

FREWITT 

FLEXMILL

PMC-160 CRYO



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ABOUT
MILLING

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PMC-160 CRYO



FREWITT, world leader in powder size reduction technologies, presents FlexMill, an innovative technology combining multiple milling processes in a single milling platform, dedicated to the pharmaceutical, chemical, battery, and food product industries.

2 PROCESSES - 2 MILLING HEADS - ONE SYSTEM

A unique, multi-process platform, PMC-160 Cryo offers unequalled flexibility and extraordinary performance allowing for significant savings. By embrittlement, the cryo-milling allows users to reduce polymer type products to powder, limiting the phenomenon of degradation, preserving the quality of the milled product. Owing to a design enabling the use of 2 interchangeable milling heads on the same base module, FlexMill permits scale-up of 2 production processes, 1 with and 1 without cryo, all within the same platform.

The PMC-160 Cryo is a high-performance pin mill designed for pulverizing hard or crystalline, elastic or fibrous, and heat sensitive products to a particle size down to D90 of 10 µm thanks to the direct injection of liquid Nitrogen in the milling chamber. Ideal for processing small-scale laboratory batches of 50 g to 2 kg or work in continuous mode up to 50 kg/h. The PMC-160 lends itself to be used in lab, pilot, or production scale. The device's compact design facilitates an easy integration and a quick set-up in any laboratory as well as an integration into production lines or isolators.

SUITABLE FOR THE FOLLOWING INDUSTRIES:



Pharmaceutical



Battery



Chemical



Food

MODULARITY

A distinctly avant-garde, modular concept: FlexMill allows you to alternate, depending on your production requirements, between 2 milling heads for the micronization of low Tg products (glass transition temperature) and products resisting milling in ambient conditions.

PERFORMANCE

FlexMill proves its capabilities with the same degree of flexibility across the entire range of your processing needs, from small batch to production scale.

INNOVATION

Due to its extraordinary versatility and high performance, this mill can be used in many demanding milling processes, whether for achieving optimum particle size distribution, milling temperature-sensitive products, or potentially explosive substances.

SAVINGS

Enhanced return on investment and lower cost of ownership: FlexMill integrates two milling processes into a single platform. With its low level of consumption, the PMC-160 is the best solution for combining micronization and cost saving.

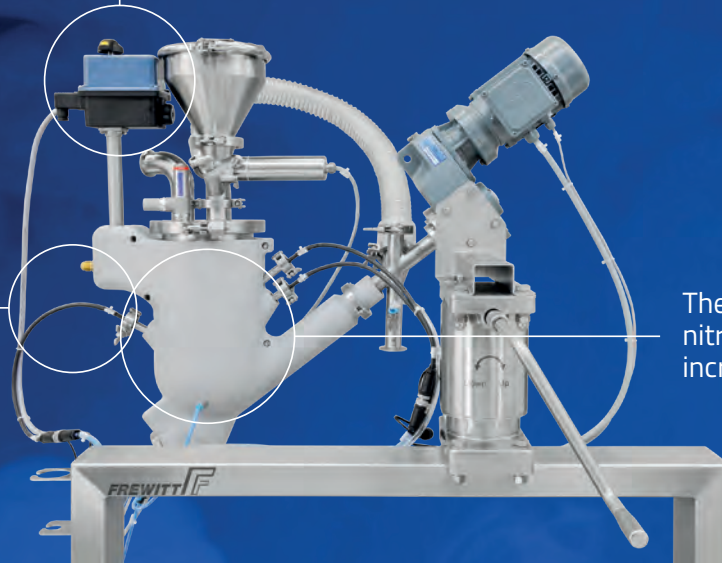
ADVANTAGES

- Scalable to Frewitt Lab Scale / Production Scale Pin Mill systems
- Compact assembly for easy in-line integration
- Flexibility of modular arrangement
- Easy top-down cleaning (easy disassembly for easy cleaning)
- Reduced product contact surface areas
- Less energy consumption

Automatic regulation of the liquid nitrogen supply to guarantee the immersion of the product at -195°C

Management of nitrogen consumption ensured by automated and secure control

Thermal insulation to prevent nitrogen evaporation and increase operator safety



PROCESS CHARACTERISTICS



End fineness
Down to D 90 < 6 µm



Throughput
Up to 50 kg/h



Product temperature range
-80°C to +60°C



Rotor speed
Ultra high speed

EXECUTIONS



Standard

- Pharma execution GMP/FDA
- Fully automated system
- Integrated dosing system with anti-vault stirrer for entry funnel
- Integrated cooling system
- Pressure and temperature sensors
- Inline process
- Mobile cart with lifting device



Optional

- ATEX
- WIP cleaning
- Controlled milling under inerted atmosphere
- Specific custom tooling
- 21 CFR part 11/ GAMP 5
- Flexible arrangement
- Automatic LN2 control

TECHNICAL CHARACTERISTICS



Materials

AISI 316/316L - Ra ≤ 0.8 µm
AISI 304/304L - Ra ≤ 1.4 µm
EPDM/PTFE/Silicone

Interior
Exterior
In product contact, certified FDA



Dimensions & weight

Length	1950 mm
Width	950 mm
Height	1800 mm
Weight	600 kg



WORLDWIDE PRESENCE



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