

Cutting Mills



IDEAL FOR

PLASTICS AND TEXTILES
AGRICULTURE AND FORESTRY
ENVIRONMENT
ROHS
ANALYTIC
CONSTRUCTION MATERIALS
CHEMISTRY
FOODSTUFFS

CUTTING MILLS

FRITSCH CUTTING MILLS – FAST, SAFE, SIMPLE

In addition to their unmatched simple and quick cleaning, FRITSCH Cutting Mills offer a number of additional advantages which distinguishes them others. This makes them simpler to operate, longer-lasting and safer – and makes your work much easier.

FRITSCH patent Only with FRITSCH Cutting Mills it is possible to lift open the entire top part of the housing as well as the closing lid – in fact, the lid can be completely removed.



Unique grinding chamber geometry: The grinding chamber in FRITSCH Cutting Mills is designed with minimal dead space and progressive cutting geometry between the rotor and the fixed knives – for faster and simpler operation.



FRITSCH patent FRITSCH Cutting Mills P-19 and P-25 incorporate a rotor with double cone bearings – on the shaft and in the lid. This ensures stable running, minimal wear and prolonged service life for your mill. The P-15 model also has a double rotor bearing.



FRITSCH patent Particularly fast and easy-to-use, the practical FRITSCH sieve cassette automatically ensures the optimal distance to the rotor.

YOUR ADVANTAGES WITH FRITSCH CUTTING MILLS

- **Especially simple operation for fast work**
- **Unmatched ease of cleaning thanks to patented quick opening facility**
- **Optimum airflow for particularly fast size reduction and secure protection against clogging**
- **More stable running and low wear due to the patented double cone bearing of the rotor**
- **Exceptionally long service life through use of replaceable and fixed knives**

With the FRITSCH standard funnel free-flowing bulk solids as well as straw, films or similar materials can be inserted at full length.

NEW: Both ends of the plunger of the funnel for long and bulk solids can be utilised: the small end for adding of long goods and the wide end for bulk solids.



The rotor of the FRITSCH Cutting Mills can be removed easily without tools and even turned by hand while the mill is open for faster cleaning.



PULVERISETTE 19

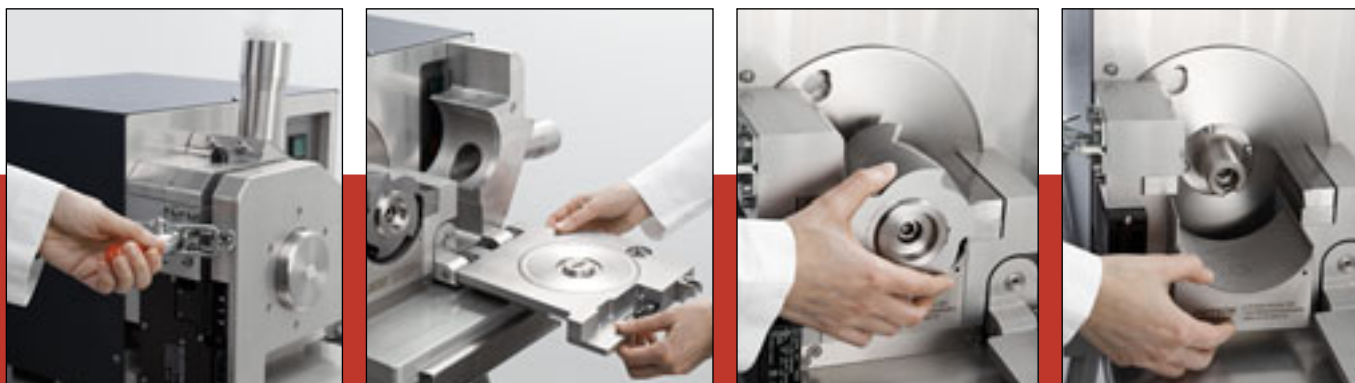
FRITSCH patent Only FRITSCH Cutting Mills offer the extra-powerful FRITSCH Cyclone separator, a patented combination of Cutting Mill and sample exhauster.

With the large FRITSCH-filter, the optimised FRITSCH-airflow ensures a particularly high air throughput in the grinding chamber, speeding up the comminution process and effectively protecting against clogging.

Especially safe: The FRITSCH safety circuit in the collecting vessel ensures that, when opened, the rotor is immediately stopped by a motor brake and prevents starting of the mill while the drawer is open.

UNMATCHED EASE OF CLEANING!

Available only with FRITSCH Cutting Mills: All grinding parts can be removed for cleaning in just a few seconds without tools – unbeatable fast, simple and efficient! This makes them ideal, time-saving assistants in the comminution of fibrous and tough materials, plastics and heterogeneous mixture of materials and for sample preparation for RoHS analysis.



While you are still tightening the screws on other mills, your FRITSCH Cutting Mill is already clean. Because the entire grinding chamber can be opened easily in seconds and both the rotor and the sieve can simply be removed with simple motions. The housing and closing lid can be lifted back completely, and the grinding chamber lid can be completely removed from its hinges.

