

**POLYMIX® PX-MFC 90 D**



Laboratory mill



**DRY SAMPLE PREPARATION  
IN THE LABORATORY**



**KINEMATICA**  
DISPERSING AND MIXING TECHNOLOGY

# POLYMIX® - Laboratory mill

Analysis or quality control requires finely ground samples. Easy to change grinding attachments and sieves extend the range of any samples that can be processed. Simple handling, high user safety and efficient grinding results are just a few of the advantages of this mill.

## RESULTS ARE CRUCIAL

**Attainable particle sizes**  
< 40µm (depending on product)

**Sieve kernel sizes**  
1/5 of sieve diameter is the approximately attainable kernel size e.g. sieve 0.2mm / 5 = 0.04mm (40µm)

**Grinding attachment variants**  
Hammering/Cutting from hardened stainless steel

Hammer attachment: brittle samples  
Cutting attachment: stringy, fibrous samples

## TECHNICAL DATA

**Funnel volume**  
300 ml

**Product discharge**  
For collection tubes with norm grinding NS29

**Sieves**  
0.2 to 6 mm mesh size

**Grinding attachments (convertible)**  
Hammer attachment  
Cutting attachment

**Motor**  
Wear-free three-phase motor  
Gearless direct drive  
Security system auto-off

**Drive power**  
1000W

**Speed range**  
50 to 6'000 rpm

**Sound level (without load)**  
70 dB(A) for 6'000 rpm

**Supply voltage**  
100 - 230 V ± 10%, 50Hz / 60Hz

**Maximum relative humidity**  
80 % in storage  
80 % during operation

**Operating temperature**  
0 - 40 °C

**Protection class according to DIN**  
IP 20

**Measurements (L x W x H)**  
325 x 251 x 480 mm

**Weight**  
12 kg

**Standard EMC**  
IEC/EN 61000-6-2 / EN 61000-6-3

**Safety Norm**  
IEC/EN 61010-2-51

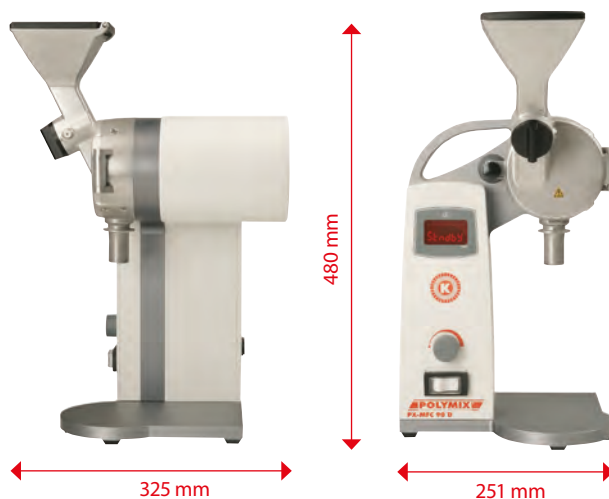
## YOUR LABORATORY EXPERT

This laboratory mill is characterized by a very robust design using solid milled parts and hardened components that have been designed for high wear and tear found with such processes as grinding of stones which can have a hardness of up to 6 on the Mohs scale.

You will receive tried and tested Swiss quality.

## ERGONOMICS:

- Dust protected main safety switch
- Gearless speed control
- Illuminated speed- and status display
- Funnel with hinged lid
- Refilling during operation is possible depending on the product
- Sample dosing or addition with turnstile
- Tight-fitting stodger in grinding chamber for subsequent application of pressure
- Grinding attachment variants can be easily changed by customer
- Tool free sieve change
- Motor stop when opening grind chamber
- Very simple cleaning process
- Carrying handle
- Very quiet maintenance-free motor
- Integrated excess load-, excess heat- and jam protection
- Automatic standby mode





# Applications / Operating range



**Grinding of solids for general sample preparation**

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**Grinding samples for dry analysis or analysis in liquids**

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**Sample preparation in content analysis**

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**Sample preparation for quality control**

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**Pollutant analysis (e.g. ground samples, foodstuffs etc.)**

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*This list represents a selection of possible applications.*

# Order information and accessories

Our modular accessories provide the at most in flexibility. Switching grinding attachments is as easy as changing sieves. Our application experts are available to answer your questions at any time.



## MILL

Order no.	Designation
<b>Mill with hammer strike-grinding attachment</b>	
35010020	POLYMIX® PX-MFC 90 D, <b>230 V / CH</b> device cable, hammer attachment, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
35010021	POLYMIX® PX-MFC 90 D, <b>230 V / EU</b> device cable, hammer attachment, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
35010022	POLYMIX® PX-MFC 90 D, <b>230 V / UK</b> device cable, hammer attachment, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
35010023	POLYMIX® PX-MFC 90 D, <b>100-120 V /</b> device cable, hammer attachment, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
<b>Mill with cutting-grinding attachment</b>	
35010030	POLYMIX® PX-MFC 90 D, <b>230 V / CH</b> device cable, cutting attachment incl. inside extractor, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
35010031	POLYMIX® PX-MFC 90 D, <b>230 V / EU</b> device cable, cutting attachment incl. inside extractor, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
35010032	POLYMIX® PX-MFC 90 D, <b>230 V / UK</b> device cable, cutting attachment incl. inside extractor, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes
35010033	POLYMIX® PX-MFC 90 D, <b>100-120 V /</b> device cable, cutting attachment incl. inside extractor, sieve 2.0 mm, tool set, wooden frame with 12 collection tubes

