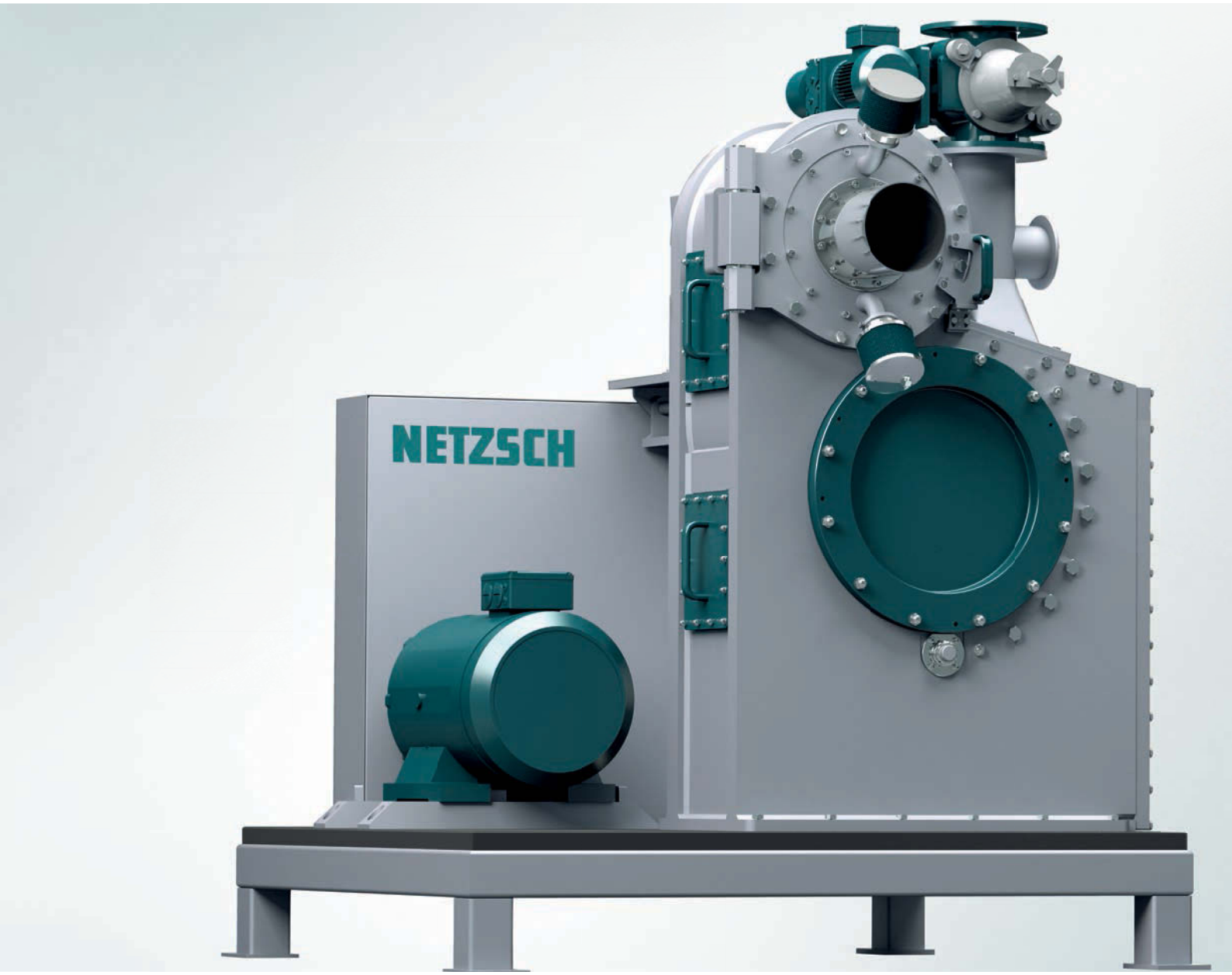
NETZSCH



NETZSCH *SecoMy*® *S*

Precision Cutting Redefined!

Business Unit
GRINDING & DISPERSING

SecoMy® S

Precision Cutting Redefined!

