

LUMP BREAKER AND SIZE CALIBRATION

The Gericke Nibbler is a coarse grinder, granulator and pre-breaker for the size reduction in a broad range of applications.



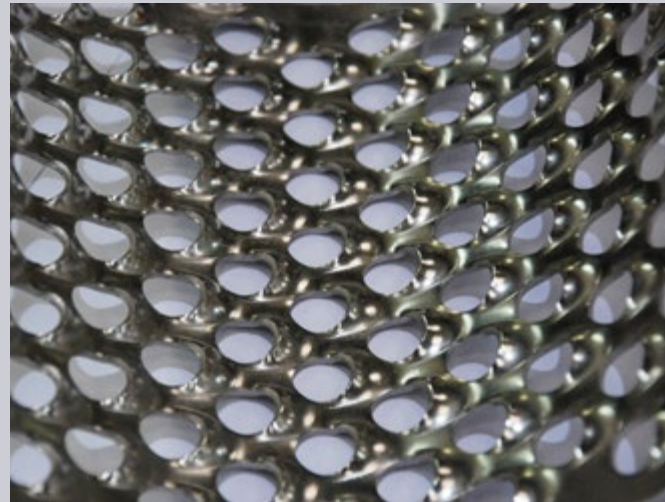
INCREASE THE EFFICIENCY OF YOUR BULK PROCESSES!

Nibbler and deagglomerator

Nibblers are used as part of many processes, often directly integrated into the product stream.

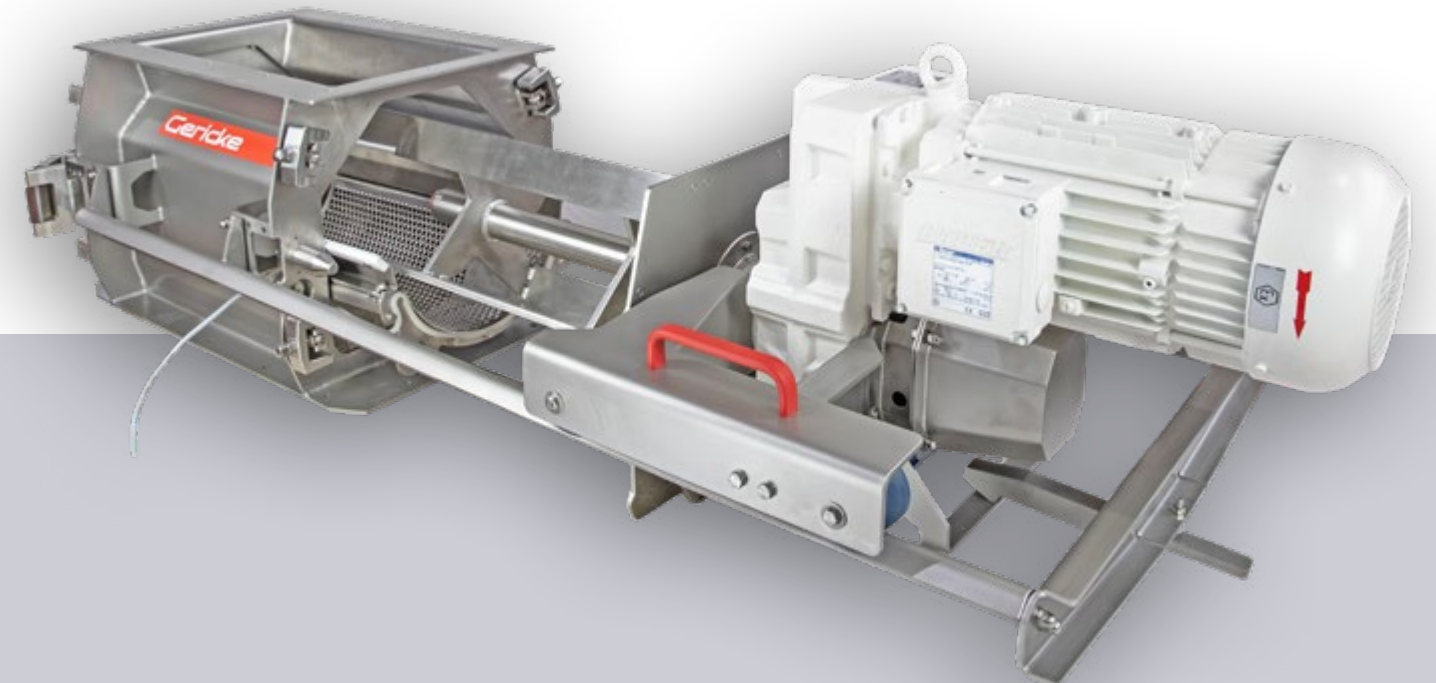
Main process uses are:

