# VERTICAL FLASH DRYER

## