

**FRITSCH · CUTTING MILLS**



**IDEAL FOR**

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

**CUTTING MILLS**

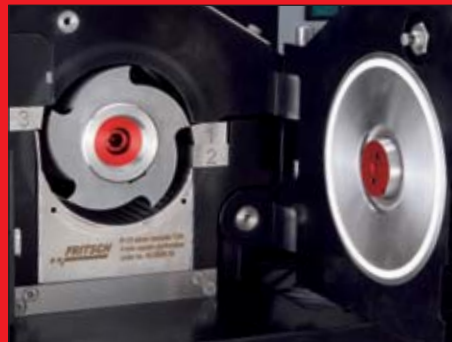
**FRITSCH CUTTING MILLS – FAST, SAFE, SIMPLE**

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 door – in fact, the door 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 grinding 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, even straw, films and similar materials can be inserted up to their full length.



PULVERISETTE 19



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.

**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 grinding 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 and WEEE 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 door can be lifted back completely, and the grinding chamber door can be completely removed from its hinges.

FRITSCH is an internationally respected manufacturer of application-oriented

laboratory instruments. For more than 80 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.



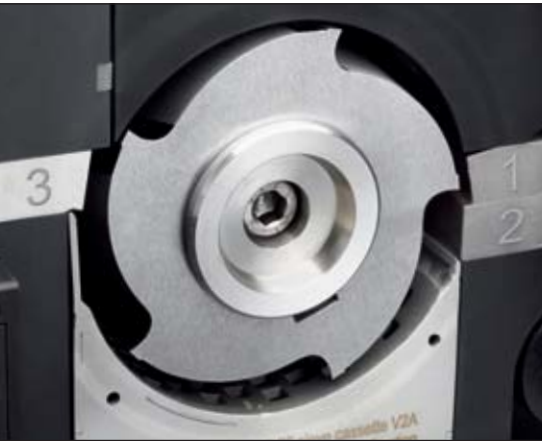


**The result:** A completely open, empty grinding chamber with minimised dead space for fast, simple cleaning and reliable protection against cross-contamination.



The rotor can be removed by lightly pulling it forward

**FRITSCH** p-19 sieve cassette V2A  
1 mm trapezoidal perforation  
order no. 45.5440.10



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 ground 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 ground 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](http://www.fritsch.de), you will find the element analysis of the various materials directly by clicking on the accessories of each corresponding mill.**



The standard rotor made of tool 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 mill 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 grinding tool material, we guarantee that your sample will really be milled 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 grinding is required for sample preparation according to RoHS and WEEE – 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.

### FRITSCH sieve inserts

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

At [www.fritsch.de](http://www.fritsch.de), 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/WEEE

### Cutting Mill PULVERISETTE 15

Effective and inexpensive



<b>Working principle</b>	Cutting
<b>Optimal for material type</b>	Medium-hard, soft, fibrous
<b>Max. feed size</b> (depending on the material and funnel)	70 x 70 mm
<b>Max. throughput</b> (depending on the material and sieve size)	50 l/h
<b>Sieve inserts</b>	0.25 – 6 mm
<b>Feeding</b>	Batchwise/continuous
<b>Materials of the grinding parts</b>	Tool steel, chromium-free steel
<b>Rotor speed</b>	2800 – 3400 rpm depending on voltage and frequency
<b>Electrical details</b>	400 V/3~, 50 Hz, 1900 watt 230-240 V/1~, 50 Hz, 2100 watt 100-120 V/1~, 60 Hz, 1800 watt
<b>Motor shaft power in accordance with VDE 0530, EN 60034</b>	1.5 kW for all motors, except 1.1 kW for 100-120 V/1~ motor
<b>Weight</b>	Net: 42 kg, gross: 72 kg
<b>Dimensions w x d x h</b>	Table-mounting or on stand: 42 x 48 x 69 cm
<b>Packing details</b>	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 by logging on  
[www.fritsch.de](http://www.fritsch.de) select menu item Sample Preparation/Solutions.