FRITSCH is an internationally respected manufacturer of application-oriented

laboratory instruments. For more than 90 years, laboratories worldwide have relied on our

FRITSCH. ONE STEP AHEAD.

experience, quality, service and innovation - for fast industrial applications as well as

for especially accurate results in industry- and research laboratories. See for yourself.





The rotor can be removed by lightly pulling it forward



The result: A completely open, empty grinding chamber with minimised dead space for fast, simple cleaning and reliable protection against cross-contamination.

FRITSCH

P-19 sieve cassette
4 mm square perforation
order no. 45.5500.1



The progressive cutting geometry between the rotor and fixed knives ensures faster comminution and reliable protection against clogging.

UNIQUE GRINDING CHAMBER GEOMETRY

Another advantage of FRITSCH Cutting Mills is their special grinding chamber geometry: Thanks to a progressively designed cutting geometry between the rotating cutting edges of the rotor and the fixed knives in the grinding chamber, the sample material is automatically transported away and thereby comminuted increasingly fine by shearing forces between the knives until the desired final fineness is achieved. In addition, the practical FRITSCH sieve cassette always automatically ensures the optimal distance to the rotor – and since there are practically no dead spaces, the sample material cannot come to a rest anywhere. At the same time, the special FRITSCH-airflow automatically transports the finished comminuted sample to the practical collecting drawer or a larger collecting vessel because of the strong air throughput. Your advantage: Faster work and more effective protection against clogging.

SELECT THE RIGHT ROTOR AND THE APPROPRIATE MATERIAL

Select exactly the right rotor for your application. The abrasion properties can also be individually accommodated through selection of the material of cutting rotors and fixed knives.

At www.fritsch.de, you will find the element analysis of the various materials directly by clicking on the accessories of each corresponding mill.



Only available from FRITSCH: The standard rotor made of hardened stainless steel with V-cutting edges and fixed knives is suited primarily for comminution of tough-elastic materials and films due to its especially acute cutting angle and the high cutting action that results. The rotor with V-cutting edges and fixed knives made of hardmetal tungsten carbide, which comminutes the grinding material through impact and cutting forces, is particularly well suited for hard-tough materials.



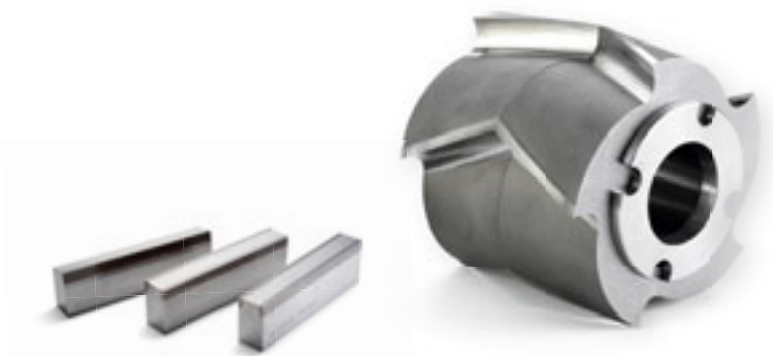
The especially robust disk milling cutter rotor with indexable inserts and fixed knives made of hardmetal tungsten carbide can even comminute scrap circuit board with glass fibre residue and copper cable. Another good idea from FRITSCH: On the disk milling cutter rotor, the cutting plates can be turned four times and replaced individually. Damage or wear will never again make it necessary to buy a completely new rotor!

GENUINE HARDMETAL – GENUINE CHROMIUM-FREE

What others promise, we deliver: With FRITSCH, when you select tungsten carbide as the cutting tool material, we guarantee that your sample will really be processed completely with hardmetal. Because only in FRITSCH Cutting Mills the fixed knives are also made of tungsten carbide. Anything else offers only half the reliability.

And when chromium-free size reduction is required for sample preparation according to RoHS – for example for verification of hexavalent chromium – or for XRF analysis, FRITSCH cutting tool sets of chromium-free tool steel offer this absolute assurance.

Full reliability: In FRITSCH Cutting Mills, the fixed knives are always of the same material as the cutting edges of the rotor.



The rotor made of tool steel with straight cutting edges which run parallel to the fixed knives is suitable for easily cut material, such as hay, straw, fibrous or biological materials. The rotor knives can be turned, since they have two cutting edges. Your advantage: doubling the service life of the rotor knives.

FRITSCH sieve cassettes

The required final fineness of the comminuted sample can be determined easily and variably in Cutting Mills through the choice of the sieve used: the finer the sieve openings, the finer the finished sample.

The practical FRITSCH sieve cassettes simplify the work enormously, guarantee a constant distance between the rotor and sample material and ensure the best result. Choose your FRITSCH sieve cassettes from a variety of trapezoidal and square perforation patterns in stainless steel 316L or chromium-free steel ST12.

