Pharmaceutical and Chemical Powder Micronizing with Dec’s MC DecJet®

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Overview

Dec Group’s MC DecJet® series offers a complete line of scalable spiral jet mills that provide highly efficient and versatile solutions for micronizing pharmaceutical and chemical powders.

The MC DecJet can be applied at a wide range of different scales, from research and development teams seeking the ability to micronize very small quantities of material as small as 0.2 grams to large scale production facilities up to 300 kilos per hour.

CFD developed 4th generation MC DecJet®

The MC DecJet’s spiral jet mill technology is capable of reducing particle size to microscale level below 1-5 microns. These machines can be deployed in a variety of configurations and formats that meet the complex requirements of the pharmaceutical industry as well as the chemical and cosmetic industries.

Dec’s new 4th generation MC DecJet® systems have been developed with Computational Fluid Dynamics (CFD) analysis to optimize the internal geometry of the grinding chambers. Furthermore, with the design integration of the nozzles through which the gas enters into the grinding chamber the new MC DecJet® generation enables to produce a very narrow PSD (Particle Size Distribution) around 1 micron thus revolutionizing existing micronizing procedures.

High containment capabilities
The entire MC DecJet® spiral jet mill range can also be configured to support very high containment levels according to customer needs, interfacing with Dec’s world-leading Powder Transfer System (PTS).

All containment systems are performance tested to SMEPAC guidelines and operates to nanogram levels whilst maintaining productivity and offering excellent ergonomic conditions.

User benefits

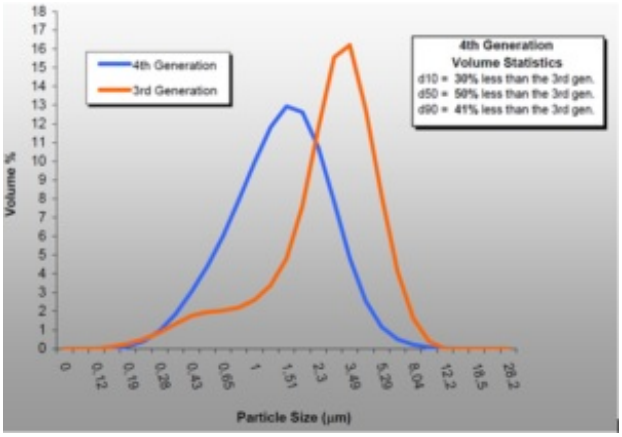
MC DecJet® jet mills are constructed from the highest grade materials for longevity and sterility. The basic simplicity of these units confers tangible benefits, including rapid cleaning and easy validation, fast and easy assembly/disassembly, limited number of components, total absence of screws (replaced by tri-clover connections), no crevices, and smooth and regular surfaces, all aiding Clean in Place and Sterilize in Place (CIP/SIP) needs.

The systems can be provided in sterile, toxic or sterile toxic arrangements.

In summary, benefits include:

- 100 % scalable from lab to production
- Excellent micronizing results
- Narrower Particle Size Distribution (PSD)
- Single pass technology
- Designed to reduce issues with sticky products
- Optimized product recovery rates
- Integrated nozzles prevent errors during installation and/or leaks during process
- Easy to clean
- Easy to assemble, no tools required
- Easy integration into glove boxes and isolators

Dec MC DecJet® 300



4th Generation MC DecJet® delivers narrower particle size distribution

Supplier Information

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