

## SINGLE DRUM FLAKER DRYER



### *PRINCIPLES OF OPERATION :-*

**GEM Flakers** convert molten liquid chemical into solid flakes. This is achieved by forming a thin layer of molten chemical on the outside surface of a rotating drum and causing this to be solidified by spraying cold water from inside the surface of the drum. An adjustable scraper continuously removes the solid paste from the drum surface in flake forms.

**GEM Single Drum Dryers** are similar to the flakers except that in these Single Drum Dryers, the inner surface instead of being sprayed with cold water is heated with steam. This results in heating of the drum and removes the excess moisture from the molten chemicals which after scraping results in a dried powdery product.

The material flaked/dried is collected through a chute or a conveyor. The required size of the flakes can be adjusted by controlling the speed of the drum through a VFD, the temperature of the product, the dip level of the drum in the molten chemical or by controlling the temperature of the cooling/drying medium.



## CONSTRUCTION: -

### DRUM:-

The material of the drum could be Mild Steel, or any grade of Stainless Steel with or without Hard Chrome plating. The surface of the drum is machined and ground. The drums rotate on antifriction self-aligning ball / roller bearing with standard Housing.

### SCRAPPER:-

The Scrapper Knife scrapes off the solidified material from the surface of the drum. The material of construction of the Scrapper knife is usually Stainless Steel or Phosphor Bronze. They are designed to ensure uniform pressure against the drum over the full length. The pressure of the knife is controlled by an adjustment screw.

### HOOD (OPTIONAL): -

To prevent toxic vapours, the dryer/flaker is equipped with a totally enclosed hood with vapour outlets on top.

**DRIVE:-** Heavy duty drive is designed for smooth, continuous and trouble free running. V-pulley or variable speed arrangement can also provided for optimum performance.

**APPLICATOR ROLLER (OPTIONAL):-** In certain cases, a heated Applicator Roller is used to transfer the feed material from the Feeding Tray to the Drum. The gap between the Applicator Roller and the Drum can be adjusted depending on the requirement.

### STANDARD SIZES (DRUM DIMENSIONS):

<b>DIMENSIONS : (mm)</b>	600	1000	1000	1250	1250	1250	1500
<b>LENGTH : (mm)</b>	1000	1250	2000	2000	2500	3000	3000
<b>GROSS AREA : (mm)</b>	2.00	4.00	6.00	8.00	10.00	12.00	14.5

### APPLICATIONS:

- Acetanilide
- Benzoic
- Fatty acids
- Organic resins
- Caustic Soda
- Magnesium chloride
- Phenolic resin
- Sodium Sulphide
- Chlorinated Wax
- Monochloro Acetic acid
- Nickel catalyst
- Phosphorous Penta Sulphide

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