## STODGER

Order no.	Designation
35080001	Stodger for PX-MFC 90 D
<b>Description</b>	
For active insertion of fibrous materials, which do not reach the grinding chamber due to their weight	



## OTHER ACCESSORIES

Order no.	Designation
35080004	Replacement collection tubes from polystyrene (12-piece set)
35080003	Wooden frame for 12 collection tubes with drawer for tool set

## GRINDING ATTACHMENTS

Order no.	35031001	35031002
<b>Description</b>	<b>Hammer attachment</b> Consists of 3-armed rotor and grooved Stator. Tool included.	<b>Cutting attachment</b> Consists of 3-armed rotor with cutting knives and stator with 3 cutting bars. Tool included.



## SIEVE ATTACHMENTS

Hole diameter	0.2 mm	0.5 mm	0.8 mm	1.0 mm	1.5 mm	2.0 mm	3.0 mm	4.0 mm	5.0 mm	6.0 mm
<b>Order no.</b>	35095002	35095005	35095008	35095010	35095015	35095020	35095030	35095040	35095050	35095060
<b>Description</b>	Depending on the sample, even finer results can be achieved by grinding with two or more sieves with progressively smaller hole sizes. Each mill includes a 2.0 mm sieve attachment									



Sieve sizes: Depending on the product, 1/5 of sieve diameter is the approximately attainable particle size Example: Sieve 0.2mm / 5 = 0.04mm (40µm)



# Grinding attachments

If there are questions regarding the use of our mill for your application after speaking with a specialist, our application lab will be happy to run your sample and send the results for your inspection.

## NOTE ABOUT GRINDING ATTACHMENTS

Wet samples or samples with high fat content gum up the sieve and chamber, producing a useless grinding result. For these types of samples KINEMATICA provides the POLYMIX® mixer and POLYTRON® homogenizers. They cover a broad range of samples.

## CUTTING ATTACHMENT

Consists of a rotor with three hardened cutting knives and stator with 3 cutting bars.

### TECHNOLOGY

During the cutting process, the sample is spun around the grinding chamber and cut until the desired particle size has been achieved. The ground sample passes through the sieve into the collection container. Particles that are larger than the sieve diameter remain in the mill and can be removed by opening the grinding chamber.

Ideal for processing of dry, stringy, fibrous and fat-free materials such as:

Wood, bark, roots, leaves, straw, corks, dried fruit, dried fat-free meat, fish fins, fish bones, feathers, leather, leather skin, wool, cotton, linen, paper, coals, turf, grass, dried resins, synthetic materials, fiber glass, plastic pellets, various textiles, felt, etc.



BEFORE

AFTER



## HAMMER ATTACHMENT

Consists of a rotor with three hardened strike hammers and a grooved stator.

### TECHNOLOGY

During the grinding process, the sample is spun around the grinding chamber and struck until the desired particle size has been achieved. The grinding sample passes through the sieve into the collection container. Particles that are larger than the sieve diameter remain in the mill and can be easily removed by opening the grinding chamber.

Ideal for processing of dried, brittle and fat-free materials such as:

Dried grains, oats, malt, pectin, raw and roasted coffee beans, dry beans, fish skeletons, nut shells, bones, pebbles, rock, amber, ceramics, etc.



BEFORE

AFTER



## YOUR APPLICATION IS OUR FOCUS!

KINEMATICA is a leading manufacturer of dispersing and mixing technology for standard and customized applications in the lab, pilot plant and production areas of pharmaceutical, chemical, food, cosmetic and biotech or life science companies worldwide.

Our POLYTRON® batch and MEGATRON® In-line Homogenizers are suitable for many applications:

- Dispersing of non-soluble liquids or solids into liquids to finest emulsions/multiple emulsions or suspensions
- Induction and dispersion of powders into liquids
- Foaming by gas induction into liquids
- Disintegration of tissue samples for preparation in further analysis
- Dispersing of various samples for quality control

We also deliver POLYMIX® Micro Dry Grinding Mills and a variety of POLYMIX® and MICROTRON® Overhead Stirrers and Mixers.

Whatever your application, we are confident that our team of specialists, with over 60 years of experience, will provide the best solution for you.

## YOUR SATISFACTION IS OUR GOAL!



**KINEMATICA**  
DISPERSING AND MIXING TECHNOLOGY



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## BRAND NAMES WITH HISTORY



Batch dispersing/homogenizing units



High turbulent mixing



Inline dispersing/homogenizing units



Dispersing/homogenizing Reactors



Stirrers and dry Mills



Mixer/Blender



Viscometers