At www.fritsch-milling.com/cutting-mills, you will find the respective element analysis directly by clicking on the accessories of each corresponding mill.



THE PROGRAMME

IDEAL FOR

HETEROGENEOUS SAMPLES
DERIVED FUELS
PLASTICS
PLANT MATERIALS
ROHS

Cutting Mill PULVERISETTE 15




Effective and inexpensive



Working principle	Cutting
Optimal for material type	Medium-hard, soft, fibrous
Max. feed size (depending on the material and funnel)	70 x 70 mm
Max. throughput (depending on the material and sieve size)	50 l/h
Sieve cassettes	0.25–20 mm
Feeding	Batchwise/continuous
Materials of the cutting tools	Tool steel, chromium-free steel
Rotor speed (depending on voltage and frequency)	2800–3400 rpm
Electrical details	400 V/3~, 50 Hz, 1900 watt 230–240 V/1~, 50 Hz, 2100 watt 100–120 V/1~, 60 Hz, 1850 watt
Motor shaft power in accordance with VDE 0530, EN 60034	1.5 kW for all motors, except 1.1 kW for 100–120 V/1~ motor
Weight	Net: 42 kg, gross: 72 kg
Dimensions w x d x h	Table-mounting or on stand: 42 x 48 x 69 cm
Packing details	Wooden case: 87 x 58 x 78 cm

➤ **Free FRITSCH sample grinding!**

Send us your sample - we will advise you which mill is the right one for you. Or take a look in the practical grinding report database at www.fritsch-milling.com/solution

Universal Cutting Mill PULVERISETTE 19	Power Cutting Mill PULVERISETTE 25	Cutting Mill Combination PULVERISETTE 25/19
Easy cleaning due to simply exchangeable cutting tools	Powerful pre-crushing even for larger samples	Pre-crushing and fine comminution in a single step
		

Cutting		Cutting		Cutting	
Medium-hard, soft, brittle, tough, fibrous		Medium-hard, brittle, tough, fibrous		Medium-hard, brittle, tough, fibrous	
70 x 80 mm		120 x 85 mm		120 x 85 mm	
60 l/h		85 l/h		60 l/h	
0.2–6 mm		1–10 mm		0.2–6 mm	
Batchwise/continuous		Batchwise/continuous		Batchwise/continuous	
Hardened stainless steel, tool steel, hardmetal tungsten carbide, chromium-free steel		Hardened stainless steel, hardmetal tungsten carbide, chromium-free steel		Hardened stainless steel, hardmetal tungsten carbide, chromium-free steel	
2800–3400 rpm	300–360 rpm Further rotor speeds on request!	300–360 rpm		300–360/2800–3400 rpm	
400 V/3~, 50–60 Hz, 2000 watt 230 V/1~, 50–60 Hz, 2200 watt 100–120 V/1~, 50–60 Hz, 1850 watt	400 V/3~, 50–60 Hz, 3240 watt	400 V/3~, 50–60 Hz, 3240 watt		400 V/3~, 50–60 Hz, 6440 watt	
1.5 kW for all motors, except 1.1 kW for 100–120 V/1~ motor	2.2 kW	2.2 kW		2.2/1.5 kW	
Net: 56 kg, gross: 86 kg	Net: 65 kg, gross: 95 kg	Net: 75 kg, gross: 105 kg		Net: 214 kg, gross: 274 kg	
Table-mounting or on stand: 45 x 55 x 63 cm	Table-mounting or on stand: 45 x 62 x 63 cm	Table-mounting or on stand: 45 x 65 x 63 cm		On stand: 62 x 82 x 145 cm	
Wooden case: 80 x 70 x 90 cm	Wooden case: 80 x 70 x 90 cm	Wooden case: 80 x 70 x 90 cm		2 Wooden cases: 75 x 65 x 165 cm, 85 x 85 x 65 cm	



PULVERISETTE 15

THE FRITSCH CUTTING MILL

- Rotor speed 2800 rpm
- Max. feed size 70 x 70 mm
- Collecting vessel 3.5 litres or 60 litres
- Funnel for long and bulk solids or protected funnel made of stainless steel with plastic sample pusher
- Externally adjustable cutting gap
- Rotor knives can be turned (2 cutting edges) – double service life
- Defined final fineness due to interchangeable sieve inserts
- Especially easy FRITSCH cleaning
- FRITSCH-air cooling
- CE mark and 2 year guarantee



Practical feeding of bulk materials

IDEAL FOR YOUR LAB

The FRITSCH Cutting Mill PULVERISETTE 15 is the ideal laboratory Cutting Mill for comminution of dry sample material with soft to medium-hard consistency, for fibrous or cellulosic materials as well as for sample preparation according to RoHS. With a particularly high rotor speed of 2800 rpm, it ensures a high air throughput and especially fast and reproducible size reduction.

Select the appropriate funnel

For your PULVERISETTE 15 you optionally receive either the funnel for long and bulk solids to feed straw, foils and similar materials at their full length or the protected funnel with sample pusher for all other materials.



