



## COSIT Sieve Shaker for Particle Size Test



**Vertical and Horizontal Vibration**



**Optional 5 inch LCD Color Touch Screen**



**Precision and reliability**



**Repeatability of tests**



**High performance thanks to 3D motion of the particles**

Sieving is the most widely used technique in the pharmaceutical industry for particle size analysis. The particles are classified based on their size, independent of any other particle characteristics such as density and surface properties. Micromesh sieves are used to classify particles of size range 5 - 20  $\mu\text{m}$ , while particles of size range 20 -125  $\mu\text{m}$  are classified in the standard woven wire sieves. Coarse particles (>125  $\mu\text{m}$ ) are classified in punched plate sieves. Punched plate sieves are commonly used in industrial applications where the openings are circular or rectangular. The sieves can take different configurations

### Principle of Laboratory Sieve Shaker

- **Vibration Mechanism:** The sieve shaker uses a motor-driven mechanism to create both vertical and horizontal vibrations. This movement helps to agitate the particles
- **Particle Movement:** The vibrations cause the particles to move and interact with the sieve mesh. Smaller particles are able to pass through the openings in the mesh, while larger particles are retained on the sieve
- **Separation:** The relative movement between the particles and the sieve mesh allows for the separation of particles based on size. The efficiency of sieving depends on factors such as particle size distribution, sieve load, and sieving time
- **Sieving Time and Parameters:** The likelihood of a particle passing through the sieve mesh is determined by the ratio of the particle size to the sieve openings, the orientation of the particle, and the number of encounters between the particle and the mesh openings.

### Working of a Sieve Shaker

- **Loading:** The sample is placed on the top sieve of a stack of sieves with progressively larger openings.
- **Operation:** The sieve shaker is turned on, and the vibrations cause the particles to move and be sorted by size.
- **Analysis:** After a specified duration, the shaker is turned off, and the material retained on each sieve is analyzed to determine the particle size distribution.

This method is widely used in industries like pharmaceuticals, food, and construction for quality control and research purposes

<b>Instrument type</b>	<b>COSIT200</b>
<b>Working principal</b>	Electromagnetic. Compact
<b>Type of sieving</b>	Dry/Wet
<b>Application</b>	Granulometric separation
<b>Range of sieving</b>	20µm to 125 mm
<b>Particle motion</b>	Three-dimensional
<b>Dynamic of sieving</b>	3000 vibrations per minute
<b>Maximum vibration amplitude</b>	3mm
<b>Timer</b>	1 to 99 minutes
<b>Work cycle</b>	Continuous / discontinuous mode (with intervals of 10 seconds)
<b>Maximum number of sieves</b>	8 (Ø 200/203 x 50 mm high) 15 (Ø 200/203 x 25 mm high)
<b>Diameter of sieves</b>	60 to 203 mm
<b>Voltage</b>	230 – 50 / 60 Hz
<b>Power</b>	450 W.
<b>Dimensions mm</b>	400 x 320 x 135
<b>GW/NW</b>	32/27

Please note  
 If this Sieve Shaker does not match the specific needs of your application, or some options are not listed for sale, please feel free to contact us. Our manufacturing engineers will come up with technical solutions to meet your needs. We reserve the right to change technical specifications at any time.


  
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