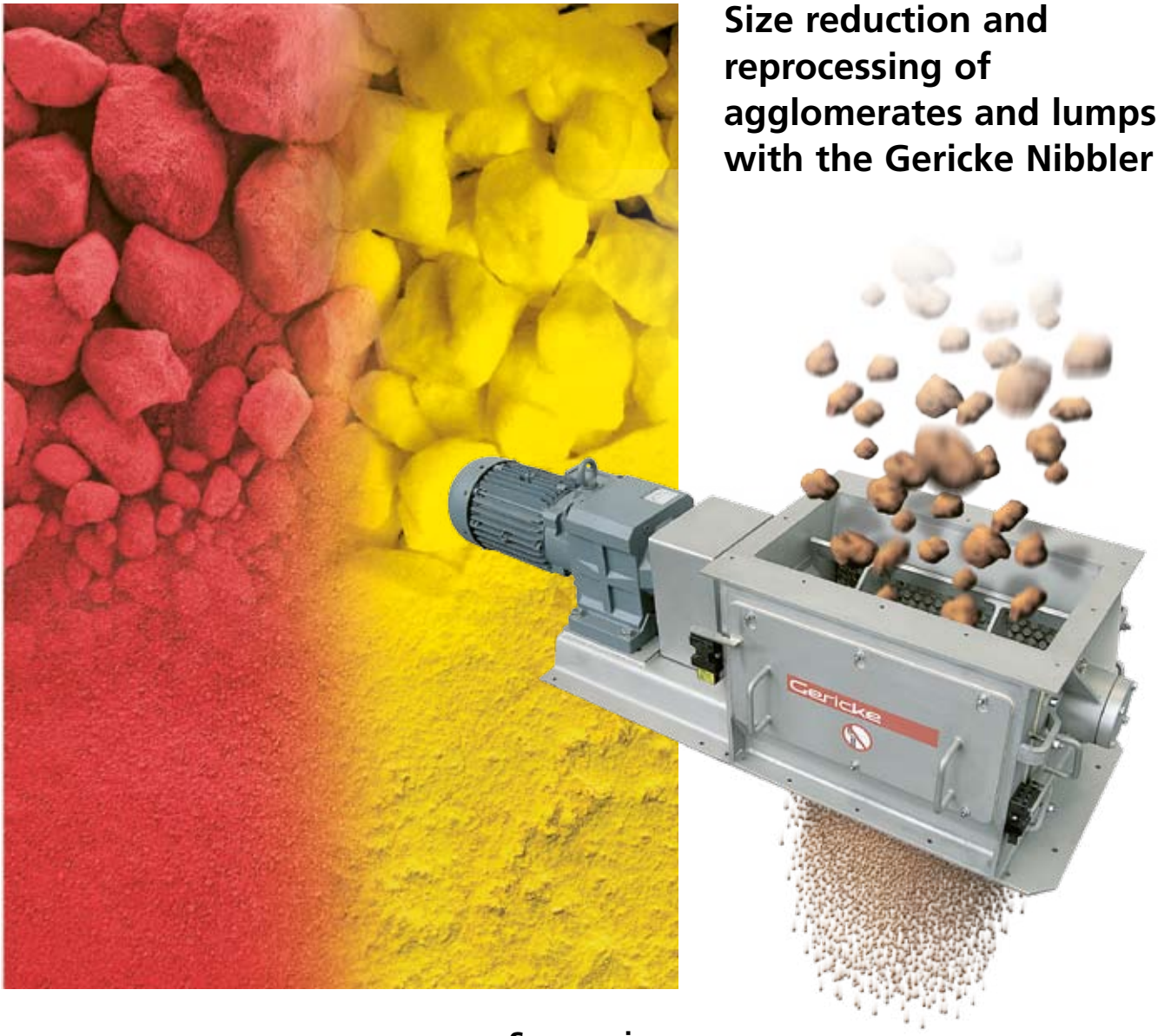
Gericke

Powder Processing Equipment & Systems

Size reduction and reprocessing of agglomerates and lumps with the Gericke Nibbler