The FRITSCH Universal Support Stand offers for your PULVERISETTE 15 even with the 60 l collecting vessel and filter hose a solid, space-saving and spatially variable basis.



Funnel
for long and bulk solids



Protected funnel
with sample pusher



TECHNICAL DATA

Electrical details

400 V/3~, 50 Hz, 1900 watt
 230-240 V/1~, 50 Hz, 2100 watt
 100-120 V/1~, 60 Hz, 1850 watt
 (Other voltages on request.)

Motor shaft power in accordance with VDE 0530, EN 60034

1.1 kW for 100-120 V/1~ motor
 1.5 kW for all other motors

Weight

Net 42 kg
 Gross 72 kg

Dimensions w x d x h

Table-mounting or on stand 42 x 48 x 69 cm

Packaging w x d x h

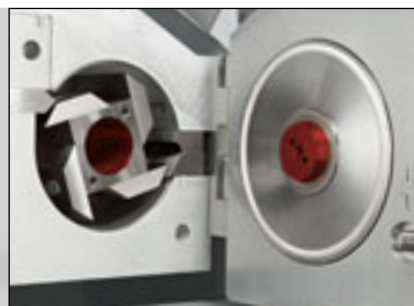
Wooden case 87 x 58 x 78 cm

Emissions value of workplace according to DIN EN ISO 3746:2005

Approx. 78 dB(A)

(depending on the material to be ground, rotor and sieve cassette used)

Order no.	400 V/3~	230-240 V/1~	100-120 V/1~
	15.4030.00	15.4020.00	15.4010.00



Especially stable: the rotor with double bearing on shaft and in the lid.



Especially powerful cutting: the P-15 rotor with 4 straight knives

IDEAL FOR COMMINUTION OF

Plastics and textiles	Plastics, rubber, leather, fabric, fibres
Agriculture and forestry	Wood, leaves, roots, animal fodder, grain, corn, peat, tobacco
Environment	Paper, cardboard, derived fuels, metal-free waste, household waste
RoHS	Mobile phone LCD glass, mobile phone keypads, disassembled circuit boards
Analytic	Coal, horn, dragées, tablets, cork, drugs
Construction materials	Derived fuels
Chemistry	Heterogeneous mixture of materials
Foodstuffs	Maize, malt, pasta, herbs, spices, dried meat

➤ With a feed size (depending on the material) of up to 70 x 70 mm and a throughput of up to 50 l/h

EQUIPMENT

Instrument without funnel, cutting tool set (consisting of rotor with rotating and fixed knives), sieve insert, collecting vessel and stand

- Required accessories

Funnel for long and bulk solids or protected funnel with sample pusher

Cutting tool set made of tool steel or chromium-free steel

Sieve inserts with trapezoidal or square perforation in stainless steel 316L or chromium-free steel ST12

Collecting vessel 3.5 litres or collecting vessel for large quantities 60 litres with filter hose

- Optional accessories

Universal support stand



PULVERISETTE 19

THE FRITSCH UNIVERSAL CUTTING MILL

- Max. feed size 70 x 80 mm
- Max. rotor speed 2800 rpm
- Standard funnel for long and bulk solids or protected funnel with sample pusher
- Variety of rotors available to adapt the cutting performance to suit the sample
- Cutting rotor and sieve cassette can be removed and replaced without tools
- Externally adjustable cutting gap
- Housing and closing lid can be lifted to open completely
- Smooth, easy-to-clean interior grinding chamber walls
- CE mark and 2 year guarantee

Food and pharmaceutical industry

The Universal Cutting Mill PULVERISETTE 19 is also in a corrosion-resistant stainless steel version 316L available (see page 18)!

FAST SOLUTION FOR ALL YOUR NEEDS

With a maximum feed size of 70 x 80 mm and a rotor speed of 2800 rpm, the FRITSCH Universal Cutting Mill PULVERISETTE 19 quickly and effectively comminutes dry, soft to medium-hard sample materials as well as fibrous materials and plastics with reliable reproducible results – and, like all FRITSCH Cutting Mills, the PULVERISETTE 19 is also unmatched in regards to simple and fast cleaning. One special advantage: Straw, films and similar material can be fed in up to their full length without additional preparation. And the PULVERISETTE 19 is also ideal for RoHS tests.

NEW: powerful version for a gentle comminution

The PULVERISETTE 19 is available immediately also with 300 to 360 rpm. This combination of extremely low cutting rate and extreme cutting forces offers a very powerful comminution of hard, tough-elastic samples or of small sample amounts – and is the ideal solution for all cases where for example thermal damage, the loss of easily volatile substances or a larger fine share is to be avoided.

