



Roll Compactor 200/50, 200/100, 200/150, 200/200



Boson Roll Compactor Machine is used for dry granulation method. It forces through feed screw the fine powders between two counter rotating rollers, one roller rotating clock wise and another one roller rotating anti-clock wise and presses the fine powders in a solid compact or sheets with hardness, so called chips or flakes. Finally these chips or flakes are then reduced in size to the desired granules/grain size further with the help of Oscillating Granulator Machine or Multi Mill Machine or Sizing Machine. The sieve size should be selected very carefully in order to prevent the generation of fines. The selected sieve defines the final granules/grains size. Also further to achieve excellent granules/grains can be made dust free by Screening (Sifter) Machine. The separated fines also can be Re-compacted/ Recycle with Roll Compactor Machine.

In the process of compaction the fine powder or crystalline powder are fed to the charging hopper of the Roll Compactor. Here the vertical feed screw feeds the powder into the compacting zone of the compacting rollers through the pre-compacting chamber. The adjustable speed through AC VFD Variable Frequency Drive of feed screw pressures the powder to pass strictly between the compacting rollers gap and therefore strong/hard chips or flakes forms from the fine or crystalline powder. After proper synchronization of Roller Speed & Feed Screw Speed with proper flakes quality, the same speed ratio can be continue to achieve the more output if the speed limit permits the machine rated roller & feed screw speed from the same machine model.

The Roller surface can be selected depending upon the characteristics of the powder/product. If the products are well familiar with the Boson Roll Compactor Machine, our Technical Team can suggest the perfect roller surface for the particular product base on an experience & expertise for it. For product development or evaluation of product or changing the concept of granulation

method, or achieving the dust free granules in order to get the Export quality granules, we are always happy to carry out the trails with your material in our plant.

The size reduction of the compact is achieved by a BOSON GRANULATOR, which can be installed as an internal part of the system, particle size can be varied by changing the Boson Granulator screen size as well as adjusting the operating speed and blade type. This combination provided maximum flexibility in meeting product requirement with a broad range of materials.

Compaction USED:

- To Produce a Uniform Particle Size Range – The Particle size range of the product can be selected to suit individual requirements & varied according to individual needs.
- To Control Dust – Dust is generally a wasteful and obnoxious form to handle. Cross contamination and product loss can be eliminated.
- To Adjust Flow Properties– Granular materials flow more easily and resist bridging and caking. Higher flow rates and more even fill can be achieved in many cases.
- To Control Bulk Density – Increased bulk density may be desirable for storage, transport or packaging. Marked increases in bulk density can usually be achieved and controlled within certain limits.
- To Control Particle Hardness – The characteristics of particle hardness can sometimes be adjusted to suit the product needs. Crush strength and disintegration can be important properties brought under more rigid control.
- To Improve Solution OR Dispersion Rates – Granular materials absorb liquids more readily than do many powders. Therefore, granular materials will dissolve or disperse more easily and quickly. Under proper conditions, some materials can also be adjusted to sink or float as desired.

Features

- Contact Parts SS-316 & Non Contact Parts – SS-304 Material .
- Roll Surface Selection depends upon material characteristics
- Roll Type Corrugated / Plain / Knurled / Briquetted (Any One)
- Very compact design available in Plain, Water Jacketed or Flameproof Model.
- Screw is driven through ACVF Drive. Safety slipping clutch between gearbox and feed screw.
- Rolls drive through twins shaft gearbox with speed drive unit coupled to it using coupling, which ensures synchronization of the rolls with a steady torque loading.
- Pre-densifier screw comprises of cylindrical or conical shape, which is well polished and made of AISI SS-316 quality material .
- Compacting rolls sleeves are made out of tool steel, hardened to 55 HRC approximately, and are keyed in to shafts and thus protected against axial slipping by thrust plates and bolts.
- The feed screw assembly can be lifted by hand-operated hydraulic pump. This facilitates ease in cleaning.
- Scraper assembly also designed to dismantle for ease of cleaning.
- Pre-compression chamber guides the powder without any slippage or leakage.
- A separate panel board which consist all controls and indicators of the compactor are permanently built in namely, on/off rolls, on/off feed screw, main switch, forward/reverse switch, ammeters for rolls and feed screw and emergency stop to avoid short circuit or fire hazard at the time of cleaning with water.
- Out Put Depending on the material characteristics.

Technical Specifications

Model	BMRC-200/50	BMRC 200/75	BMRC 200/100
Output – Kgs./Hr.*	20 to 60	75 to 100	100 to 250
Roll size –Dia X Width mm	Ø 200 x 50	Ø 200 x 75	Ø 200 x 100
Roll Speed – AC Drive	5 to 25 RPM	5 to 25 RPM	5 to 25 RPM
Feed screw Speed–AC Drive	10- 60 RPM	10- 60 RPM	10- 60 RPM
Roll drive Motor Crompton Make	5 Hp/960 rpm/3 Ph	5 Hp/960 rpm/3 Ph	5 Hp/960 rpm/3 Ph
Feed Screw Drive motor Crompton Make	3 HP/1440 rpm/3 Ph	3 HP/1440 rpm/3 Ph	3 HP/1440 rpm/3 Ph

Model	BMRC 200/150	BMRC 200/200
Output – Kgs./Hr.*	100 to 350	150 to 400
Roll size –Dia X Width mm	Ø 200 x 150	Ø 200 x 200
Roll Speed – AC Drive	5 to 25 RPM	5 to 25 RPM
Feed screw Speed–AC Drive	10- 60 RPM	10- 60 RPM
Roll drive Motor Crompton Make	10 Hp/960 rpm/3 Ph	10 Hp/960 rpm/3 Ph
Feed Screw Drive motor Crompton Make	5 Hp/1440 rpm/3 Ph.	5 Hp/1440 rpm/3 Ph