- Deagglomeration after drying, spraying and mixing etc.
- After storage in silos
- Below big bag stations, tipping stations, sacks, drums and containers where compaction may occur
- Before secondary processing including milling, grinding and feeding
- Before pneumatic or mechanical conveying
- Reprocessing/reclaiming of oversize or off-spec materials
- After band driers



Operation principle

3 or 4 paddles are fixed onto a rotating shaft. The rotation and angle of the paddles sweep the product against the serrated screen with the reduced particles passing through the holes. Size reduction is achieved by a cutting action (not grinding) and the breaking effect of brittle materials. The Nibbler works with a low peripheral tip speed. The gap between the rotor blade and screen is adjustable.



Your benefits with all our deagglomerators and lump breakers:

- Compact and robust design but high capacity size reduction
- Consistent particle size and high throughput with lower heat generation than traditional grinding solutions
- Increased process efficiency due to increased particle surface area
- Low power consumption and low noise levels.
- Minimum product temperature rise and fines generation, due to low rotational speed
- Consistent particle size
- No special tools required for maintenance, easy to access
- Adjustable paddle blades
- Customized versions available for special applications (heating/cooling, higher pressure, heavy duty etc)



Calibration of raw material upstream of reactor vessel

Meet the GERICKE Nibbler GNB!

- Very short downtime with easy to clean design features giving full access with an optional extractable drive
- Features allowing quick inspection and changing of the main screen
- Easy adjustment of paddle / cutting screen clearance for maximum process flexibility
- Optional metal-to-metal contact detection for maximum process safety
- EHEDG design conformity, wash-out and wash-in-place seals
- ATEX versions for gas and dust environments (also combined)
- Highly efficient, low power consumption and low noise emission levels



FLEXIBLE TO FIT FOR MANY NEEDS

Size reduction of filter cakes

Filter cakes are created when separating solids from a suspension by filtering, centrifuging or drying. The compressed filter cakes are frequently up to 1 m² in size and several centimeters thick. The product has up to 50% residual moisture when discharged from the filter press. The compressed filter cakes are reduced to the required granulate size by a Nibbler.



Integrated with your process

Nibblers are part of a process, and our product line is easy to integrate. Our designs are used in combination with sack tipping stations, Big Bag unloaders or just at any step where you need to calibrate particle size to ensure your process quality. Mobile versions give you even more flexibility.

Calibration of frozen products

Frozen products such as fruits, berries and vegetables are cut to an exact size for further processing in the food industry to ensure consistent quality in the final product. The products are sent for further processing without prior thawing. The frozen products are processed to different sizes depending on the product requirements.



RotaSafe Contact Detection

Gericke's experience with real time diagnostic of its equipment also brings metal-to-metal contact detection to this device. If a contact is detected between the basket and the paddles, a signal is sent to the control system to isolate power to the drive motor. This helps to protect the process equipment and the products and significantly increases the production safety!

Creating semi-dry pellets

The slurry product, via a loss-in-weight feeder, enters the Nibbler where the rotary blades rotate through the thick mass, cut and pushing the product through a serrated screen. The size can be altered at any time by changing out the screen size: pellet size options 1 mm to 25 mm.

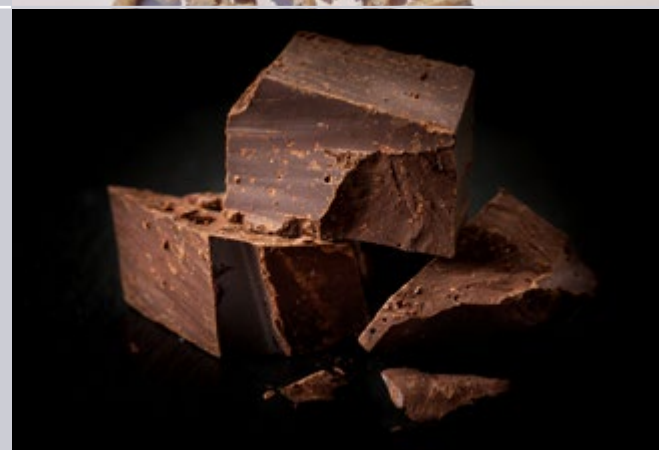


Accessibility and flexibility

To further increase the usability of the Nibbler, GERICKE has completely redesigned the housing and the screen. It gives now even better access to all areas of the equipment for inspection and cleaning. This allows also for fast change to other screen sizes if required.