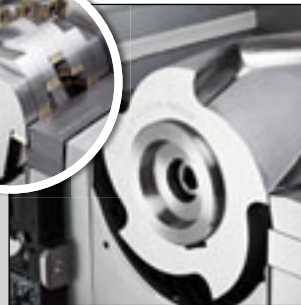
Further information at www.fritsch-milling.com/p-19108000

Opening up possibilities: the FRITSCH Cyclone separator

In connection with the PULVERISETTE 19, the patented FRITSCH sample exhauster with Cyclone separator ensures with its powerful vacuum function, based on negative pressure a simple feeding, fast throughput and good cooling, effectively prevents sample material from escaping during feeding and opens up new possibilities in the processing of heterogeneous mixture of materials, such as derived fuels in the cement industry.



TECHNICAL DATA			
Electrical details (Other voltages on request.)	400 V/3~, 50-60 Hz, 2000 watt	400 V/3~, 50-60 Hz, 3240 watt	
	230 V/1~, 50-60 Hz, 2200 watt		
	100-120 V/1~, 50-60 Hz, 1850 watt		
Rotor speed (depending on voltage and frequency)	2800-3400 rpm	300-360 rpm	
Motor shaft power in accordance with VDE 0530, EN 60034	1.1 kW for 100-120 V/1~ motor	2.2 kW	
	1.5 kW for all other motors		
Weight	Net	56 kg	65 kg
	Gross	86 kg	95 kg
Dimensions w x d x h Table-mounting or on stand	45 x 55 x 63 cm	45 x 62 x 63 cm	
Packaging w x d x h Wooden case	80 x 70 x 90 cm	80 x 70 x 90 cm	
Emissions value of workplace according to DIN EN ISO 3746:2005 <small>(depending on the material to be ground, rotor and sieve cassette used)</small>	approx. 78 dB(A)	approx. 75 dB(A)	
Order no.	400 V/3~ 19.1030.00	230 V/1~ 19.1020.00	100-120 V/1~ 19.1010.00
			400 V/3~ 19.1080.00



Choose between a disk milling cutter rotor or a V-rotor.

Sets final fineness: Sieve cassette with square perforation

Practical: Hand turning function of the rotor.

IQ/OQ documentation available to support equipment qualification.



IDEAL FOR COMMINATION OF

Plastics and textiles	Plastics, rubber, films, leather, fabric, fibres
Agriculture and forestry	Wood, leaves, roots, animal fodder, grain, corn, peat, tobacco, straw – can be fed in at full length
Environment	Paper, cardboard, derived fuels, metal-free waste, household waste, composites
RoHS	Mobile phone LCD glass, mobile phone keypads, electronic chips, circuit boards (assembled and disassembled)
Analytic	Coal, bones, horn, dragées, tablets, cork, drugs
Construction materials	Derived fuels
Chemistry	Heterogeneous mixture of materials
Foodstuffs	Maize, malt, pasta, herbs, spices, dried meat

➤ **With a feed size (depending on the material) of up to 70 x 80 mm and a throughput of up to 60 l/h**

EQUIPMENT

Instrument without funnel, cutting tool set (consisting of rotor and fixed knives), sieve cassette, collecting vessel and stand

- Required accessories

Standard funnel for long and bulk solids or protected funnel with sample pusher

Standard rotor with V-cutting edges and fixed knives made of hardened stainless steel, hardmetal tungsten carbide or chromium-free tool steel or Rotor with straight cutting edges and fixed knives made of tool steel or chromium-free steel or Disk milling cutter rotor with indexable inserts and fixed knives made of hardmetal tungsten carbide

Sieve cassettes with trapezoidal or square perforation in stainless steel 316L or chromium-free steel ST12

Collecting vessel 3 litres or collecting vessel for large quantities 10 litres

- Optional accessories

Universal support stand

Sample exhauster with Cyclone separator



PULVERISETTE 25

THE FRITSCH POWER CUTTING MILL

- Easy, fast and thorough cleaning of the grinding chamber and of all cutting tools
- Cutting rotor and sieve cassette can be removed and replaced without tools
- Variety of rotors available to adapt the cutting performance to suit the sample
- Max. feed size: 120 x 85 mm
- High-torque geared motor (2.2 kW)
- Externally adjustable cutting gap
- Housing and closing lid can be lifted to open completely
- CE mark and 2 year guarantee



Minimised dead space ensures faster operation and cleaning

EXTRA POWERFUL

The FRITSCH PULVERISETTE 25 is our heavy duty Power Cutting Mill for fast, reproducible pre-crushing of dry, soft to medium-hard or fibrous materials and plastics at low speeds with a high-torque, 2.2 kW geared motor.

EASY FEEDING

For fast, simple and material-appropriate feeding, you can also choose between two different funnel models for the FRITSCH PULVERISETTE 25. For bulk solids and free flowing materials, use the standard funnel for bulk solids, 10 litres. For all other materials, use the 3-litre protected funnel with sample pusher.



