



Multifunction grinding plant
Three machines in a single unit
for laboratory tests
or small productions.



STM Microtec

For over 50 years STM provides integrated solutions and tests for milling and dosing technologies. A wide and complete range of customized services, from single machine to complete packages for industrial and environmental applications.



Remote Assistance

Remote assistance for the verification and optimization of all operating parameters by STM technicians with the possibility of resolving anomalies without on-site interventions, using remote connection technologies. Periodic maintenance plans for control and complete verification of the process parameters, and in general of the system with annual interventions, possible replacement of wear elements (hub bearings, fan, grinding hammers, etc.).

Test Plant and Laboratory

STM is equipped with a complete laboratory where every kind of test and analysis relating to grinding and classifying can be carried out.

By exactly simulating the performance of machines installed at clients' premises, productivity can be optimized in terms of technology and economics.



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 STM MICROTEC



**POWERING
A GREENER
WORLD**



GALILEO Line

Ideal for R&D departments producing
up to 10 kg/h, or minimum batches
of 0.5 dm³ of material.



Three machines in a single unit

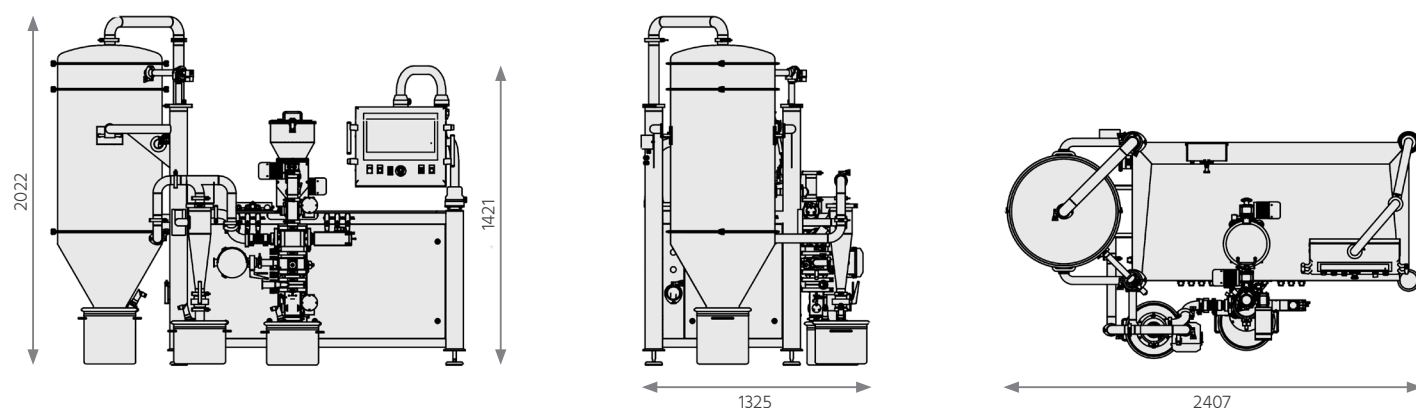
Galileo is a multifunction laboratory system which is highly innovative in technological terms. The operating principles of the Galileo counter-top machines are exactly the same as those of the industrial versions of the same machines. This means that a client who trials micronization on a reduced scale has the guarantee of being able to transfer the laboratory process to an industrial-scale machine, thanks to an accurate and meticulous up-scaling of productive capacity. The Galileo line is the ideal solution for research and development, for producers using expensive ingredients in cosmetics, pharmaceuticals, plastics, ceramics, specialized chemical products and other new materials, and where processing happens in small batches.

3 functions in 1:

- **MJS** – compressed gas jet mill (air / nitrogen)
- **JCF** – impact grinding mill;
- **SDF** – separation and classifying mill;

The system comprises a series of 3 individual machines which are specially designed for small batches; the tools and electronic equipment used are of the highest standard of design and the technology is cutting-edge. The mechanical processes are integrated with a series of electronic devices which monitor the transformation of the material, analyse the parameters of the process and collect and analyse physical, chemical and mechanical data detected by the instruments during the grinding operation.

Dimensions



Technical specifications

Function	Feed	Max. fineness at outlet	Production	Volume of gas flow	Air – nitrogen gas pressure	Power supply	Productivity factor
MJS	500µm	d.97 : 2 ÷ 50 µm	0,5 ÷ 10 Kg/h	60 mc/h	12÷16 bar	2,2 kW	0,22
JCF	<10 mm	d.97 : 8 ÷ 100 µm	1 ÷ 25 Kg/h	150 mc/h	8 bar	3,0 kW	0,15
SDF	500 µm	d.97 : 2 ÷ 50 µm	0,5 ÷ 30 Kg/h	150 mc/h	8 bar	2,2 kW	0,35

*Details and dimensions may be subject to modification during engineering phase or change without notice.

MJS – compressed gas jet mill (air / nitrogen)

The grinding is realized striking the material with concentric jets of air / nitrogen at high pressure. In this way it is exploited the internal friction of the product, the particles rubbing and impacting against each other producing the pulverized material. The separator integrated with variable rotation is used for the preselection of the material at the entrance and for the automatic recycling of the product until obtaining the desired particle size.



JCF – impact grinding mill

The product is fed into the grinding chamber, where the grinding disc impacts the particles against the armor of coating mill. To have a greater effect, the material is subjected to collision, friction and shear, in the space between the grinding bodies and the coating, in addition to generating trajectories that intersect and terminate on the armor optimizing the kinetic energy and the efficiency of grinding for self-impact of the material. The milled product is conveyed towards the classifier with variable rotation, which makes a selection of fineness produced in relation to the specific weight of the particles. The material whose fineness has not yet reached the required values is cyclically reported in the impact chamber for further milling.



SDF – separation and classifying mill

The dynamic separator is composed of a chamber in which a rotor high-speed and variable rotation, allows to fluidize the product eliminating particles which do not fall within the specific request. The dosage material is conveyed to the rotor through a dedicated, concentric grid. The combined action and contrasting air and the centrifugal force from the rotor, according to air flows and pressure losses controlled, allows the extraction of materials having size and / or different specific weight, this adjustment is scalable in order to obtain the required result.

The initial characteristics of the product are unaffected, but there is with precision and repeatability, a division between the coarse particulate and the finest one.



Benefits of Galileo Line:

- **Ease of operation**, with automatic recognition of devices installed
- **Ease of use**: the client is guided to introduce the required analytic objective and desired granulation, while the machine's electro-mechanical parameters are regulated automatically.
- **Ease of maintenance**: interface with the control panel guides the tasks, methods and timing of maintenance.
- **Ease of cleaning**: every component of the machine is designed to be easy to clean, with polished internal surfaces and no rough or inaccessible areas.
- **Flexibility**; ideal for initial phases of development of single components or compounds in powdered form.
- **Low investment costs**

