearly circular motion.

The practical **collecting vessel** for batchwise comminution is particularly easy to remove.



View of the grinding chamber with the housing removed

Especially **safe and dust-free:** The enclosed grinding chamber prevents users from reaching inside and ensures a safe and dust-free operation of all moving parts. An integrated connection makes it very simple to combine the instrument with a dust exhaust system for automatic removal of the fine dust arising during grinding. The dust exhaust system is also very useful when cleaning the grinding parts.





OUR SUGGESTION

Double the service life of your crushing jaws – they can be easily turned around on the FRITSCH Jaw Crusher PULVERISETTE 1 *classic line*.

Select the right material combination!

The crushing jaws and lateral support walls of the FRITSCH Jaw Crusher PULVERISETTE 1 *classic line* are available in 6 different materials in order to avoid undesired contamination due to material abrasion. The standard version is equipped with fixed and movable crushing jaws as well as lateral support walls made of tempered steel.

Normally, crushing jaws and support walls of the same material are used. Since the lateral support walls are subject to low stresses, however, the standard lateral support walls made of tempered steel can often be retained.

MATERIAL DATA FOR CRUSHING JAWS AND SUPPORT WALLS

Material	Main component of the material*	Abrasion resistance	Use for materi be ground
Tempered steel	Fe – Cr	Good	Brittle, very ha
Stainless steel	Fe – Cr – Ni	Fairly good	Medium-hard, I
Chromium-free steel	Fe	Good	Medium-hard s
Manganese steel	Mn – Fe	Good	Hard, brittle sa
Hardmetal tungsten carbide	WC	Very good	Hard, abrasive samples
Zirconium oxide ¹⁾	ZrO ₂	Good	Medium-hard, I samples, iron-f
Aluminium	Al	Fairly good	Medium-hard,

ittle, very hard samples edium-hard, brittle samples edium-hard samples ard, brittle samples ard, abrasive amples edium-hard, brittle amples, inon-free grinding edium-hard, brittle

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At www.fritsch.de, you can find the corresponding element analyses with detailed information about the materials.

¹⁾ Crushing jaws of zirconium oxide are only suitable for crushing ceramic

materials, minerals, etc. and never for hard-tough samples, such as metals.

RoHS (Restriction of the use of certain hazardous substances)

For the comminution of RoHS samples – such as for the XRF analysis – crushing jaws and support walls made of chromium-free steel are particularly well suited.

Iron-free pre-crushing

For completely iron-free pre-crushing of medium-hard brittle samples, for example in the ceramics industry, we can equip your FRITSCH Jaw Crusher PULVERISETTE 1 *classic line* with crushing jaws made of zirconium oxide, lateral support walls in zirconium oxide or aluminium, and with a special PVC funnel. So you will have absolute protection against iron contamination, such as for dental ceramics.

Steel crushing jaws with a grooved surface

If required, we can equip your PULVERISETTE 1 *classic line,* model II, with fixed and movable crushing jaws in steel with a grooved surface, which have a different influence on particle shape and particle size distribution.

IRON-FREE GRINDING

For iron-free grinding, use the practical PVC funnel.



TECHNICAL DATA

Electrical details Model I, 400 V/3~, 50-60 Hz, 1450 watt Model I, 230 V/1~, 50-60 Hz, 1570 watt Model I, 115 V/1~, 50-60 Hz, 1900 watt Model II, 400 V/3~, 50-60 Hz, 2780 watt Motor shaft power in accordance with VDE 0530, EN 60034 Model I, 1.1 kW Model II, 2.2 kW Weight Model I, net 177 kg, gross 202 kg Model II, net 205 kg, gross 230 kg Dimensions w x d x h Model I and model II, bench top instrument 40 x 80 x 80 cm Packaging w x d x h Model I and model II, wooden case 90 x 75 x 90 cm Emissions value of workplace according to DIN EN ISO 3746:2005 Approx. 85 dB(A) (depending on the material to be crushed)
 400 V/3~
 230 V/1~
 115 V/1~

 01.5030.00
 01.5020.00
 01.5010.00
Order no. Model I Model II 01.7030.00







Powerful: Coarse basalt rock crushed by the PULVERISETTE 1 *classic line* (model I) at gap position 2 to the final fineness shown in the collecting vessel on the right.

APPLICATION EXAMPLES

Mining and metallurgy	Niobium-titanium, ferrovanadium, chrome vanadium, tungsten carbide, ores, coal, slag, coke	
Chemistry	Wide variety of various raw materials	
Geology and mineralogy	Granite, basalt, barite, silicates and other rocks	
Glass industry	Frits, glass, raw materials	
Ceramics industry	Dental ceramics, steatite, fire-clay, sintered ceramics, electrotechnical porcelain	
Rocks and soils	Bauxite, clinker, quartz, concrete	

FACTS AND ADVANTAGES Model I resp. model II Working principle Pressure Bearings Needle and spherical roller bearings Instrument with fixed and movable crushing jaw and lateral support walls of **Standard equipment** tempered steel **Optimal for material type** Hard, medium-hard, brittle Max. feed size (depending on the material) 60 mm resp. 95 mm Min. sample quantity 20 ml Max. continuous throughput 140 kg/h resp. 200 kg/h (depending on material and gap width) **Final fineness** 1 – 15 mm Feeding Batchwise/continuous **Grinding parts** Fixed and movable crushing jaws **Eccentric oscillations** 308 movements/min CE mark Conformity Guarantee 2 years