Protected funnel with sample pusher,
3 litres



Standard funnel for bulk solids,
10 litres

TECHNICAL DATA

Electrical details

400 V/3~, 50-60 Hz, 3240 watt
(Other voltages on request.)

Motor shaft power in accordance with VDE 0530, EN 60034
2.2 kW

Weight

Net 75 kg
Gross 105 kg

Dimensions w x d x h

Table-mounting or on stand 45 x 65 x 63 cm

Packaging w x d x h

Wooden case 80 x 70 x 90 cm

Emissions value of workplace according to DIN EN ISO 3746:2005

Approx. 71 dB(A)

(depending on the material to be ground, rotor and sieve cassette used)

Order no. 25.2030.00



Larger grinding chamber depth for larger grinding material quantities

Closes especially secure: The grinding chamber safety lock

IDEAL FOR COMMINUTION OF

Plastics and textiles	Plastics, rubber, films, leather, fabric, fibres
Agriculture and forestry	Wood, leaves, roots, animal fodder, grain, corn, peat, tobacco, straw – can be fed in at full length
Environment	Paper, cardboard, derived fuels, metal-free waste, household waste, composites
RoHS	Mobile phone LCD glass, mobile phone keypads, electronic chips, circuit boards (assembled and disassembled)
Analytic	Coal, bones, horn, dragées, tablets, cork, drugs
Construction materials	Derived fuels
Chemistry	Heterogeneous mixture of materials
Foodstuffs	Maize, malt, pasta, herbs, spices, dried meat

➤ **With a feed size (depending on the material) of up to 120 x 85 mm and a throughput of up to 85 l/h**



EQUIPMENT

Instrument without funnel, cutting tool set (consisting of rotor and fixed knives), sieve cassette, collecting vessel and stand

• Required accessories

Standard funnel for bulk solids 10 litres or protected funnel with sample pusher 3 litres

Standard rotor with V-cutting edges and fixed knives made of hardened stainless steel, hardmetal tungsten carbide or chromium-free tool steel or Disk milling cutter rotor with indexable inserts and fixed knives made of hardmetal tungsten carbide

Sieve cassettes with trapezoidal or square perforation in stainless steel 316L or chromium-free steel ST12

Collecting vessel 3 litres or collecting cassettes for large quantities 10 litres

• Optional accessories

Universal support stand



PULVERISETTE 25/19

THE FRITSCH CUTTING MILL COMBINATION

- **Maximum feed size 120 x 85 mm**
- **Patented fully-automated, two-stage comminution**
- **Final fineness 0.2 – 6 mm**
- **Sample extraction into glass sample bottle by FRITSCH Cyclone separator**
- **Integrated sample division to reduce the quantity for fine size reduction**
- **Sample cooling during the comminution process**
- **Capable of sample material with moisture content up to 30 %**
- **Exceptionally high material throughput**



FRITSCH Cyclone separator with an ultra-fine HEPA dust filter.

PATENTED POWER TEAM

With the extra powerful, patented FRITSCH Cutting Mill Combination of PULVERISETTE 25 and PULVERISETTE 19 as well as the associated FRITSCH Cyclone separator, it is possible, for example, to process 2 litres of sample material with a particle size of 30 mm in only one single step. It doesn't matter how heterogeneous the sample is – even household waste, construction waste, German recycling system bales or light shredder fractions from automobile recycling: Within five minutes, our extra-powerful double mill will reduce any of these materials into a representatively divided analysis sample with a final fineness of < 500 µm! This is the ideal solution for inexpensive preparation of heterogeneous materials for analysis according to the Technical Instructions on Municipal Waste (TOC) or for determination of the calorific value and chlorine content.

Operating principles of the powerful FRITSCH Cutting Mill Combination

The extra powerful FRITSCH Cutting Mill Combination consists of the Power Cutting Mill PULVERISETTE 25 and the Universal Cutting Mill PULVERISETTE 19. The entire sample is pre-crushed by the PULVERISETTE 25 then falls automatically through a funnel into a sample divider which divides the sample according to a 1:13 ratio by default. The division ratio is variable. This smaller sample is then automatically comminuted in the PULVERISETTE 19 down to a final fineness of 0.2 mm and drawn into the glass sample bottle by the connected FRITSCH Cyclone separator.

Through selection of the cutting tool sets and sieve cassettes, the FRITSCH Cutting Mill Combination can be individually adapted to any specific application. All accessories of the PULVERISETTE 25 and PULVERISETTE 19 are available for this.



PULVERISETTE 25



PULVERISETTE 19

TECHNICAL DATA

Electrical details

400 V/3~, 50-60 Hz, 6440 watt

Motor shaft power in accordance with VDE 0530, EN 60034

2.2/1.5 kW

Weight

Net 214 kg

Gross 274 kg

Dimensions w x d x h

On stand 62 x 82 x 145 cm

Packaging w x d x h

2 Wooden cases 75 x 65 x 165 cm, 85 x 85 x 65 cm

Emissions value of workplace

according to DIN EN ISO 3746:2005

Approx. 78 dB(A)

(depending on the material to be ground, rotor and sieve cassette used)

Order no. 19.5030.00



Automatic sample division

The extra powerful FRITSCH Cyclone separator

The powerful air vortex within the FRITSCH Cyclone separator draws the comminuted sample into the attached glass sample bottle. The fine dust is kept out by the ultra-fine HEPA dust filter (High-Efficiency Particulate Airfilter).