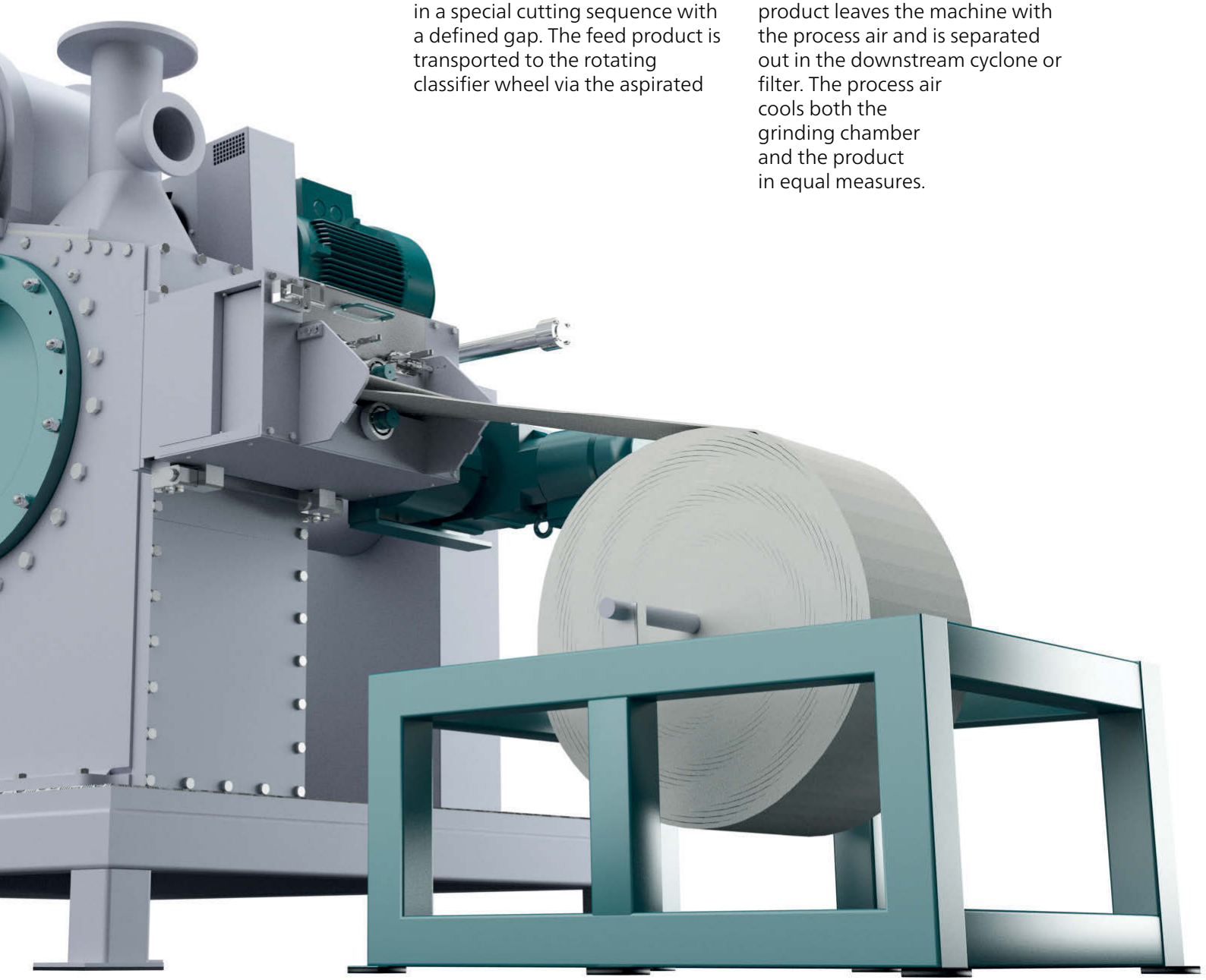
The NETZSCH range of Fine-Grinding Mills type *SecoMy® S* consists of rapidly running cutting mills with a high rate of cuts which can be used for the ultrafine grinding of cuttable materials.

In contrast to classic cutting mills, final finenesses of up to 45 µm can be reached in a one-step process with the *SecoMy® S*. This is possible due to an air classifier integrated into the machine housing, which replaces the traditionally-used screen mesh. A dynamic classifier wheel classifies the ground product within the mill and forms the product discharge for the fine fraction. Particles, which are too coarse, are rejected by the classifier wheel and undergo the grinding process a second time. The actual target fineness for the final product is determined by adjusting the classifier wheel.

