

Roller Compactor RC



The roller compactor is designed for precise adjustment of three variables to allow for different kind of material. The three adjustable variables are Screw Speed, Roller Speed, and Roller Pressure; the calculation for bulk density is related to adjusting of the roller gap, the screw speed and the roller speed. The capacity differs depending on the bulk density of the materials according to the following equation.

Features:

1. The Roller Compactor is designed to have 3 functions in one unit. These are compression, milling, and granulating. It is a simpler operation than wet granulation (mixing, pasting, kneading, drying, sifting, and granulation etc.)
2. No water or other liquid is added, so the loss of active ingredients due to decomposition can be eliminated. Highly stable granules can be obtained.
3. Feeding Hopper can move up and down by the inbuilt hydraulic system for ease of maintenance and cleaning.
4. Charging screw and roller speed are designed for precise and variable adjustment.
5. The pressure of hydraulic system is adjustable to accommodate a wide range of materials.
6. Wide ranges of screen mesh size are available for the granulator screen.
7. The temperature of the roller system can be reduced by the connection of a cooling system to the rollers.
8. The connection of a cooling system to the bottom of hopper will further reduce high temperatures generated during the operation that maintain the product quality.
9. High percentage of re-usable granules can be reached by the better-designed breaking blades and fine crushing rollers.
10. OPTIONAL: A vibration sifter, which can filter small or undersize granules for re-granulation is available as an option.

11. OPTIONAL: An automatic suction conveyer for the charging or recycling of powder or granules is available to assist in the reduction of labor costs and to maximize the production.
12. The resulting granules are uniform. The tablet weight can be controlled within narrow limits.
13. The resulting granules are suitable for direct compression without slugging.
14. The resulting granules of light powder can be easily filled into capsules.
15. The resulting granules flow easily for efficient automatic filling and packing procedures.
16. No water or air pollution treatment is required.
17. This machine can be maintained easily and requires a small floor space.
18. For the processing of thermo sensitive materials, the rolls can be fitted with a cooling system.
19. ISO 9002 Registered Manufacturing.

Specification:

* Specifications subject to change without notice.

Applications:

Pharmaceutical

Free flowing granules for automatic packaging

Compact granules to reduce package size.

Dust free granules to facilitate handling.

Granules can be filled in smaller capsules.

Granules for tableting.

Electrical, mechanical, and other industries: Ferrite, kaolin, minerals etc.

Food Industry: Granules for compressed candies, chocolate, dairy products, seasonings, etc.

Chemical Industry: Catalysts, fertilizers, pesticides, dyes, cosmetics and other chemicals.

Granulation Theory

Two categories of granulation methods: wet type and dry type.

Wet type granulation requires water or binder, to be added during the granulation process; consequently a drying process is essential after granulation stage.

Dry type granulation eliminates the addition of water, or binder, and as a result the drying process is not required. (Bonding agents or lubricants however can be added during the dry granulation process.)

Some powder raw materials have the characteristics of low density (low specific gravity) and bad flow ability. By using the Roller Compactor – dry granulation process, it will improve the above characteristics and result in a bigger bulk density, higher specific gravity and good flow ability granules.

Mechanical Theory

Model	Capacity	Compacting Roller	Max. Roller Force	Total Connected Load	Overall Dimensions	Net Weight
	Lactose (kgs/hr)	(mm)	(ton)	KW	WxLxH (mm)	Kgs
YC-RC-5	5	10(Φ)x40(w)	5	2.2	800 x 1000 x 1750	1000
YC-RC-30	30	150(Φ)x60(w)	15	5.5	900 x 1100 x 2250	1150
YC-RC-70	70	200(Φ)x80(w)	20	8.5	1100 x 1200 x 2450	1250
YC-RC-200	200	300(Φ)x150(w)	30	14.5	1500 x 1870 x 3500	1400
YC-RC-400	400	400(Φ)x220(w)	40	28	1800 x 2200 x 4000	1800