EQUIPMENT

Power Cutting Mill PULVERISETTE 25 with 3-litre funnel, Universal Cutting Mill PULVERISETTE 19, interposed sample divider, underframe and sample exhauster with Cyclone separator, including hardmetal tungsten carbide cutting tools and sieve cassettes made of stainless steel.

- Additional accessories

Can be equipped with any type of cutting tool sets and sieve cassettes available for the PULVERISETTE 25 and PULVERISETTE 19.

ORDERING DATA

Order No. Article

CUTTING MILL

PULVERISETTE 15

**Instrument without funnel, cutting tool set, sieve insert, collecting vessel and stand**

- 15.4030.00 For 400 V/3~, 50 Hz, 1900 watt
 15.4020.00 For 230-240 V/1~, 50 Hz, 2100 watt
 15.4010.00 For 100-120 V/1~, 60 Hz, 1850 watt
 The PULVERISETTE 15 with voltage of "/3~" can **only** be operated on a three-phase supply network.¹⁾
 Other voltages on request.

Funnels

- 15.1550.00 Funnel for long and bulk solids
 15.4300.00 Protected funnel with sample pusher

Collecting vessels

- 15.4400.00 Collecting vessel, 3,5 litres
 15.4560.00 Collecting vessel for large quantities, 60 litres with filter hose

Cutting tool set made of tool steel

- 15.4603.00 Rotor with rotating and fixed knives

Sieve inserts made of stainless steel 316L

- 45.1200.10 0.25 mm trapezoidal perforation
 45.1210.10 0.5 mm trapezoidal perforation
 45.1220.10 0.75 mm trapezoidal perforation
 45.1230.10 1 mm trapezoidal perforation
 45.1240.10 1.5 mm trapezoidal perforation
 45.1250.10 2 mm trapezoidal perforation

- 45.2190.10 2 mm square perforation
 45.2200.10 4 mm square perforation
 45.2210.10 6 mm square perforation
 45.2020.10 8 mm square perforation
 45.2030.10 10 mm square perforation
 45.2300.10 20 mm square perforation

Accessories for chromium-free comminution**Cutting tool set made of chromium-free tool steel**

- 15.4602.00 Rotor with rotating and fixed knives

Sieve inserts made of chromium-free steel ST12 (not rust-proof)

- 45.1211.09 0.5 mm trapezoidal perforation
 45.1230.09 1 mm trapezoidal perforation

- 45.2200.09 4 mm square perforation

Further accessories

- 45.5820.00 Universal support stand

Order No. Article

UNIVERSAL CUTTING MILL

PULVERISETTE 19

**Instrument without funnel, cutting tool set, sieve cassette, collecting vessel and stand**

- 19.1030.00 For 400 V/3~, 50-60 Hz, 2000 watt, 2800-3400 rpm
 19.1020.00 For 230 V/1~, 50-60 Hz, 2200 watt, 2800-3400 rpm
 19.1010.00 For 100-120 V/1~, 50-60 Hz, 1850 watt, 2800-3400 rpm

- 19.1080.00 For 400 V/3~, 50-60 Hz, 3240 watt, 300-360 rpm
 The PULVERISETTE 19 with voltage of "/3~" can **only** be operated on a three-phase supply network.¹⁾
 Other voltages on request!

Funnels

- 19.1550.00 Standard funnel for long and bulk solids
 19.1850.00 Protected funnel with sample pusher

Collecting vessels

- 45.5730.00 Collecting vessel, 3 litres
 45.5700.00 Collecting vessel for large quantities, 10 litres

Cutting tool sets

- 45.5100.00 Standard rotor with V-cutting edges and fixed knives made of hardened stainless steel
 45.5370.00 Rotor with V-cutting edges and fixed knives made of hardmetal tungsten carbide
 45.5000.00 Rotor with straight cutting edges and fixed knives made of tool steel
 45.5200.00 Disk milling cutter rotor with indexable inserts and fixed knives made of hardmetal tungsten carbide

Sieve cassettes made of stainless steel 316L

- 45.5405.10 0.2 mm trapezoidal perforation
 45.5410.10 0.25 mm trapezoidal perforation
 45.5420.10 0.5 mm trapezoidal perforation
 45.5430.10 0.75 mm trapezoidal perforation
 45.5440.10 1 mm trapezoidal perforation
 45.5450.10 1.5 mm trapezoidal perforation
 45.5460.10 2 mm trapezoidal perforation

- 45.5500.10 4 mm square perforation
 45.5510.10 6 mm square perforation

Accessories for chromium-free comminution**Cutting tool sets made of chromium-free tool steel**

- 45.5112.00 Rotor with V-cutting edges and fixed knives
 45.5012.00 Rotor with straight cutting edges and fixed knives