With this design, high degrees of fineness can be achieved, which were previously not possible with the screen meshes used. In addition to this, thanks to the integrated classifier wheel, the well-known problems of blockage and clogging of fine screen meshes and their short service life have been eliminated with the newly developed *SecoMy® S*.

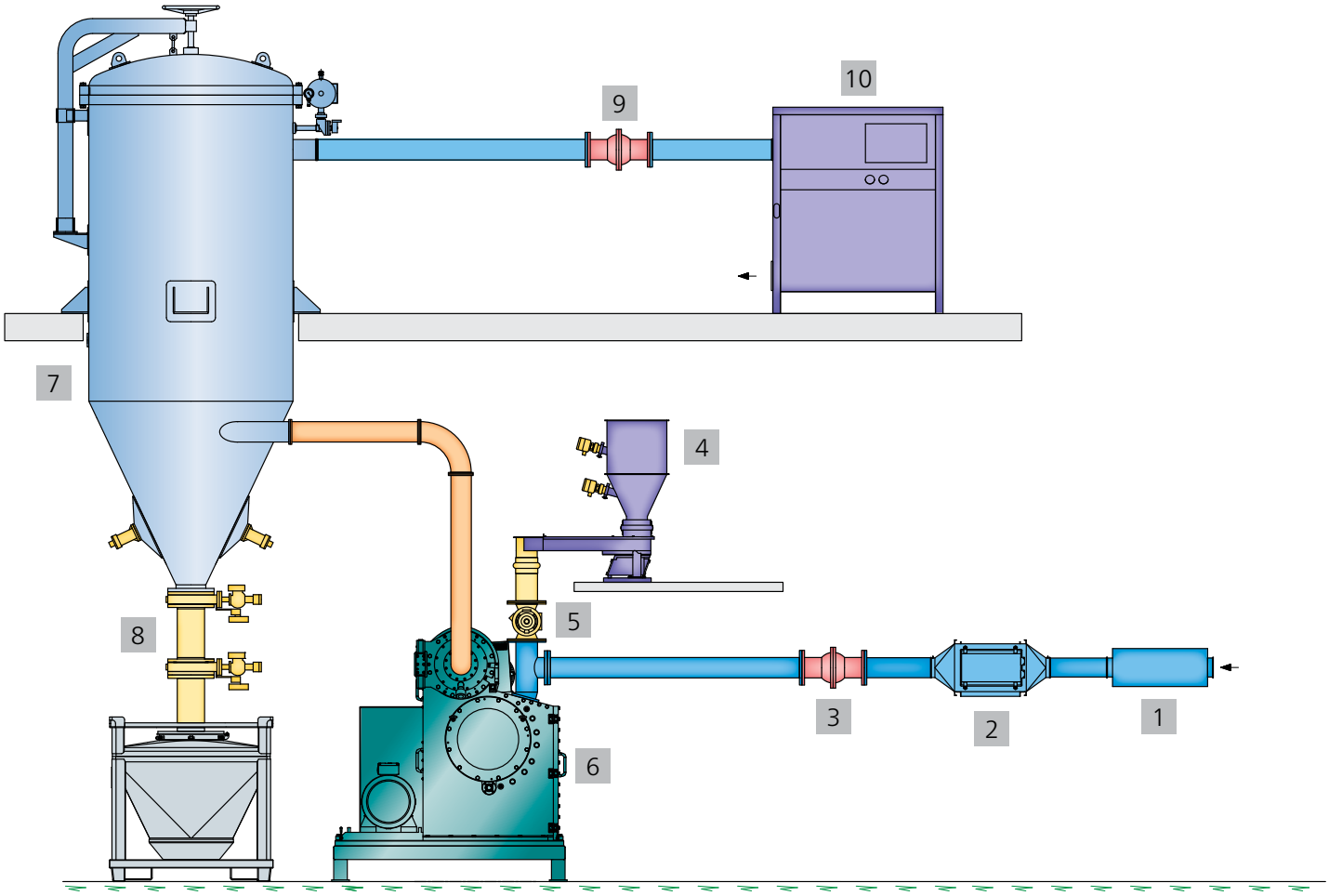
The machine

The feed material is fed into the cutting chamber by gravity or using a nip-roll system. The actual grinding takes place between the precision-cutting rotor running at a high peripheral speed and several fixed knives installed in the housing. Here the rotary- and fixed knives operate against each other in a special cutting sequence with a defined gap. The feed product is transported to the rotating classifier wheel via the aspirated process air. A specially designed execution of the classifier wheel was developed for fibrous products for use in the *SecoMy® S*. In the classifying part of the machine, the coarse product is rejected by the classifier wheel and falls back into the grinding zone for further grinding. The fine product leaves the machine with the process air and is separated out in the downstream cyclone or filter. The process air cools both the grinding chamber and the product in equal measures.



