

# NETZSCH



## Submersible Basket Mill *MASTERMILL*

The very Highest Degree of Efficiency

CHEMICAL INDUSTRY | a Business Field of  
NETZSCH Grinding & Dispersing

# Submersible Basket Mill

## MASTERMILL

The NETZSCH *MASTERMILL* is a batch-type basket mill for ultra-fine grinding in mobile and stationary mixing hoppers. This unique system comprises separate drives for the grinding tools within the grinding basket, for both mixing-devices and devices for conveying of the product being ground in the grinding chamber. With this assembly, the *MASTERMILL* can be used with various shapes of hopper. Both drives are controlled separately via a frequency converter and are infinitely variable. The distinctive feature of this machine is the possibility of optimizing the circulation

of the product depending on its flow behavior but without changing the grinding parameters. Due to the special construction of this machine, the total necessary driving power is lower compared to similar machines.

The agitator, which is driven by a grinding shaft, rotates within the grinding basket. The grinding zone which comprises the gap between the rotating agitator and the grinding basket, is filled with grinding beads. The agitator consists of a cylindrical body equipped with impellers. Their rotation activates

the grinding beads. The grinding basket cover is in coolable execution. A gap screen is fitted on the circumference of the milling basket. The feed product is fed into the grinding zone via the opening of the milling basket at the upper end. Here it is processed and discharged from the grinding zone via the gap screen on the circumference of the grinding basket.

This simple configuration guarantees an effective grinding of the product and makes the subsequent cleaning of the mill quicker and more thorough.

### Special features

- Ergonomic design
- Use of various hopper geometries possible
- Covers for various hopper diameters with flap for checking and addition of components
- Hopper grips with traction switch for safe fixing of the milling hopper
- Machine suitable for ATEX Zone 1
- Hydraulic lifting of the machine upper part
- Motor with noise- and ventilator protection
- Operating panel for EX-zone, intrinsically safe
- Characterization of the quality via the dispersing time or energy input

### Your advantages is our focus

- High flexibility of batch size as well as of shape- and size of hopper
- Higher product throughput capacity through the grinding basket
- Narrow particle size distribution
- Low specific energy requirement
- Constant temperature profile, no hot spots
- Wide range of product viscosities can be processed







# Executions

## Technical Data

### Standard features

- The grinding basket execution ensures the optimal feeding of the product and prevents unwanted discharge of the grinding beads
- The separately adjustable drives of the mixer and the agitator provide an outstanding flexibility for mixing- and dispersing processes
- The mixing agitators ensure an even product circulation and enable customers to process products with a large range of viscosities
- The operating speeds for the mixing tools and for the agitators can be adjusted either manually or via an automatic control system
- For an optimum and efficient control of the product temperature the processing tank and the grinding basket cover are in double-walled and temperature-controlled execution
- Cleaning and product change are possible within a short time

### Available options

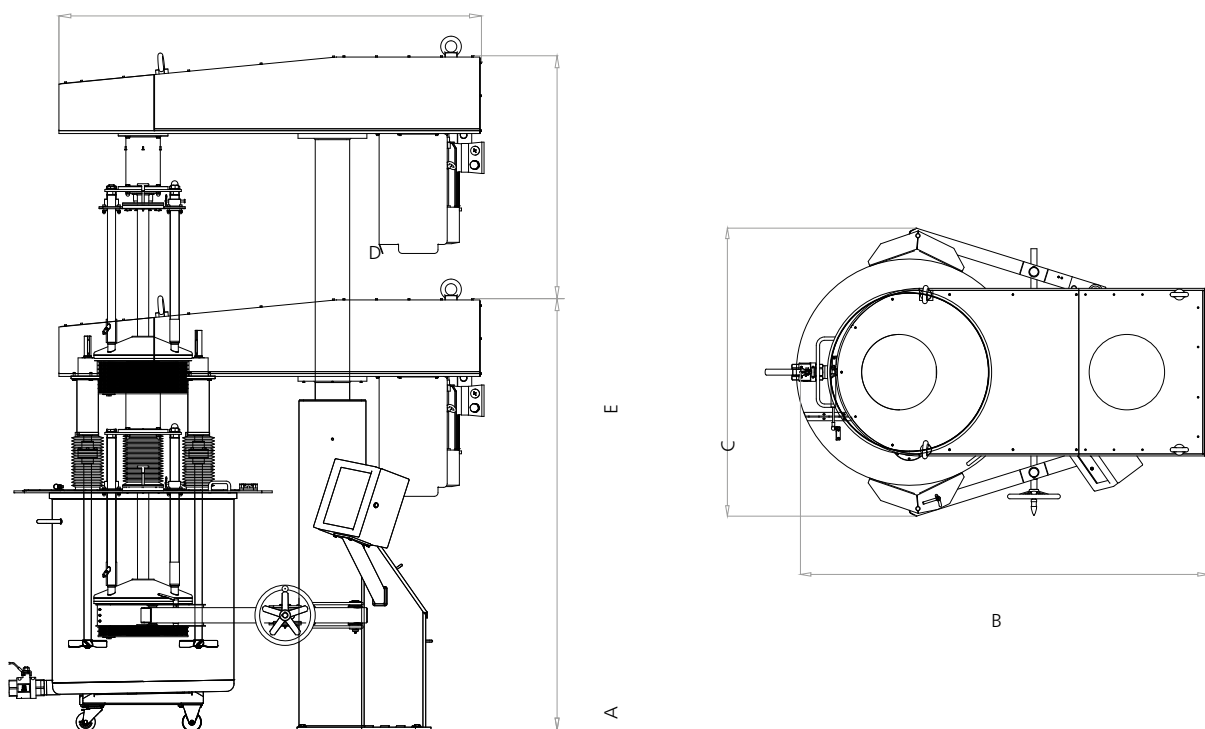
- Vacuum features
- Further material features



