



**Managing complexity
to enhance life**

mUNIT

JETPHARMA • MICROCHEM

WE ARE MICRONIZATION



MUNIT is the world leading player in the field of **particle size engineering** for pharmaceutical substances, offering tailored solutions to enhance the physical behaviour of drug molecules.

OUR VISION

Always and only the best micronization service implementing independent and sustainable industrial growth.

Based on over four decades of experience in the field of micronization, MUNIT is your access point to the technical and commercial expertise of its affiliates Jetpharma (Switzerland) and Microchem (Italy). This triangular company structure, with two autonomous GMP manufacturing plants, provides **UNIQUE FLEXIBILITY** and is the foundation of a solid **BUSINESS CONTINUITY PLAN** based on its inherent back-up potential.

PROPRIETARY TECHNOLOGY

This outstanding combination of proprietary technology and highly skilled professionals enables MUNIT to support customers in complex formulation challenges, from the drug development process right up to commercial batches.

INNOVATIVE TECHNOLOGY

Whether a new drug candidate or generic product, Highly potent API or excipient, MUNIT offers individual solutions for a broad range of particle size reduction and measurement services using innovative technology, such as low-temperature milling, co-micronization and post-milling conditioning with particular focus on maximizing process yields.

QUALITY BY DESIGN

MUNIT offers a process development approach through Quality by Design: a concept based on Design of Experiment studies, through specific advisory support generated by experience, competence and process knowledge.

INDEPENDENCE

MUNIT is an independent group of companies. It has been family-owned since its foundation and is firmly committed to remaining so. The group offers specific partnership opportunities worldwide and, due to its lean organization and welcoming, customer-orientated attitude, guarantees the best service and high efficiency.

Particle size reduction advantages

The particle size distribution of an active pharmaceutical ingredient plays a key role in a successful formulation.

An appropriate particle size reduction accelerates the solubility rate of the active ingredient, which further better the absorption and thus its bioavailability. This allows a reduced amount of active ingredient in the formulation, limiting the drug's side effects.

A pharmaceutical active ingredient has an inherent toxicity; therefore, its dosage in the finished formulation is of crucial importance.



MUNIT offers pharmaceutical contract micronization and milling services combining quality, flexibility and expertise. Particle size reduction services have a range of applications for oral, inhalation and transdermal drug delivery:

- + Bioavailability Enhancement
- + Solubility Acceleration
- + Palatability properties improvement
- + Pulmonary target size achievement
- + Drug Delivery Improvement
- + Modified Release Improvement
- + Dosage Uniformity Improvement

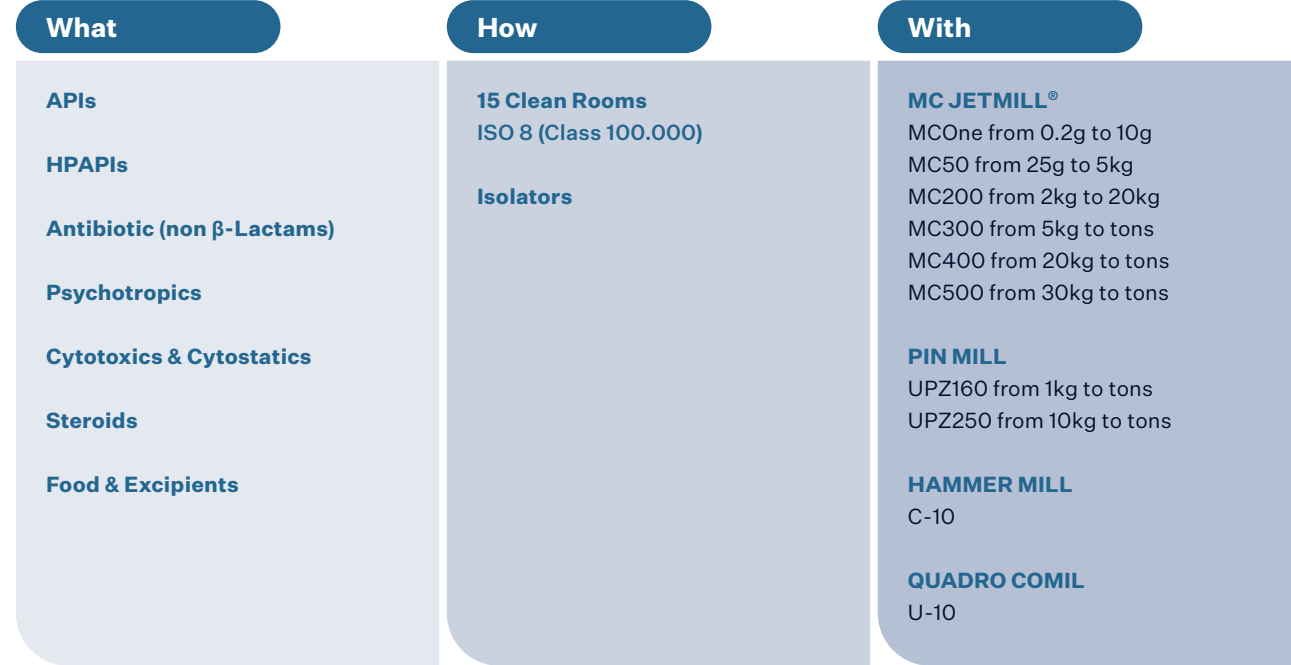
Micronization Activities

- + Micronization (Spiral Jet Milling)
- + Pin-, Hammer- and Quadro-Co-Milling
- + Micronization and Milling Under Containment
- + Co-micronization
- + Cryogenic Micronization and Milling
- + Postmilling Conditioning
- + Sieving, Blending, De-lumping
- + Technical Trials, DoE Study, Process Development and Validation
- + Dedicated Cabins