<b>Universal Cutting Mill PULVERISETTE 19</b>	<b>Power Cutting Mill PULVERISETTE 25</b>	<b>Cutting Mill Combination PULVERISETTE 25/19</b>
<b>Easy cleaning due to simply exchangeable grinding parts</b>	<b>Powerful pre-crushing even for larger samples</b>	<b>Pre-crushing and fine grinding in a single step</b>
		

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
0.25 – 6 mm	1 – 10 mm	0.25 – 6 mm
Batchwise/continuous	Batchwise/continuous	Batchwise/continuous
Tool steel, hardmetal tungsten carbide, chromium-free steel	Tool steel, hardmetal tungsten carbide, chromium-free steel	Tool steel, hardmetal tungsten carbide, chromium-free steel
2800 rpm	300 rpm	300/2800 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, 3340 watt	400 V/3~, 50-60 Hz, 6340 watt
1.5 kW for all motors, except 1.1 kW for 100-120 V/1~ motor	2.2 kW	2.2/1.5 kW
Net: 56 kg, gross: 96 kg	Net: 75 kg, gross: 105 kg	Net: 214 kg, gross: 244 kg
Table-mounting or on stand: 44 x 55 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	Pallet case: 82 x 100 x 165 cm



# PULVERISETTE 15

## THE FRITSCH CUTTING MILL

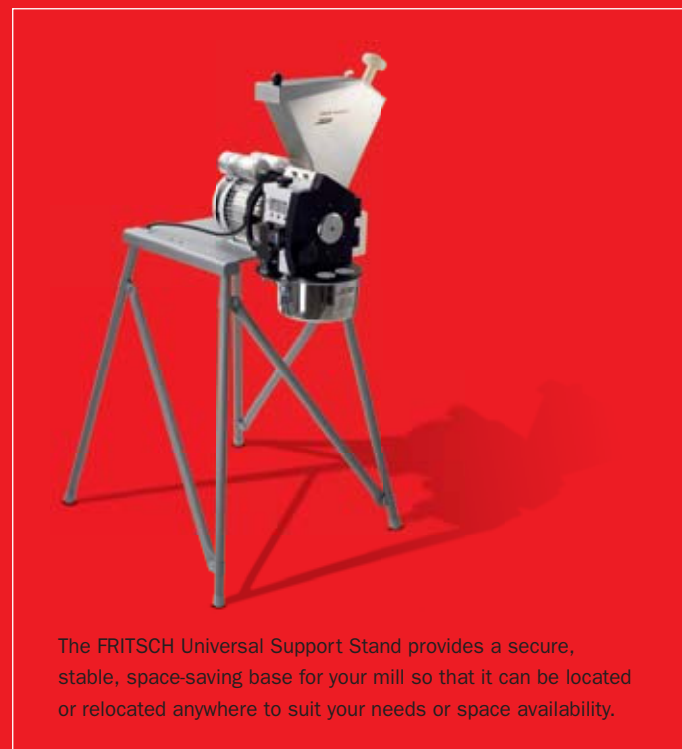
- Rotor speed 2800 rpm
- Max. feed size 70 x 70 mm
- Standard collecting vessel 3.5 litres, optional 60 litres
- 2-litre funnel made of stainless steel with plastic pusher
- Externally adjustable cutting gap
- Defined final fineness due to interchangeable sieve inserts
- Especially easy FRITSCH cleaning
- FRITSCH-air cooling
- CE mark and 2 year guarantee



Collecting vessel 60 l with filter hose

## 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 and WEEE. With a particularly high rotor speed of 2800 rpm, it ensures a high air throughput and especially fast and reproducible grinding.



The FRITSCH Universal Support Stand provides a secure, stable, space-saving base for your mill so that it can be located or relocated anywhere to suit your needs or space availability.



