



**GEMTECH PROJECTS
LLP**

FLASH DRYER



www.gemdryers.com



PRINCIPLE :

GEM Flash dryers are used for drying free flowing powders or cakes containing moisture which are sensitive to heat. It works on the principle of a pneumatic conveyor using hot air. Wet product is introduced through a screw conveyor into a long vertical tube with a high velocity air stream. The product gets dried as it travels in this flash duct and is then separated in a cyclone or a bag filter. Even the heat sensitive products can be dried at high inlet air temperatures due to very low residence time of the product in the flash duct. The air can be directly or indirectly heated using steam, thermic fluid, oil, gas or solid fuel and is handled by centrifugal fans.

CONSTRUCTION:

Feeding Screw Conveyor

The materials are fed into the flash duct with the help of a feed screw conveyor. This screw conveyor is made out of Mild Steel or Stainless Steel depending on the application and moisture content of the material being fed.

Flash Duct

The Flash Duct or the tube through which the materials passes is fabricated out of Mild Steel or Stainless Steel sheets and duly welded to ensure there are no leaks. The size of the tube and the length is dependent on the capacity and moisture of the product that is conveyed.

Cyclone/Bag Filter

Once dried, the particles are forced into a Cyclone/Bag Filter which separates the particles from the air. The Humid air is further exhausted out with the help of an additional blower.





Centrifugal Fans

The Centrifugal Fans used are High Pressure Fans to transport the materials through the flash duct.

Control Panel

A control Panel displaying all the parameters of the temperature and pressure is provided. It can be equipped with PLC/SCADA/HMI if required.

Salient Features :

- Short retention time
- Appropriate for a wide range of materials
- Low product attrition
- Promotes product quality
- Cost effective and reliable with low maintenance and cleaning requirements
- Space saving designs, High processing capacities in relatively small amount of space.
- Backward curved radial blower for maximum efficiency & longer impeller life.
- Effective drying with low Energy (Fuel & Power) requirement.
- High Efficiency Cyclone for minimum pollution & material loss.

Technical Parameters :

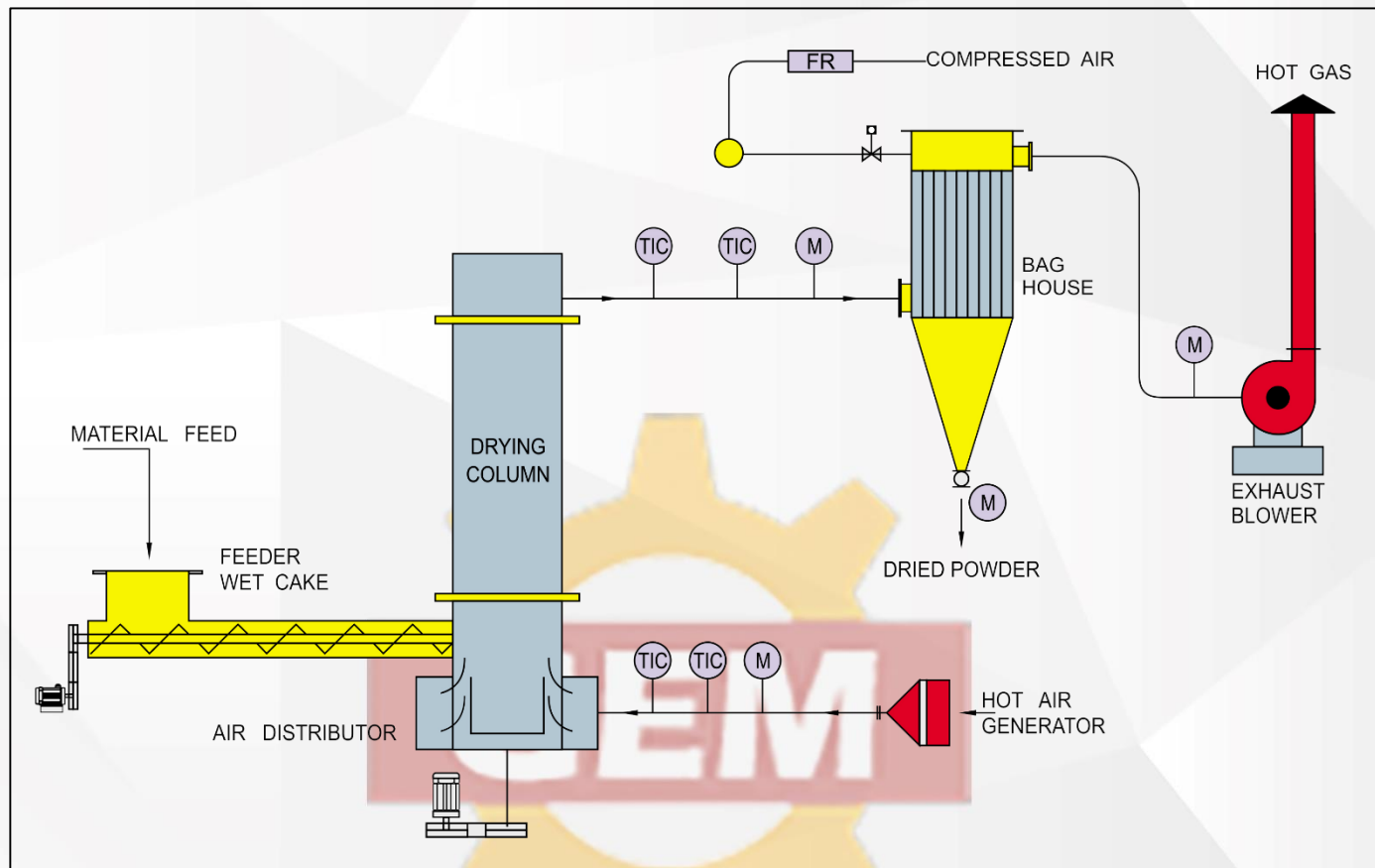
CAPACITY	100 Kgs/Hr to 5000 Kgs/Hr
FUEL CONSUMPTION	75 Kgs/Hr – 1000 Kgs/Hr
POWER SUPPLY	3 Phase, 50 Hz/60Hz, 380 v / 415 Volt
MOC	MS, SS, Carbon Steel
HEAT SOURCE	Steam, Wood, Electricity, Hot Gas





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Flow Diagram of Flash Dryer :



Application :

- Fine Powders
- Filter Cakes
- Fibres
- Pigments and Dyes
- Sawdust
- Starch
- Bagasse
- Phosphates

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