Grinding basket and agitators *MASTERMILL*



*MASTERMILL 3*



Technical data	MASTERMILL 3	MASTERMILL 9	MASTERMILL 18	MASTERMILL 30	MASTERMILL 50	MASTERMILL 90
A [mm]	1 150	1 660	1 760	2 560	3 030	3 610
B [mm]	-	1 800 max.	2 500 max.	2 800 max.	3 250 max.	4 200 max.
C [mm]	1 200	1 000 max.	1 800 max.	1 800 max.	2 000 max.	2 500 max.
D [mm]	840	1 650	1 900	2 210	3 150	3 800
E [mm] (stroke)	-	795	850	970	1 500	1 800
Weight [kg]	350	1 130	1 810	2 040	2 270	5 220
Batch size [l]	6 - 10	50 - 200	200 - 400	300 - 1 500	1 500 - 2 000	2 000 - 5 600
Drive power (Mill) [kW]	2.2	7.5	15	22	37	55
Drive power (Stirrer) [kW]	0.75	1.5	4	7.5	15	37
Mill speed [min <sup>-1</sup> ]	1 100 - 3 000	600 - 1 650	420 - 1 260	220 - 660	200 - 500	200 - 400
Mixer speed [min <sup>-1</sup> ]	180 - 2 600	180 - 1 800	180 - 1 400	80 - 800	75 - 750	50 - 500
Basket volume [l]	0.5	4	8	26	41	67
Screen size [mm]	0.3 / 0.4 / 0.6 / 0.8					

# Control and Monitoring

## NETZSCH BASE

- Power measurement and -indication of the agitator- and the mixer drives
- Malfunction lamp set for indication of excess- and/or too low limit values
- kWh counter for recording energy input (kWh), pre-selection value for switching off process and display switching-over to current power input (kW)
- Reset key for kWh-counter for reset to zero
- Infinitely variable speeds for agitator and mixer via frequency converter with digital speed display and spring-return button
- Raise/Lower



## NETZSCH TEXT

- Indication of operating parameters:  
Product temperature, power input of the agitator, kWh-counter
- Specification of set- and limit values:  
MAX product pressure, MAX product temperature
- Pre-selection values for automatic operation:  
Machine is started-up to these values
- Indication of operating- and malfunction messages
- MAX energy input of agitator
- Operating time



## NETZSCH GRAPH

- Display of trend charts of the most important operating data
- Process data base (set- and limit values for max. 98 sets of product data)
- Automatic operation with the incorporation of all process parameters from the data bank
- For display of process values:  
speed, agitator drive, peripheral speed of the agitator, power input of the agitator drive, speed agitator drive, peripheral speed of agitator, power input of agitator drive, product temperature, energy input of agitator, tank pressure (only for vacuum execution)
- For specification of set-values:  
Agitator speed, mixer speed
- For specification of limit-values, operating- and malfunction messages:  
MAX product temperature, MAX energy input of agitator, Operating time




# Applications

## Applications

- Industrial paints
- Construction paints
- Automobile paints
- Coil coating
- Screen printing inks
- Latex suspensions
- Pigments
- Pigment pastes





The NETZSCH Group is an owner-managed, international technology company with headquarters in Germany. The Business Units Analyzing & Testing, Grinding & Dispersing and Pumps & Systems represent customized solutions at the highest level. More than 3,800 employees in 36 countries and a worldwide sales and service network ensure customer proximity and competent service.

Our performance standards are high. We promise our customers Proven Excellence – exceptional performance in everything we do, proven time and again since 1873.

## Proven Excellence. ■

### Business Unit Grinding & Dispersing – The World's Leading Grinding Technology

NETZSCH-Feinmahltechnik | Germany  
NETZSCH Trockenmahltechnik | Germany  
NETZSCH Vakumix | Germany  
NETZSCH Lohnmahltechnik | Germany  
NETZSCH Mastermix | Great Britain  
NETZSCH FRÈRES | France  
NETZSCH España | Spain  
ECUTEC | Spain

NETZSCH Machinery and Instruments | China  
NETZSCH India Grinding & Dispersing | India  
NETZSCH Tula | Russia  
NETZSCH Makine Sanayi ve Ticaret | Turkey  
NETZSCH Korea | Korea  
NETZSCH Premier Technologies | USA  
NETZSCH Equipamentos de Moagem | Brazil

NETZSCH-Feinmahltechnik GmbH  
Sedanstraße 70  
95100 Selb  
Germany  
Tel.: +49 9287 797 0  
Fax: +49 9287 797 149  
info.nft@netzsch.com

**NETZSCH®**

[www.netzsch.com](http://www.netzsch.com)