## 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, 1800 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

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 straight knives

## IDEAL FOR COMMINATION OF

<b>Plastics and textiles</b>	Plastics, rubber, leather, fabric, fibres
<b>Agriculture and forestry</b>	Wood, leaves, roots, animal fodder, grain, corn, peat, tobacco
<b>Environment</b>	Paper, cardboard, derived fuels, metal-free waste, household waste
<b>RoHS/WEEE</b>	Mobile phone LCD glass, mobile phone keypads, electronic chips, circuit boards
<b>Analytic</b>	Coal, horn, dragées, tablets, cork, drugs
<b>Construction materials</b>	Derived fuels
<b>Chemistry</b>	Heterogeneous mixture of materials
<b>Foodstuffs</b>	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 with funnel and collecting vessel 3.5 litres

- Required accessories

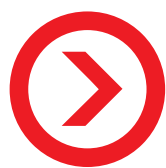
Cutting tool set made of tool steel or chromium-free steel

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

- Optional accessories

Universal support stand

Collecting vessel 60 litres with filter hose



# PULVERISETTE 19

## THE FRITSCH UNIVERSAL CUTTING MILL

- Max. feed size 70 x 80 mm
- Max. rotor speed 2800 rpm
- 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



Practical feeding of bulk materials

## 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.

### 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

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  
 (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 56 kg  
 Gross 96 kg

### Dimensions w x d x h

Table-mounting or on stand 44 x 55 x 63 cm

### Packaging w x d x h

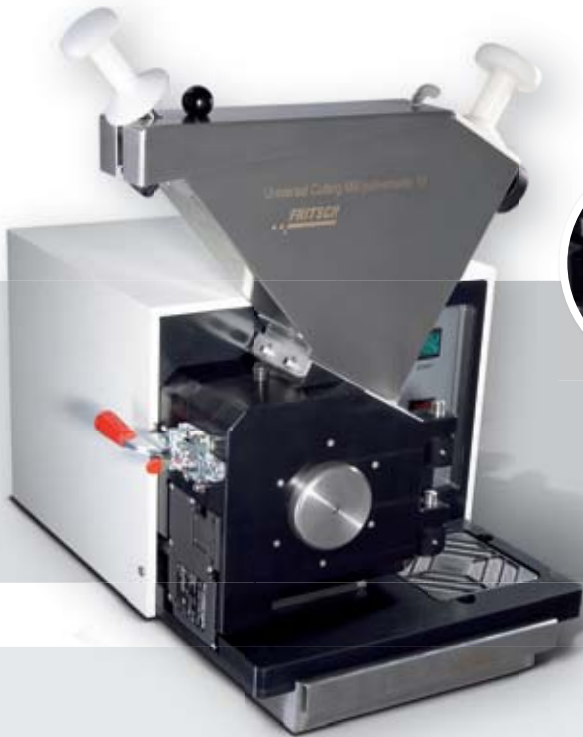
Wooden case 80 x 70 x 90 cm

### Emissions value of workplace

Approx. 78 dB(A)

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

<b>Order no.</b>	<b>400 V/3~</b>	<b>230 V/1~</b>	<b>100-120 V/1~</b>
	19.1030.00	19.1020.00	19.1010.00



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.

## IDEAL FOR COMMINUTION OF

<b>Plastics and textiles</b>	Plastics, rubber, films, leather, fabric, fibres
<b>Agriculture and forestry</b>	Wood, leaves, roots, animal fodder, grain, corn, peat, tobacco, straw – can be fed in at full length
<b>Environment</b>	Paper, cardboard, derived fuels, metal-free waste, household waste, composites
<b>RoHS/WEEE</b>	Mobile phone LCD glass, mobile phone keypads, electronic chips, circuit boards
<b>Analytic</b>	Coal, bones, horn, dragées, tablets, cork, drugs
<b>Construction materials</b>	Derived fuels
<b>Chemistry</b>	Heterogeneous mixture of materials
<b>Foodstuffs</b>	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 tool steel, hardmetal tungsten carbide or chromium-free tool steel

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

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

### • Optional accessories

Universal support stand

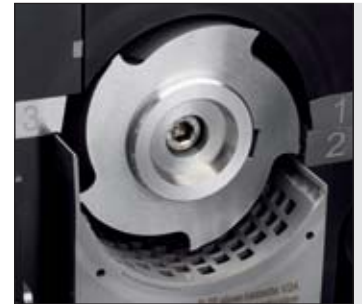
Sample exhauster with Cyclone separator



# PULVERISETTE 25

## THE FRITSCH POWER CUTTING MILL

- Max. feed size: 120 x 85 mm
- High-torque geared motor (2.2 kW)
- Easy, fast and thorough cleaning of the grinding chamber and of all grinding parts
- 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
- 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, 3340 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