SecoMy® S

Precision Cutting Redefined!



1	Suction noise sound absorbers	6	SecoMy® S 50
2	Suction filter	7	Fully automatic filter
3	Explosion protection valve	8	Double-flap valve
4	Vibration feeder	9	Explosion protection valve
5	Rotary airlock valve	10	Rotary piston blower

The plant

For the installation of a complete grinding plant we can provide you with all necessary plant technology from one source. We can provide you with a complete, carefully coordinated system, from the product inlet (e.g. dosing- or nip-roll devices including the roll-unwinding station) via the product conveying system (consisting of suction devices with cyclone and dust filter) to the additional equipment such as noise protection components. A complete electric control panel with graphic operating panel for controlling the installation is also part of our supply portfolio.

Options

A pressure-shock resistant execution and additional explosion protection components can also be supplied. An inertization of the plant is possible with a gastight construction execution. This provides an installation compliant with ATEX guidelines.

ATEX conformity

EG-TYPE INSPECTION DOCUMENT
acc. to directive 94/9/EG, annex III

II 1 / 2 D c 100°C

Technical Data and Applicatio

Constructional Features

- Screenless fine-cutting mill
- Thermally optimized system
- Optimized variable knife concept
- Coolable by air and water
- Adjustable grinding air flow
- Small amount of wear parts required
- Rotary knives adjustable from outside the machine
- Very simple knife change
- Compressed air-rinsed bearing sealings to prevent product entering into the bearings
- Gap rinsing for classifier wheel to avoid oversized particles
- Wear protection possible
- Optional pressure shock resistant execution
- Optional gastight execution

Technical Data

Type		SecoMy® S 50	SecoMy® S 230
Cutting rotor			
Drive power	kW	22 - 37	110 - 160
max. speed	1/min	1 200	1 200
Classifier wheel			
Drive power	kW	15	2 x 37
max. speed	1/min	5 300	3 600
Working width	mm	250	1 000
Air volume (max.)	m^3/h	1 000	4 200
Weight (approx.)	kg	1 900	7 000
Surface area	m^2	1.4 x 2	2.5 x 2.5

Your Advantage is our Focus

- Low energy costs
- High flexibility
- Best product quality
- High yield
- Low product temperature
- Highest availability
- High bulk densities
- Narrow particle size spectrum
- Possibility of blending
- Increase in productivity
- One-step ultrafine grinding

ons

Applications

This new cutting mill technology is mainly used for materials, which must be finely ground by cutting, e.g. all fibrous, flexible materials or temperature-sensitive products, which cannot be ground down to the highest fineness by impact. This new machine is particularly suitable for the grinding of materials, for which good free-flowing properties, high bulk densities and gentle grinding are required.

Wood cellulose

Wood flour

Carob beans

Carbon fibers

Product	Type of feed product	Feed size	Achieved Fineness
Carboxymethyl cellulose CMC	Powder	d_{95} = 400 µm	d_{95} = 63 µm
Carob husks/-beans	Pieces	up to10 mm x 10 mm x 10 mm	d_{99} = 45 µm
Carbon fibers	Flakes	50 mm x 50 mm	d_{97} = 45 µm
Keratin fibers	Fibers	50 mm x 50 mm x 50 mm	d_{97} = 150 µm
Wood flour	Chips	< 3 mm	d_{97} = 45 µm
Wheat bran	Husks	5 mm - 7 mm	d_{99} = 100 µm
Oats	Husks	4 mm - 8 mm	d_{97} = 100 µm
Cellulose	Rolls	220 mm width	d_{99} = 63 µm
Cellulose	Chips	15 mm x 15 mm	d_{97} = 63 µm

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

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The NETZSCH Group is a mid-sized, family-owned German company engaging in the manufacture of machinery and instrumentation with worldwide production, sales, and service branches.
The three Business Units – Analyzing & Testing, Grinding & Dispersing and Pumps & Systems – provide tailored solutions for highest-level needs. Over 3400 employees at 210 sales and production centers in 35 countries across the globe guarantee that expert service is never far from our customers.

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