Surface increase of chocolate blocks

A consistent and large surface is key in many processes to increase efficiency and quality, for example in melting and mixing processes.



Very compact and efficient

Gericke Nibblers combine a compact footprint with high throughput and low energy consumption. The overall process improvement allows for a quick return on investment.

FROM SMALL TO LARGE

Specifications and sizes

- Available in sizes from 200 mm up to 1200 mm, for process rates from less than 10 kg/h up to 50.000 kg/h
- Screen sizes from 1 mm to 25 mm
- Screen materials perforated plate/serrated/woven wire
- Optionally ATEX approved
- Hygienic options

Type 1	Inlet size (mm)	Max. throughput 1)
NBS 200/200	200 x 200	1.500 l/h
NB 300/350	300 x 350	7.000 l/h
GNB 530	300 x 530	12.000 l/h
NB 300/800	300 x 800	22.000 l/h
NB 450/800	450 x 800	30.000 l/h
NB 450/1200	450 x 1200	45.000 l/h

1) The effective throughput depends on the product properties as well as the basket and screen assembly



TRIALS WHEREVER YOU WANT

Tests on an industrial scale reduce planning time and increase process safety

Test centres in Switzerland, France, England, Brazil, USA and Singapore are available for customer tests under near-production conditions with original machines.

- Testing of machines and prototypes with original products
- Checking of performance ranges and accuracies
- Testing of the interaction of multiple machines
- Gaining of experience for product processing
- Sampling for laboratory tests and market response
- Customer training
- Remote test monitoring available



Rent a Nibbler!

There are many reasons why you may prefer to do tests in your own factory. Sometimes the product must be fresh, keeping its characteristics from an upstream production process, or perhaps it cannot be transported to somewhere else. Sometimes you just need to add an additional ingredient into an existing process, so you rent a Nibbler. Or you run a campaign for two months a year and don't want to invest in a machine. Rent it from us, produce your goods and send the equipment back afterwards.



Mobile sack tipping station with integrated nibbler.

PRODUCT EXAMPLES

Product Examples	Before Nibbler	After Nibbler
Activated carbon briquettes	4,5 – 6	0,5 – 1,5
Alu-magnesium fragments	10 x 90 x 150	< 6
Baked products (incl. fresh dough)	80 x 80 x 300	< 10
Biscuits	20 – 100	< 2
Breakfast beverage chips	40 - 50	1 - 5
Carbamide	Agglomerates	2 - 3
Ceramic waste, pre kiln	Ø 70 x 200	3 - 5
Charcoal blocks	20 x 30 x 50	< 6
Chocolate blocks	150 x 25 x 250	5 - 6
Chocolate, powder mix	Agglomerates	< 2
Cocoa	Agglomerates	< 1
Crystal sugar	Hard granules	< 3
Disulphide	60 x 60 x 10	< 3
Dyestuffs	Agglomerates	< 3
Epoxy resins	10	< 2
Food stuffs, enriched	30 x 100 x 200	< 2
Magnesium fluoride	6 - 8	< 3
Milk powder (50% fat)	20 - 40	< 2
Nougat	20 x 35 x 40	2 - 3
Optical brighteners	20 x 30 x 40	< 1
Pectin (50% moist)	Granules	< 2
Pesticides	20 x 30	2 - 3
Plastic	2 x 30 x 80	< 3
Polyphosphate	Large granules	< 10
Polyvinylacetate	10 - 25	5 - 8
Potassium chloride	Bag size	< 2
Salts	Agglomerates	< 2
Soap wastes	Fragments	10 - 20
Tablets	20 x 10	< 1
Wall-paper adhesive	1 x 5 x 5	< 1
Wax	Granules	< 5

Size in mm



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