P-19

CUTTING MILL

FRITSCH

TECHNICAL SPECIFICATIONS



EASY WORKING. GREAT RESULTS.

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TECHNICAL DATA

P-19 & P-19 large / P-19 combination – Cutting Mills

	P-19	P-19 large / P-19 combination
Working principle	Cutting	Cutting
Material-type	Medium-hard, soft, brittle, tough, fibrous	Soft, medium-hard, brittle, tough, fibrous
Field of application	Plastics Textiles Agriculture Forestry Environment RohS Analytic Construction materials chemistry Food stuffs	Plastics Textiles Agriculture Forestry Environment RohS Analytic Construction materials chemistry Food stuffs
Cutting tools (different rotors)	With V-cutting edges and fixed knives	With V-cutting edges and fixed knives
	With straight cutting edges and fixed knives	With straight cutting edges and fixed knives
	Disk milling cutter rotor with indexable inserts and fixed knives	Disk milling cutter rotor with indexable inserts and fixed knives
	With notched edges	With notched edges
Materials grinding tools	Hardened stainless steel, hardmetal tungsten carbide, chromium-free tool steel, stainless steel 316L, chromium-free steel DC01	Hardened stainless steel, stainless steel 316L, hardmetal tungsten carbide, chromium-free tool steel, chromium-free steel DC01
Max. feeding size *(depending on material + funnel)*	70 x 80 mm	120 x 85 mm
Max. throughput *(depends on material + sieve size)*	Up to 60 l/h	Up to 85 l/h

	P-19	P-19 large / P-19 combination
Final fineness *(depends on sieve insert – additional sieve sizes available)*	0.1 - 20 mm	0.1 - 20 mm
Feeding	Batch-wise/continuous	Batch-wise/continuous
Rotor speed	50 - 700 rpm (low speed) 300 - 3000 rpm (high speed)	50 - 700 rpm (low speed) 300 - 3000 rpm (high speed)
Rotor peripheral speed	0.26 - 3.66 m/s (low speed) 1.57 - 15.7 m/s (high speed)	0.26 - 3.66 m/s (low speed) 1.57 - 15.7 m/s (high speed)
Rotor dimension	Ø 100 mm x L 85 mm	Ø 100 mm x L 140 mm / Ø 100 mm x L 85 mm
Types of funnels	Standard funnel for long and bulk solids Protected funnel with sample pusher Funnel for long and bulk solids made of stainless steel 316L Sample pusher Funnel for long and bulk solids made of stainless steel 316L	Protected funnel with sample pusher *Other funnels (depending on application) on request.*
Drive	50 - 700 rpm: up to 2.8 kW three-phase motor with frequency converter and flywheel mass for stabilising the drive torque 300 - 3000 rpm: up to 5 kW three-phase motor with frequency converter and flywheel mass for stabilising the drive torque	Up to 9.4 kW three-phase motor with frequency converter + flywheel mass for stabilising the drive torque

	P-19	P-19 large / P-19 combination
Electrical details/ torque	50 - 700 rpm: 380 - 460 V/3~, 50 - 60 Hz, 2800 watt, 67 Nm 300 - 3000 rpm: 380 - 460 V/3~, 50 - 60 Hz, 5000 watt, 30 Nm *For further voltages see accessories table p.6.*	380 - 460 V/3~, 50 - 60 Hz, 9400 watt *Other voltages on request.*
Collector systems/ capacities	Vessel stainless steel 316L capacity 3 litres or 10 litres Sample glasses from 1 to 5 litres in combination with cyclone Stainless steel 316L collecting vessels 20 litres + 60 litres in combination with cyclone	Food grade collecting vessel 60 litres
Standards	CE	CE
Emission sound pressure level at the workplace acc. to DIN ESO 3746 *(workplace related)*	78 dB	78 dB
Weight	77 kg	251 kg
Safety class	IP21	IP21
Dimensions (W x D x H)	44 x 79 x 56 cm	100 x 65 x 145 cm on included underframe

ACCESSORIES

P-19 – Cutting Mill

Order no.	Article
	**Instrument without funnel, cutting tool set, sieve cassette, collecting vessel and stand**
	300 - 3,000 rpm – variable rotational speed adjustment
19.3060.00	for 380 - 460 V/3~, 50 - 60 Hz, 5,000 watts
19.3070.00	for 200 - 240 V/3~, 50 - 60 Hz, 2,350 watts
19.3020.00	for 200 - 240 V/1~, 50 - 60 Hz, 2,350 watts
19.3030.00	for 100 - 120 V/1~, 50 - 60 Hz, 1,725 watts
	Corrosion-resistant stainless steel version 316L
19.3160.00	for 380 - 460 V/3~, 50 - 60 Hz, 5,000 watts
19.3170.00	for 200 - 240 V/3~, 50 - 60 Hz, 2,350 watts
19.3120.00	for 200 - 240 V/1~, 50 - 60 Hz, 2,350 watts
19.3130.00	for 100 - 120 V/1~, 50 - 60 Hz, 1,725 watts
	50 - 700 rpm – variable rotational speed adjustment
19.3040.00	for 380 - 460 V/3~, 50 - 60 Hz, 2,800 watts
19.3000.00	for 200 - 240 V/1~, 50 - 60 Hz, 2,350 watts
19.3010.00	for 100 - 120 V/1~, 50 - 60 Hz, 1,725 watt
	Corrosion-resistant stainless steel version 316L
19.3140.00	for 380 - 460 V/3~, 50 - 60 Hz, 2,800 watts
19.3100.00	for 200 - 240 V/1~, 50 - 60 Hz, 2,350 watts
19.3110.00	for 100 - 120 V/1~, 50 - 60 Hz, 1,725 watts



