



PHARMA MACHINERIES



SPERIODISER



SPHERODIZER

TECHNICAL OFFER

The machine consists of a round disc with a vertical shaft spinning at high speed at the bottom of cylindrical chamber. The cylindrical drum is called bowl and the spinning disc is called a friction plate. The friction plate has a groove pattern to increase the friction with the product. When the extrudes are charged into the spherodizer, they are thrown to the end of spinning plate by centrifugal forces. By the contact with the plate, the extrudes are cut into short cylindrical segments which are gradually rounded by the collisions with the drum wall and the plate. The probabilities of fines generated during the process is there, these fines will adhere on the surface of the spheres again they can get under the friction plate, through the gap between the plate and the wall. The fines generated under the friction plate will be discharged from the machine by means of a propeller after a certain retention time, the particles have obtained the desired spherical shape, then the discharge is via centrifugal force.

The on going action of particles colliding with the wall and being thrown back to the inside of the plate creates a rope movement of the product along the wall. The continuous collision of granules with the wall and the friction plate will gradually turn cylindrical, is essential for optimum spheronisation.

The extrudes from the extruder are converted into spherical beads due to the centrifugal force created by the high speed rotation of plate.

The gap between the chequered plate and drum is reduced to minimum to avoid powders from falling down & beads being crushed during the Spher'oidization process.

The RPM of Spher'oidizer and choosing correct plate with proper formulation are the key factors. Each extrudate that comes in contact with the chequered plate, is then broken in length to its diameter, due to the tumbling & rope effect of the beads get converted into spheres. Compressed connection is provided to facilitate rope formation and avoid crushing of pellets.



TECHNICALS SPECIFICATION

Model	Output	Motor HP	Compressed	RPM	Weight	Dimension in
	Per batch		air(kg/cm ²)	(RPM)	(Kgs)	mm LxBxW
RDSPD-150	0.1-0.25	0.5	N.A	100-3000	25	500x250x400
RDSPD-250	0.25-2	1	N.A	100-1500	60	550x350x600
RDSPD-380	0.5-4	2	2.5	100-1500	120	900x450x800
RDSPD-500	1-10	5	2.5	100-1500	250	1000x600x950
RDSPD-700	2-28	5	2.5	100-750	450	1200x900x1100
RDSPD-900	5-60	7.5	2.4	100-750	700	1200x1400x1

RIDDHI PHARMA MACHINERY LTD.

Manufacturer & Exporters of Pharmaceutical Machineries

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