Sieve cassettes made of chromium-free steel ST12 (not rust-proof)

- 45.5410.09 0.25 mm trapezoidal perforation
 45.5420.09 0.5 mm trapezoidal perforation
 45.5430.09 0.75 mm trapezoidal perforation
 45.5440.09 1 mm trapezoidal perforation
 45.5450.09 1.5 mm trapezoidal perforation
 45.5460.09 2 mm trapezoidal perforation

- 45.5500.09 4 mm square perforation
 45.5510.09 6 mm square perforation

Accessories for sample exhaust system with Cyclone separator

- 45.5900.00 Sample exhauster with Cyclone separator incl. sample glass 500 ml for 230 V/1~
 83.3250.00 Sample glass 1 litre
 83.3260.00 Sample glass 2 litres
 83.3270.00 Sample glass 5 litres
 19.5790.00 Adapter for sample glass 1, 2 and 5 litres

Further accessories

- 45.5820.00 Universal support stand

Certification

- 96.0250.00 IQ/OQ documentation (questionnaire format – for filling out by customer)

Universal Cutting Mill PULVERISETTE 19 in a corrosion-resistant stainless steel version 316L

- 19.2040.00 For 400 V/3~, 50-60 Hz, 2000 watt, 2800-3400 rpm
 Consisting of: standard funnel for long and bulk solids, collecting vessel for large quantities 10 litres, standard rotor with V-cutting edges and fixed knives made of hardened stainless steel, as well as of a completely welded, electrochemically polished support stand.
 (Please note: sieve cassette made of stainless steel 316L is additionally necessary! Choose the FRITSCH sieve cassette in different trapezoidal and square perforations according to the desired final fineness!)
 Other configurations on request.
 The PULVERISETTE 19 with voltage of "/3~" can **only** be operated on a three-phase supply network.

¹⁾ The three-phase version "/3~" is definitely preferable instead of a single phase version "/1~", because the three-phase version obtains more power, better effectiveness and greater energy efficiency.

Order No. Article

POWER CUTTING MILL

PULVERISETTE 25



Instrument without funnel, cutting tool set, sieve cassette, collecting vessel and stand

25.2030.00 For 400 V/3~, 50-60 Hz, 3240 watt
The PULVERISETTE 25 with voltage of "/3~" can **only** be operated on a three-phase supply network.
Other voltages on request.

Funnels

25.2700.00 Standard funnel for bulk solids, 10 litres
25.2850.00 Protected funnel with sample pusher, 3 litres

Collecting vessels

45.5730.00 Collecting vessel, 3 litres
45.5700.00 Collecting vessel for large quantities, 10 litres

Cutting tool sets

45.7000.00 Standard rotor with V-cutting edges and fixed knives made of hardened stainless steel
45.7370.00 Rotor with V-cutting edges and fixed knives made of hardmetal tungsten carbide
45.7200.00 Disk milling cutter rotor with indexable inserts and fixed knives made of hardmetal tungsten carbide

Sieve cassettes made of stainless steel 316L

45.7440.10 1 mm trapezoidal perforation
45.7460.10 2 mm trapezoidal perforation

45.7500.10 4 mm square perforation
45.7510.10 6 mm square perforation
45.7520.10 8 mm square perforation
45.7530.10 10 mm square perforation

Accessories for chromium-free comminution

Cutting tool set made of chromium-free tool steel

45.7112.00 Rotor with V-cutting edges and fixed knives

Sieve cassettes made of chromium-free steel ST12 (not rust-proof)

45.7440.09 1 mm trapezoidal perforation
45.7460.09 2 mm trapezoidal perforation

45.7500.09 4 mm square perforation
45.7510.09 6 mm square perforation
45.7520.09 8 mm square perforation
45.7530.09 10 mm square perforation

Further accessories

45.5820.00 Universal support stand

Order No. Article

CUTTING MILL COMBINATION

PULVERISETTE 25/PULVERISETTE 19



19.5030.00 For 400 V/3~, 50-60 Hz, 6440 watt
Consisting of: Power Cutting Mill PULVERISETTE 25,
Universal Cutting Mill PULVERISETTE 19,
interposed sample divider, 3-litres funnel, underframe and sample
exhauster with Cyclone separator; inclusive hardmetal tungsten carbide
cutting tools and sieve cassettes made of stainless steel.

Other configurations on request.

The PULVERISETTE 25/PULVERISETTE 19 with voltage of "/3~" can **only** be operated on a three-phase supply network.



Test our instruments in practice!

If you would like to be convinced of the performance and ease of use of the **FRITSCH** laboratory instruments, we would be happy to call on you with the **FRITSCH** mobile laboratory and provide you with on-site practical demonstrations.



Alternatively, send us your samples for a free grinding trial after which we will submit a fully documented grinding report identifying the most suitable instrument and accessories to meet your requirements.

A comprehensive collection of grinding reports for various materials and industries can also be found online at www.fritsch-milling.com/solution

It's worth to take a look!

Scheduling and information

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