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# RAPID MIXING GRANULATOR



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## 1. MATERIAL OF CONSTRUCTION:

- Product contact parts should be constructed of SS 316L grade stainless steel as complying with the requirements of WHO-GMP
- All non-product contact surfaces should be constructed of SS 304 grade stainless steel.
- All internal and external surfaces of the vessel are fully polished to obtain a surface roughness of ISO Ra0.5 so that the product particles are freely moving and smoothly mixed without the powder sticking trouble
- Gaskets, seals and O-ring coming in direct/indirect contact of product surface should be constructed of FDA approved polymeric materials only.
- All welds should be ground finished.



- Speed control achieved via a frequency inverter (England or Germany).
- Two C shape of blades are installed at a right angle each other.
- **Air sealing system:** The filtered compressed air is stably distributed to the agitator air sealing system and the chopper air sealing system. It prevents the powder from falling into the shaft of agitator and chopper.

## 2.2 VESSEL LID:

- The vessel lid can be lifted by manual or pneumatic cylinder for easy operation.
- Binder tank: the binder tank is used for adding the binder during the mixing process. There are a ball valve and a

sanitary clamp attached. The ball valve is controlling the supply, the cut-off amount of the binder. The binder hopper is assembled and disassembled by the sanitary clamp

- A light is fitted to the top cover for the illumination of the vessel contents.
- Sight glass window: During the machine operation, the vessel inside can be checked through the sight glass window for checking the mixing condition and it can be opened and fixed
- The bag filter port on the vessel is preventing the vacuum symptom inside of the vessel caused by the sealing.
- Clamp handles are attached for easy opening and closing of the vessel lid.
- Balance weight: The vessel lid is opened smoothly and easily according to the gravity of balance weight

## 2.3 DISCHARGE CHUTE:

The damper is opened and closed by the air cylinder and the body of the damper is made of the stainless steel and inside surface is finished with the mirror polishing treatment. The damper

plate can be checked whether it is opened or closed after opening the top cover of the discharge damper. The damper is sealed with the Teflon packing

## 3. TOUCH SCREEN CONTROL SYSTEM.

- Control panel: Color Touch Screen, size: 5,7 inch (Proface-Japan)
- Language: English
- Program Controller: PLC (Japan)
- All the functions can be operated by means of the touch screen icon.
- All the parameters necessary to the process can be set in touch screen
- Switches, emergency button (Germany or Italy), CB, contactor (Germany).
- Emergency and Discharge switches are located in two parts (Operation box and control box)

## 4. SAFETY :

- Emergency stop button.
- All the error will be displayed on the screen and the machine will automatically stop in case of – air pressure is low, electric phase is lost,



- emergency s/w not in On position.
- Cover unlock- Stop operation
- No air sealing- Stop operation

## 5. PNEUMATIC PARTS:

Pneumatic cylinder, Filter-regulators, air pressure gauge, air pressure regulator solenoid valve (Festo, Germany).

## 6. CLEAN IN PLACE:

A CIP, built into the system washes inside vessel, shaft seal, agitator and chopper

## 7. NOISE:

The noise levels at the work place for each machine, operating at maximum speed must be below 70dB (A) at operator work position.