Accessories for Cutting Mill P-19

Order no.	Article
	Funnels
19.1550.00	Standard funnel for long and bulk solids
19.1850.00	Protected funnel 2 litres with sample pusher
19.1867.00	Protected funnel 2 litres with sample pusher made of stainless steel 316L
19.1559.00	Funnel for long and bulk solids made of stainless steel 316L
	Collecting vessels made of stainless steel 316L
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
45.5192.00	Rotor with notched edges and fixed knives made of hardened stainless steel
45.5198.00	Rotor with notched edges and fixed knives made of stainless steel 316L
45.5185.00	Rotor with straight cutting edges and fixed knives made of hardened stainless steel
45.5199.00	Rotor with straight cutting edges and fixed knives made of stainless steel 316L
45.5200.00	Disk milling cutter rotor with indexable inserts and fixed knives made of hardmetal tungsten carbide
45.5201.00	Disk milling cutter rotor with large chip chambers, indexable inserts and fixed knives made of hardmetal tungsten carbide
	Sieve cassettes made of stainless steel 316L
45.5400.10	0.1 mm trapezoidal perforation
45.5402.10	0.15 mm trapezoidal perforation

Order no.	Article
45.5405.10	0.2 mm trapezoidal perforation
45.5410.10	0.25 mm trapezoidal perforation
45.5415.10	0.3 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
45.5495.10	2 mm square perforation
45.5501.10	4 mm square perforation
45.5513.10	6 mm square perforation
45.5514.10	8 mm square perforation
45.5515.10	10 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 DC01
45.5420.09	0.5 mm trapezoidal perforation
45.5440.09	1 mm trapezoidal perforation
45.5460.09	2 mm trapezoidal perforation
45.5500.09	4 mm square perforation
45.5510.09	6 mm square perforation

Order no.	Article
	Sample exhaustion with cyclone separators
	High-performance cyclone separators
19.1907.00	High-performance cyclone separator made of stainless steel 316L with flexible tube connection, incl. sample glass 1 litre
19.1940.00	High-performance cyclone separator with solid piping made of stainless steel 316L, incl. sample glass 1 litre
	Collecting vessels for high-performance cyclone separators
83.3250.00	Sample glass 1 litre
83.3260.00	Sample glass 2 litres
83.3270.00	Sample glass 5 litres
45.8040.00	Collecting vessel, 20 litres made of stainless steel 316L
45.8050.00	Collecting vessel, 60 litres made of stainless steel 316L (not suitable for 19.1940.00)
	Small volume cyclone separator
19.1937.00	Small volume cyclone separator made of plastic, foodGrade, incl. sample glass 500 ml
	Collecting vessels for small volume cyclone separator
27.1450.00	Sample glass 250 ml
27.1460.00	Sample glass 500 ml
	Exhaust system for high-performance cyclone separators and small volume Cyclone separator
19.3073.00	Switch box for controlling the exhaust system directly via the Cutting Mills P-19 | P-19 large for 100 - 240 V/1~, 50 - 60 Hz, up to 3,600 watts
43.9070.00	Exhaust system, dust category "M" according to DIN EN 60335-2-69 for 230 V/1~, 50/60 Hz, 1,600 watts

Order no.	Article
43.9055.00	Fleece filter bag for exhaust system (pack = 5 pieces)[1)]
43.9052.00	Plastic bag for exhaust system (pack = 5 pieces)[1)]
	[1)]*Remark: One pack/one piece is included in the scope of delivery of the exhaust system.*
	Stands
45.5820.00	Universal support stand
45.5829.00	Stand cpl. welded, electrochemically polished made of stainless steel 316L
45.5800.00	Stand with wheels
45.5805.00	Table-top stand 330 mm high
	Certification
96.0250.00	IQ/OQ documentation (questionnaire format – implementation not included)
	Collecting vessels are also available in further sizes. Cutting tool sets are also available in further materials. Sieve cassettes are also available in further perforations. *PLC module for Cutting Mills P-19 available on request. Simply ask us.*



P-19 with universal support stand and high-performance cyclone separator.

Order no.	Article

Cutting Mill Combination P-19 | P-19 large

19.5030.00	for 380-460 V/3~, 50-60 Hz, 9,400 watts consisting of: Cutting Mill P-19 large with variable rotational speed 50 to 700 rpm, Cutting Mill P-19 with variable rotational speed 300 to 3,000 rpm, interposed sample divider, protected funnel with sample pusher, underframe, sample exhaustion with high-performance cyclone separator made of stainless steel 316L with flexible tube connection, collecting vessel 60 litres as well as exhaust system *Other configurations and voltages on request!* **Cutting tool set and sieve cassette for P-19 large and P-19 are additionally necessary!**



APPLICATION EXAMPLES

P-19 – Cutting Mill

Sample 1: Textile fibres

Accessories:

- Standard rotor with V-cutting edges
- 0.5 mm trapezoidal perforation sieve cassettes

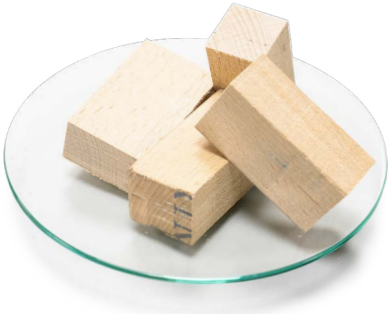




Sample 2: Wood

Accessories:

- Standard rotor with V-cutting edges
- 1 mm trapezoidal perforation sieve cassettes





Sample 3: Nutmeg

Accessories:

- Standard rotor with V-cutting edges
- 1 mm trapezoidal perforation sieve cassettes





Sample 4: Plastics

Accessories:

- Standard rotor with V-cutting edges
- 2 mm square perforation sieve cassettes





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Contact person:

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