

P-23

VIBRATORY MILL

 FRITSCH

TECHNICAL SPECIFICATIONS



EASY WORKING. GREAT RESULTS.



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TECHNICAL DATA

P-23 / P-23 Glovebox ready – Vibratory Mill

Working principle	impact
Material type	medium-hard, brittle, moist
Field of application	chemical analysis environmental research pharmaceuticals & medical science biotechnology forensic analysis materials technology
Grinding tools	grinding bowls and grinding balls
Materials grinding tools	zirconium oxide, hardened stainless steel, PTFE
Initial size / feeding size max.	6 mm
Min. sample quantity	0.1 ml
Max. sample quantity	15 ml
Final fineness <i>(depends on application)</i>	5 µm
Grinding bowl sizes	5 ml, 10 ml, 15 ml, 30 ml
Grinding ball diameter	1–15 mm
Grinding time	seconds to minute <i>(depending on material)</i>
Grinding Process	dry / wet
Cryogenic grinding	liquid nitrogen can be used for pre-cooling in the PTFE bowl
Oscillations per minute	900–3,000 at 9 mm amplitude
Power consumption / Electrical details	100–240 V/1-, 50–60 Hz, 70 W
Emission sound pressure level at the workplace acc. to DIN ESO 3746 <i>(workplace related)</i>	65 dB (L_{pAeq})
Weight	7 kg
Safety class	IP 42
Dimensions (W x D x H)	200 x 300 x 300 mm



ACCESSORIES

P-23 / P-23 Glovebox ready – Vibratory Mill

order no.

article



Instrument without grinding bowl and balls

23.1000.00 for 100-240 V/1~, 50-60 Hz, 70 W

23.1002.00 Glovebox ready
for 100-240 V/1~, 50-60 Hz, 70 W



Accessories for Vibratory Mill P-23

Grinding bowl 30 ml volume *(separate holder 23.1441.00 required)*

23.1440.00 PTFE

23.1441.00 holder for grinding bowl 30 ml volume

Grinding bowls 15 ml volume

23.1427.00 zirconium oxide

23.1409.00 hardened, stainless steel

Grinding bowls 10 ml volume

23.1327.00 zirconium oxide

23.1309.00 hardened, stainless steel

Grinding bowl 5 ml volume

23.1600.00 PTFE

Container for single-use tubes

23.1700.00 container incl. 6 tubes à 0.5 ml, 1.5 ml and 2 ml volume



order no.

article

Grinding balls 15 mm dia. for grinding bowl 15 ml, 10 ml

55.0150.27 zirconium oxide

55.0150.09 hardened, stainless steel

Grinding balls 10 mm dia. for grinding bowl 15 ml, 10 ml, 5 ml

55.0100.27 zirconium oxide

55.0100.09 hardened, stainless steel

Grinding balls 5 mm dia. for grinding bowl 15 ml, 10 ml, 5 ml

55.0050.27 zirconium oxide

55.0050.09 hardened, stainless steel

Grinding balls 1 mm dia. for container for single-use tubes (100 g package)

55.0010.27 zirconium oxide 1 mm dia.

55.0010.09 hardened, stainless steel 1 mm dia.

Certification

96.0290.00 IQ/OQ documentation (questionnaire format)

Grinding balls also available in further sizes.


The P-23 Glovebox ready was specially developed for working in an isolator. It is the solution for grinding in an oxygen- and moisture-free atmosphere or for handling toxic or hazardous substances. The integrated USB-C interface enables fast and reliable connection to external devices. A specially developed software tool allows the P-23 to be conveniently controlled via remote control – ideal for use in shielded environments where direct access is not possible. This allows grinding parameters to be precisely set, monitored and documented – without having to open the isolator.



APPLICATION EXAMPLES

P-23 / P-23 Glovebox ready – Vibratory Mill

Sample 1: Gemstones

Milling:

- 15 ml zirconium oxide grinding bowl
- 1 x 15 mm grinding ball
- 2 min
- 50 Hz



Sample 2: shark teeth

Milling:

- 15 ml zirconium oxide grinding bowl
- 2 x 15 mm grinding balls
- 2 min
- 50 Hz



Sample 3: hair

Milling:

- 10 ml steel grinding bowl
- 5 x 10 mm grinding balls
- 5 min
- 50 Hz



Sample 4: egg shells

Milling:

- 15 ml zirconium oxide grinding bowl
- 1 x 15 mm grinding ball
- 1 min
- 50 Hz





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Contact person:

Contact us now

for a non-binding consultation or individual test grinding to identify your ideal device configuration and optimal grinding parameters.



