

HLSG-5/10/30 High Shear Mixer Pharma Granulator



Revolutionize your granulation process with our High Shear Mixer Granulator, engineered to deliver superior granule density and homogeneity for the most demanding pharmaceutical applications. This advanced system excels at rapidly transforming powder blends into uniform, robust granules with excellent flowability and compressibility.

By combining dry mixing, wet granulation, and intensification in a single, contained vessel, our granulator streamlines production, enhances operational efficiency, and ensures consistent, repeatable results that meet stringent cGMP and regulatory standards.

Description

The exceptional performance of our High Shear Mixer Granulator begins with its intelligent design. The unit features a unique cylindrical cone tangent structure, meticulously engineered to create a powerful vortex and promote efficient, three-dimensional material rolling. This ensures that every particle is incorporated into the mixing process, eliminating dead zones and guaranteeing a homogenous blend.

At the heart of the system are two critical components: a main stirring impeller and a high-speed chopper. During operation, the low-speed impeller agitates the powder bed, creating the vortex while a binding agent is precisely introduced. The high-speed, V-shaped granulating knife (chopper) then intersects this moving mass, applying intense shear forces that break down oversized agglomerates and densify the particles. This synergistic action of mixing and shearing produces granules of remarkable density and uniformity in a fraction of the time required by traditional methods.

Features

Advanced Process Automation & Control Driven by a sophisticated PLC with an intuitive Human-Machine Interface (HMI), our granulator offers complete process automation. Pre-programmed recipes ensure batch-to-batch consistency and simplify operations. This system provides a clear, validatable process that is ready for integration into a 21 CFR Part 11 compliant data management environment.

Dynamic Variable Speed Control Achieve ultimate process flexibility. Both the main stirring blade and the chopper feature independent variable frequency speed control. This allows operators to precisely manipulate shear forces and mixing intensity, making it easy to develop and optimize granulation recipes for a wide variety of formulations, from fine cohesive powders to highly viscous blends.

Optimized for High Yield and Efficiency The innovative geometry of our mixing bowl and the V-shaped granulating knife work in concert to eliminate blind spots and prevent material from caking on the walls. This results in a significantly improved granulation rate and a fast, residue-free output, maximizing your product yield and simplifying cleaning between batches.

Specifications

Product Number	HLSG-5	HLSG-10	HLSG-30
Hopper Volume	5L	10L	30L
Feeding Volume	2-8L	3-8L	8-24L
Stirring Motor	1.5KW	2.2KW	3KW
Stirring Speed	5-500 rpm	50-500 rpm	50-500 rpm
Granulating Motor	0.55KW	0.75KW	1.1KW
Weight	300kg	330kg	400kg
Host Size (L x W x H)	1200x530x1280mm	1280x530x1320mm	1700x600x1600mm