

Cryogenic grinding

Conventional and innovative

Open cryogenic screw conveyor



Our expertise ranges from trial grinding and product analysis to feasibility studies and the construction of customer tailored grinding plants.”

Customized powdery solids

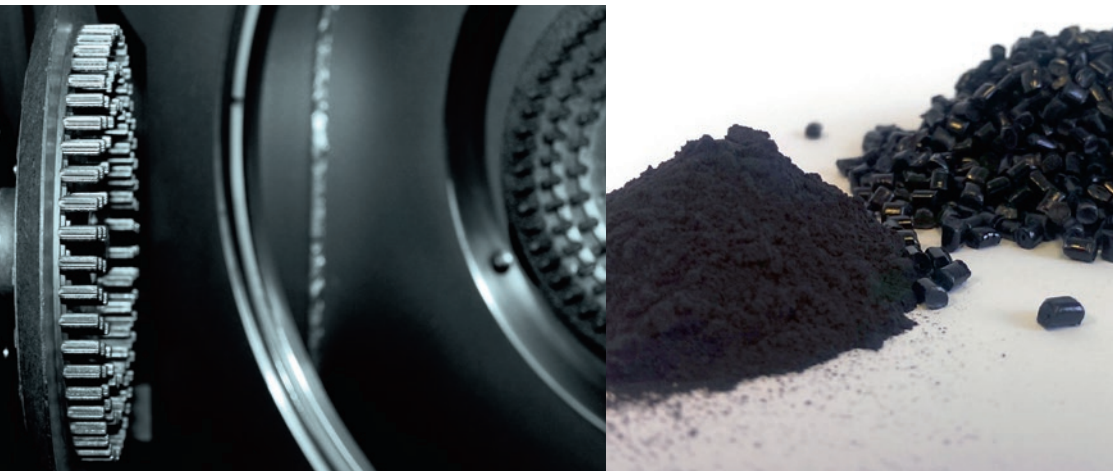
The market for tailor-made powdered solids with defined particle size distributions is growing steadily. However, temperature-sensitive, viscoelastic and fibrous materials can only be grinded with considerable energy and cost expenditure.

Innovative refrigeration technology offers the right solution here.

Cryogenic grinding is supplemented by a particle pilot plant, which includes an SLS test rig for cost-effective investigation of the suitability of powders for selective laser sintering (SLS).

Industrial sectors

- Plastics processing industry
- Chemical industry
- Recycling industry
- Food industry



left:
Counter rotating pin disc mill

right:
Powder and pellets

Technological specifications

- Material cooling down to -196 °C
- Throughput up to 200 kg/h
- Size reduction machines:
 - Eddy current mills
 - Pin mills
 - Ball mill (laboratory scale)
 - Centrifugal mill (laboratory scale)
- Pre-shredding: Cutting mills
- Refrigeration:
 - Liquid nitrogen cooler (500 kg LN₂/h)
 - 6 t nitrogen tank
- Classification technology: vibrating screen, tumbler screen, air jet screen, vibrating screen (laboratory scale)
- Confectioning: mixer, pellet mill, extruder
- Measurement: Bulk density, tapped density, abrasion, pellet hardness, specific surface area according to BET, thermal analysis and gravimetry, particle size analysis
- Further processing: compounding, laser sintering

Our service

- Trial grinding and sample production of batches up to 3 t
- Sample preparation
- Product analysis
- Classification
- Feasibility and economic studies for cryogenic grinding (incl. process development)
- Development, planning, construction and optimization of customer tailored grinding plants
- Extensive chemical analysis
- Further processing of produced powders

Your benefit

- Feasibility studies
- Economical sample production
- Simplified market introduction
- Planning reliability

Keywords

- LN₂-cryogenic grinding
- Feasibility tests
- Pilot production
- Process development

Contact

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Further information

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