



### 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  $\mu\text{m}$  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  $\mu\text{m}$ ) and  $d_{99} < 3 \mu\text{m}$  (99% below 3  $\mu\text{m}$ ) 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 la

**[J-40, J-50 & J-70 Series](#)** The capacity is from 0. **[More info](#)** 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](#)** 30.00 kg/hour, suitable for small produ

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

**[J-500, J-600, J-750 & J-900 Series](#)** The capacity is from 0. **[Contact Us](#)** 50.00 kg/hour, suitable for large production app

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### 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**