

Rapid Mixer Granulator - R & D Model (5 KG-10LTR)-PLC



Pilot scale rapid mixer is mainly used in R&D or F&D facility for the wet mixing of the pilot batches. Basically, it consists of a Bowl, Impeller & Chopper assembly.

CONSTRUCTION

It consists on main structure, which is made from mild steel square tube and covered from SS-304 grade. All main drive related assemblies are covered in to main structure and castors provided for mobility.

THE COMPLETE RELIABILITY OF THE PROCESS TECHNOLOGY FOR THE STEPS

Mixing

Homogenizing

Granulating

As the result on intensive up to date development.

RAPID MIXER GRANULATION PROVIDES:

High Shear Mixing Precision.

Short Batch Time.

Trouble free Cleaning.

Residue Free Discharge.

As the guarantee for optimum system available in strict compliance with the stipulation of cGMP.

INSTRUMENTATIONS

- Basic machine with PLC and graphical operator interface.
- Color touch screen as a optional.
- Password protected PLC system.
- Power consumption data on HMI
- HMI – PLC system provide features like
- Touch Panel function for hassle free operation.
- Recipe Management covers following information.
- Recipe number (Automatic Generation in sequence)
- Recipe code
- Material Parameters like
- Product Name
- Product Code
- Product Size
- Machine Parameter like
- Impeller Speed RPM
- Chopper Speed RPM
- Batch Management cover additional parameters like
- Operator Code
- Batch Start Time
- Batch Size in Nos
- On demand Report generation Management for
- Batch
- Recipe
- Alarms

THE PROCESS

The RMG performs dry mixing & wet granulating by basic design of the special four arm of the mixing impeller and sequences of the mixing process in the cylindrical mixing drum with rounded connection to the base plate, achieve another special effect. The mixing process runs without varying pressure zone in the volume of mixing product. Separately driven multiple choppers can effectively intensify the mixing result in particular when liquid or paste components are added. During humidifying and granulating process of the products, the chopper controls and regulates the granular spectrum and structure of the granules according to the product, chopper shape and time. The RMG system requires only small quantities of granulating liquid or pastes to obtain the required granulate structure. This reduces the amount of drying energy required.

SAFETY FEATURES:

Total drive transmission system enclosed.

Air pressure switch installed to ensure pressure is in limit. [if equipped]

SALIENT FEATURES:

High Shear Mixing, Homogenizing, Humidifying and Granulating process.

Offers reproducible mixing and granulation processes.

Design as per stringent cGMP Model.

Contact parts of SS 316 and non-contact parts of SS 304.

Easy to install, operate, clean, convenient & user friendly.

Compact Table Top design.

Easy to dismantle seal and chopper bearing.

Easy move ability with the help of trolley.

Variable Speed Drive for main impeller and chopper motor.

Technical Specifications:

MODEL	SRMG 10
Gross Capacity	For 10 Liters (5 Kg bowl)
Max Working volume	10 Liter (5 Kg)
Min Working volume	2 KG
Main Motor	1 HP, 1400 RPM , 415 V, 3 PH
Chopper Motor	0.5 HP, 2800 RPM, 415 V, 3 PH
Chopper Blade RPM	50 RPM to 2800 RPM Variable.
Granulation-Main Blade RPM	15 RPM to 150 RPM Variable
Main Impeller Granulator RPM	10 to 150 RPM Maximum – Variable.
Chopper Impeller RPM	Maximum 2800 RPM- variable.
Pneumatic Cylinder	Discharge Gate.
Air purging	At Main Blade and Chopper Blade
Dimensions-(mm)	1250 x 500 x 1100 height
Net Weight	136 Kg
Gross Weight	265 Kg