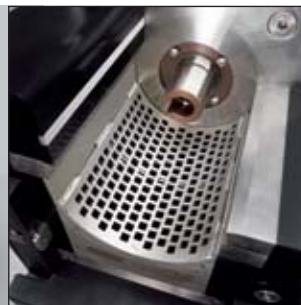
Wooden case 80 x 70 x 90 cm

### Emissions value of workplace

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 snap-locking-system

## IDEAL FOR COMMINUTION OF

<b>Plastics and textiles</b>	Plastics, rubber, films, leather, fabric, fibres
<b>Agriculture and forestry</b>	Wood, leaves, roots, animal fodder, grain, corn, peat, tobacco, straw – can be fed in at full length
<b>Environment</b>	Paper, cardboard, derived fuels, metal-free waste, household waste, composites
<b>RoHS/WEEE</b>	Mobile phone LCD glass, mobile phone keypads, electronic chips, circuit boards
<b>Analytic</b>	Coal, bones, horn, dragées, tablets, cork, drugs
<b>Construction materials</b>	Derived fuels
<b>Chemistry</b>	Heterogeneous mixture of materials
<b>Foodstuffs</b>	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 tool 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 inserts with trapezoidal or square perforation in stainless steel or chromium-free steel ST12

Collecting vessel, 3 litres, or collecting vessel 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 0.25 – 6 mm
- Sample extraction into glass sample bottle by FRITSCH Cyclone separator
- Integrated sample division to reduce the quantity for fine grinding
- Sample cooling during the grinding 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 ground in the PULVERISETTE 19 down to a final fineness of 0.25 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, 6340 watt

**Motor shaft power in accordance with VDE 0530, EN 60034**

2.2/1.5 kW

### Weight

Net 214 kg

Gross 244 kg

### Dimensions w x d x h

On stand 62 x 82 x 145 cm

### Packaging w x d x h

Pallet case 82 x 100 x 165 cm

### Emissions value of workplace

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 ground 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 cutting tool set, sieve insert and stand, incl. collecting vessel 3.5 litres**

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, 1800 watt  
 Other voltages on request.

**Cutting tool set made of tool steel**

15.4603.00 Rotor with rotating and fixed knives

**Sieve inserts made of stainless steel**

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

45.2200.10 4 mm square perforation  
 45.2210.10 6 mm square perforation

**Accessories for chromium-free grinding****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**

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  
 15.4560.00 Collecting vessel 60 litres with filter hose

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  
 19.1020.00 For 230 V/1~, 50-60 Hz, 2200 watt  
 19.1010.00 For 100-120 V/1~, 50-60 Hz, 1850 watt  
 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 tool 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 with sieve insert made of stainless steel**

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 grinding****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 with sieve insert made of chromium-free steel ST12**

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

**Further accessories**

45.5820.00 Universal support stand  
 45.5900.00 Sample exhauster with Cyclone separator incl. sample glass 500 ml for 230 V/1~  
 83.3230.00 Sample glass 5 litres  
 83.3220.00 Sample glass 2 litres  
 19.5770.16 Adapter for sample glass 2 and 5 litres  
 83.3210.00 Sample glass 1 litre  
 19.5780.16 Adapter for sample glass 1 litre

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, 3340 watt  
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 tool 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 with sieve insert made of stainless steel

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 grinding

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

45.7112.00 Rotor with V-cutting edges and fixed knives

#### Sieve cassettes with sieve insert made of chromium-free steel ST12

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, 6340 watt  
Consisting of: Power Cutting Mill PULVERISETTE 25, Universal Cutting Mill PULVERISETTE 19, interposed sample divider, 3-litres funnel, underframe and sample exhaustor with Cyclone separator; inclusive hardmetal tungsten carbide cutting tools and sieve cassettes made of stainless steel.  
Other configurations on request.



# 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.de](http://www.fritsch.de) under the menu item Sample Preparation / Solutions.

It's worth to take a look!

Scheduling and information

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