

# P-11

KNIFE MILL



## TECHNICAL SPECIFICATIONS



EASY WORKING. GREAT RESULTS.



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# TECHNICAL DATA

## P-11 – Knife Mill

<b>Working principle</b>	cutting
<b>Material-type</b>	moist, oily, fatty, dry, soft, medium-hard and fibrous
<b>Field of application</b>	foodstuffs animal feed agriculture and forestry biology pharmaceuticals chemistry
<b>Cutting tools</b>	standard knife with 4 blades and knife with serrated blades
<b>Material and geometry of knives</b>	stainless steel: knife with truncated cutting edges, sickle knife, sickle knife with serrated blades <hr/> TiN coated: sickle knife with serrated blades
<b>Materials of grinding vessels</b>	plastic PC, glass, stainless steel 316L, Eastman Tritan Copolyester
<b>Max. feeding size</b> <i>(depending on material)</i>	40 mm
<b>Feed quantity</b> <i>(depending on material)</i>	< 1,400 ml <hr/> 540 ml with the Vario-Lid system
<b>Average grinding time</b>	30 sec
<b>Final fineness</b> <i>(depending on material)</i>	< 300 µm
<b>Variable speed settings</b>	2,000–10,000 rpm, turbo function with 14,000 rpm for max. 6 sec
<b>Max. knife peripheral speed</b>	~ 67 m/s; 94 m/s with turbo function
<b>Max. knife diameter</b>	128 mm
<b>Operation modes</b>	continuous, reverse and interval mode



<b>USB interface for SOP management</b>	20 SOP's can be saved, generation of grinding reports
<b>Motor Power</b>	1,250 W
<b>Electrical details/torque</b>	200–240 V/1~, 50/60 Hz, 1,250 W 100–120 V/1~, 50/60 Hz, 1,000 W
<b>Emission sound pressure level at the workplace acc. to DIN ESO 3746 (workplace related)</b>	$L_{pAd} = 71$ dB
<b>Weight</b>	18 kg
<b>Safety class</b>	IP 22
<b>Dimensions (WxDxH)</b>	320 x 430 x 480 mm

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# ACCESSORIES

## P-11 – Knife Mill

Order no.

Article



**Instrument incl. 1.4 liter standard grinding vessel made of autoclavable plastic PC, standard lid and standard knife made of stainless steel**

11.3020.00 for 200–240 V/1~, 50/60 Hz, 1,250 W

11.3010.00 for 100–120 V/1~, 50/60 Hz, 1,000 W



### Accessories for Knife Mill P-11

#### Grinding vessels, 1.4 liter

11.3151.16 \* standard grinding vessel made of plastic PC <sup>1)</sup>

11.3280.00 grinding vessel made of stainless steel 316L <sup>1)</sup>

11.3152.16 grinding vessel made of Eastman Tritan Copolyester

11.3170.00 grinding vessel made of glass <sup>1)</sup>

#### Lids for grinding vessels

11.3203.15\* standard lid made of silicone <sup>1)</sup>

11.3180.00 Vario-Lid system with plunger made of plastic PP and reduction sample pusher for moist, liquid and viscous sample materials <sup>1)</sup>

11.3189.16 reduction sample pusher for dry, solid samples for Vario-Lid system with plunger <sup>1)</sup>

11.3220.00 special lid<sup>1)</sup> for cryogenic comminution with single-use sieve insert for grinding vessel made of stainless steel 316L

11.3224.00 set of single-use sieve inserts (set = 10 inserts)

\* included in the basic price of the instrument.



<sup>1)</sup> Remark: All parts in contact with the sample are autoclavable.



Order no.	Article
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**Knives for standard grinding vessels, grinding vessels made of stainless steel and Eastman Tritan Copolyester**

11.3204.00*	standard knife made of stainless steel <sup>1)</sup>
11.3206.00	knife with truncated cutting edges made of stainless steel <sup>1)</sup>
11.3208.00	sickle knife made of stainless steel <sup>1)</sup>
11.3210.00	sickle knife with serrated blades made of stainless steel <sup>1)</sup>
11.3215.00	sickle knife with serrated blades, TiN-coated <sup>1)</sup>

**Knives for grinding vessel made of glass**

11.3270.00	sickle knife made of stainless steel <sup>1)</sup>
11.3271.00	sickle knife with serrated blades made of stainless steel <sup>1)</sup>
11.3272.00	sickle knife with serrated blades, TiN-coated <sup>1)</sup>

\* included in the basic price of the instrument.

 <sup>1)</sup> **Remark: All parts in contact with the sample are autoclavable.**

**Single-use grinding vessels and reusable grinding vessels**

11.3230.00	adapter for single-use grinding vessel 40 ml and 100 ml volume
83.3280.00	set single-use grinding vessels 40 ml volume made of plastic PP (set = 10 pieces)
83.3282.00	set single-use grinding vessels 40 ml volume made of plastic PP (set = 100 pieces)
83.3283.00	reusable grinding vessel 40 ml volume made of plastic PA with inner vessel 316L, dishwasher safe
83.3285.00	set single-use grinding vessels 100 ml volume made of plastic PP (set = 10 pieces)
83.3287.00	set single-use grinding vessels 100 ml volume made of plastic PP (set = 100 pieces)
83.3288.00	reusable grinding vessel 100 ml volume made of plastic PA with 316L inner vessel, dishwasher safe

**Order no.****Article****Software**

11.3990.00 software P-11Control for Windows  
for automatic control of the mill via USB, for editing, saving and managing of  
the SOPs with grinding report generation

**Further accessories**

83.4075.00 scraper

**Spare Parts**

11.3205.16 replacement knife coupling for the protection of the knife holder

**Certification**

96.0350.00 IQ/OQ documentation (*questionnaire format – implementation not included*)

*Further knives on request!*

*Maintenance packages for the Knife Mill P-11 available on request!*





## APPLICATION EXAMPLES

### P-11 – Knife Mill

#### Sample 1: tomato

##### Milling:

- standard grinding vessel made of plastic PC
- standard knife made of stainless steel
- 5 x 5 sec
- 10,000 rpm



#### Sample 2: beef

##### Milling:

- standard grinding vessel made of plastic PC
- standard knife made of stainless steel
- 3 x 10 seconds (pulsed)
- 10,000 rpm





### Sample 3: sweets

#### Milling:

- grinding vessel made of stainless steel 316L
- special lid for cryogenic comminution
- standard knife made of stainless steel
- Pre-embrittlement with liquid nitrogen
- 3 x 5 sec (pulsed)
- 10,000 rpm



### Sample 4: feed pellets

#### Milling:

- standard grinding vessel made of plastic PC
- standard knife made of stainless steel
- 10 sec (pulsed)
- 10,000 rpm







**FRITSCH GmbH**  
**Industriestraße 8**  
**55743 Idar-Oberstein**  
**+49 67 84 70 0**  
**[www.fritsch.de](http://www.fritsch.de)**  
**[service@fritsch.de](mailto:service@fritsch.de)**

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