

## *Roll Compactor cGMP Plain & Water Jacketed*



Roll Compactor & Roller Compactor Machine is used for dry granulation method. It forces the fine powders between two counter rotating rollers and presses the fine powders in a solid compact or sheets, 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 Comminuting Mill 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 Variable Frequency Drive – AC VFD) of feed screw pressures the powder to pass strictly between the compacting rollers gap and therefore strong/hard chips/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 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.

## SALIENT FEATURES:

- In Compliance with cGMP guidelines.
- Contact Parts are made of S.S. 316 except rollers.
- Very compact design available in Plain, Water Jacketed or Flameproof Model.
- Screw is driven through AC Variable Frequency Drive. Safety slipping clutch between gearbox and feed screw.
- ELNP (Electroless Nickel Plating) or Hard chrome plated with mirror finished compacting rolls made of tools steel.
- Rolls drive through twins shaft gearbox with drive unit coupled to it using coupling, which ensures synchronization of the rolls with a steady torque loading.
- Pre-Compression chamber guides the products to roll without any slippage or leakage.
- Pre-densifier screw comprises of cylindrical or conical shape, which is well polished and made of AISI SS-316 quality material.
- The feed screw assembly can be lifted by hand-operated hydraulic pump. This facilitates ease in cleaning.
- Scrapper assembly also designed to dismantle for ease of cleaning.
- 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.
- Electrical interlocking between main roll drive and fixed screw drive.
- Water jacketing arrangement. (optional)
- Hydraulic power pack system for Rear Roller. (optional)
- AC Variable frequency drive for Rollers. (optional)

## Technical Specifications:

MODEL	SMRC-200/50	SMRC-200/75
Output *	5 to 60 Kgs / hour	10 to 100 Kgs / hour
Roll Size	200mm Dia X 50 mm (W)	200mm Dia X 75 mm (W)
Roll Speed (Step Pulley drive)	6 to 25 RPM	6 to 25 RPM
Feed Screw Speed (Through A.C.Drive)	5 to 60 RPM	5 to 60 RPM
Roll Drive Motor	5 HP, 960 RPM, 440 V, 3 Phase, 50 Hz,	
Feed Screw Drive Motor	3 HP, 1440 RPM, 440 V, 3 Phase, 50 Hz,	

MODEL	SMRC-200/100	SMRC-200/150
Output *	50 to 250 Kgs / hour	50 to 350 Kgs / hour
Roll Size	200mm Dia X 100 mm (W)	200mm Dia X 150 mm (W)
Roll Speed (Step Pulley drive)	6 to 25 RPM	6 to 22 RPM
Feed Screw Speed (Through A.C.Drive)	5 to 60 RPM	5 to 60 RPM
Roll Drive Motor	7.5 HP, 960 RPM, 440 V, 3 Phase, 50 Hz,	10 HP, 960 RPM, 440 V, 3 Phase, 50 Hz,
Feed Screw Drive Motor	3 HP, 1440 RPM, 440 V, 3 Phase, 50 Hz,	5 HP, 1440 RPM, 440 V, 3 Phase, 50 Hz,