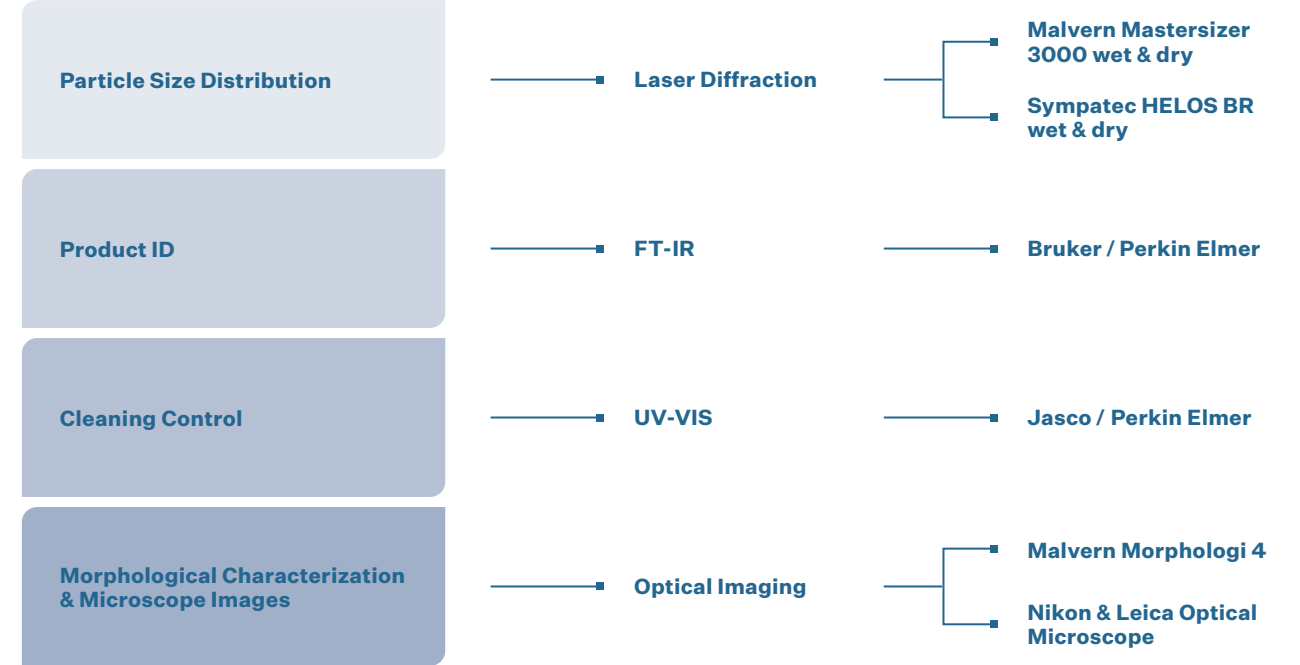
Micronization Capabilities

Milling equipment



Micronization Capabilities

Lab equipment



Corporate Services

We offer particle size reduction services to pharmaceutical companies and R&D Institutes as well as comprehensive advisory support.

Milling Expertise

- + Active Pharmaceutical Ingredients (APIs)
- + Highly Potent Ingredients (HPAPIs, Containment Performance < 25 ng/m³)
- + Cytotoxic and Cytostatic Compounds
- + Psychotropics
- + Steroids
- + Antibiotics (non β -Lactams)
- + Food Ingredients and Excipients

Analytical services

- + Morphological Characterization
- + PSD Analysis (Malvern and Sympatec, wet and dry)

cGMP and ISO Certifications, Accreditations and Inspections



JETPHARMA

JETPHARMA was founded in 1986 by Alberto Martinoli, in response to the need for internationalization in the pharmaceutical market. Since then, the global market for powder engineering solutions has grown rapidly, and JETPHARMA has become synonymous with Micronization services worldwide. A broad range of innovative solutions are offered for powder inhalation and bioavailability enhancement of poorly soluble drug substances, based on JETPHARMA's innovative and proprietary platform technology, its top-ranking product and process development, and its state-of-the-art analytical service.

JETPHARMA is situated in southern Switzerland, the prospering heart of the European pharmaceutical industry, one of the fastest-growing centres of the Healthcare industry worldwide.



MICROCHEM

MICROCHEM, established in 1978, is founded on the pioneering spirit of engineer Alberto Martinoli who designed jet mills for pharmaceutical applications when micronization services became a fundamental aspect of the pharmaceutical industry.

Over the last two decades, MICROCHEM, located in northern Italy, has become an indispensable player in the evolving pharmaceutical-industrial network of central and southern Europe.



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