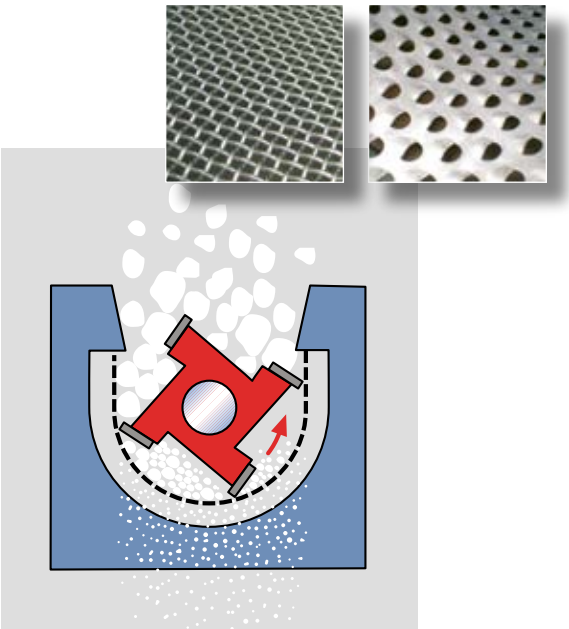


Screen sizes from 1 to 25 mm

Leaflet No. 634 en
Replaces No. 586/1/e

Select your required particle size

Nibbler model 300/450 with side cleaning door and screen

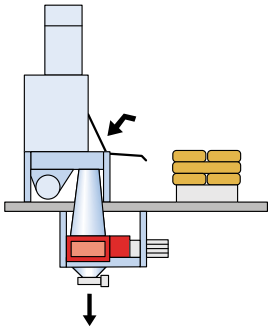


Paddle and screen assemblies

Size reduction of agglomerates, granules and lumps etc.

Installation after:
- Drying processes
- Filter presses (filter cake)
- Liquid addition and spraying processes
- Storage in silos, containers, sack tipping or Big bag stations
- Processing, extrusion or conditioning

Installation before:
- Pneumatic conveying systems
- Secondary size reduction processes
- Mixing
- Filling and packing lines
- Dissolving or melting processes
- Recycling/reprocessing/reclaiming of rejected materials



Installation of Nibbler: after sack tipping, container or Big bag unloading stations

Final particle size is flexible
using a fast changeover screen or mesh sieve basket assembly.
Screen sizes: 1, 2, 3, 4, 6, 8, 10, 14, 18 or 25 mm.
Mesh sizes of sieve basket available: 0.8, 1.0, 1.6, 3.15 or 5 mm.

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.

Advantages
- Improves process efficiency
- Simple and flexible handling
- Safeguards material processing
- Minimises dust and fine particles
- Reduces component wear
- Energy saving
- Reducing over heating of processed material

Flexibility for most applications

Specifications available
- Carbon and stainless steel
- Large inspection access doors for easy and efficient cleaning
- Quick removal of basket and screen assembly
- Fully adjustable gap between rotor and paddles
- Various options for sealing arrangements
- Option for CIP cleaning

ATEX Compliant
- Nibbler with ATEX certification available
- Definition II 1 GD or 2 GD

E.g. the Nibbler is suitable for zone 21 or 22, with zone definition inside zone 20.

Type 1)	Inlet size (mm)	Rotor 2)	Max. throughput 3)
NBS 200/200	200 x 200	1,1 kW	1.500 l/h
NB 300/350	300 x 350	2,2 kW	7.000 l/h
NBS 300/450	300 x 530	4,0 kW	12.000 l/h
NB 300/800	300 x 800	4,0 kW	18.000 l/h
NB 450/800	450 x 800	5,5 kW	24.000 l/h

1) Other models on request
2) Speed 60 - 80 RPM; optional and special rotors available
3) The effective throughput depends on the product properties as well as the basket and screen assembly

Pharmaceutical execution for exacting requirements, special requirements available

Picture left:
Nibbler installed after filter press for breaking up filter cake

Picture right:
Nibbler mounted onto skid frame

Economical size reduction for a wide range of applications

NBS 200/200 installed before pneumatic dense phase conveying

Sack tipping station for breaking up of granules; execution for CIP cleaning

Gericke GCN Cone Nibbler completes the range of products for applications requiring a very fine particle size, or if increased bulk density is required. Screen sizes range from 2000 to 150 µ. Please request the appropriate documentation for this equipment.

Cone Nibbler GCN

Product (Example)		Maximum Before Nibbler (mm)	particle size After Nibbler (mm)
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 – 3
Breakfast beverage	Chips	40 - 50	1 - 5
Carbamide	Large hard agglomerates		2 - 3
Ceramic waste, pre kiln	∅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	up to 20 - 30	up to 2
Cocoa	Agglomerates		% 1
Crystal sugar	Hard granules due to storage		< 3
Disulphide	Granules	60 x 60 x 10	ca. 3
Dyestuffs	Agglomerates		< 3
Epoxy resins		up to 10	ca. 2
Food stuffs, enriched	Cakes	30 x 100 x 200	< 2
Latex	Granules		Granules
Magnesium fluoride	Lumps	6 - 8	< 3
Milk powder (50% fat)		20 - 40	1 - 1,5
Nougat		20 x 35 x 40	2 - 3
Optical brighteners	Granules	20 x 30 x 40	< 1
Pectin (50% moist)	Granules, moist	ca. 2	
Pesticides		20 x 30	2 - 3
Plastic	Chips	2 x 30 x 80	< 3
Polyphosphate	Granules	Fist size	< 10
Polyvinylacetate		10 - 25	5 - 8
Potassium chloride	Lumps	Bag size	< 2
Salts	Agglomerates	Nodules	up to 2
Soap wastes	Fragments		10 - 20
Tablets		20 x 10	% 1
Wall-paper adhesive	Chips	1 x 5 x 5	< 1
Wax	Granules		Fines granules

Our comprehensive test lab offers trials on our entire range of equipment.

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