



Fluid Jet Micronizers

With forty years of experience and in-depth know-how in the design and manufacture of equipment for the pharmaceutical, cosmetics and chemical industries, **Tecnologia Meccanica** (Italy) today can offer the most advanced

Fluid Jet Micronizers

systems (also known as

Fluid Jet Mills

) for the micronization of process powders.

{xtypo_info}**Fluid Jet Micronizers** provide an integrated and super-fast method of reducing the

dimension of powder particles to under 5 μm in size. This technology is extremely important in different industrial fields, particularly the pharmaceutical industry where the reduction of the active principles (the so-called API and HPAI) to such dimensions increases exponentially the characteristics of Bioavailability, Bioequivalence, and the surface area available of the product.

Tecnologia Meccanica's Fluid Jet Micronizers are capable of achieving an extremely narrow tight particle size distribution curve of $d_{100} < 5 \mu\text{m}$ (100% below 5 μm) and $d_{99} < 3 \mu\text{m}$ (99% below 3 μm) or even less depending on the nature of the product.

A full range of **Fluid Jet Micronizers** is available for all your applications, including lab machines with capacities as low as 0.5 g/hour, up to production units with throughputs of up to 1500 kg/hour.

Find out more about **Micronization Technology** and its advantages to your applications below:

What is Micronization Technology?

Micronization Technology is a term that refers to the complex process of producing highly-refined powders.

Generally, this is a complicated and rather expensive process with wide applications in various fields, particularly in the pharmaceutical industry.

How Does Micronization Technology Work?

Process powder is fed at subsonic speeds (approximately 50 m/s) into the flat cylindrical milling chamber.

The micronizing effect occurs when the slower incoming particles and the faster particles in the spiral path collide. This process works at a constant temperature (endothermic) and independently with the lowest consumption of energy.

The

Particle Size Distribution is controlled by adjusting two main parameters:

- **PRESSURE** : the energy used to micronize; increased pressure increases the micronizing effect.
- **FEED RATE** : the concentration of product fed into the milling chamber.

The Fluid Jet Micronizer Advantage

- hi-tech milling chamber geometry
- nozzles designed for laminar jet streams and available with different grinding angles
- optimized static classifier
- elimination of the "caking" of sticky powders
- narrow Gauss curve (particle size distribution)
- lowest gas consumption on the market
- elimination of the "blowback" phenomenon
- optimised gas-solid separation and unique collecting point with yields close to 100%
- balance and control of pressures within the whole micronisation system
- reduction of contact surfaces – rapid cleaning and lower product loss
- easy cleaning and validation operations
- sterilizing system with hydrogen peroxide solution
- Inexpensive and easy to operate
- Capable of processing products with high solvent content (around 3000 ppm)
- Capable of processing sticky powders that do not flow well

Find Your Fluid Jet Micronizer Solution

Tecnologia Meccanica have over 40 years experience in **Micronization Technology**, currently manufacturing **Fluid Jet**

Each size caters for a different requirement, depending on your application. If you are at all unsure or re

To browse each solution, **Fluid Jet Mill** let your desired size below the available

[J-20, J-25 & J-30 Series](#) The capacity is from 0.5 **[More info](#)** to 100.00 g/hour, suitable for lab

[J-40, J-50 & J-70 Series](#) The capacity is from 0.5 **[More info](#)** to 7.00 kg/hour, suitable for pilot, or small pro

[J- 100, J-125 & J-150 Series](#) The capacity is from 0.5 **[More info](#)** to 30.00 kg/hour, suitable for small produ

[J-200, J-300 & J-400 Series](#) The capacity is from 0.5 **[More info](#)** to 35.00 kg/hour

[J-500, J-600, J-750 & J-900 Series](#) The capacity is from 0.5 **[Contact Us](#)** to 50.00 kg/hour, suitable for large production app

{/faq}

Download Brochure:

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[Fluid Jet Mill Technology](#) 

[Benefits From the High-Tech Micronization Process](#)



[Tests and Trials-Fluid Jet Micronizers](#) 

[Check List Sheet-Fluid Jet Micronizers](#)



[Screw Feeders](#) 

[PSD-Fluticasone Propionate](#) {/xtypo_download}



TECNOLOGIA

Specializzata nello sviluppo e nella produzione di **MICRO**

Specialized in the development and manufacturing of **FLUID JET M**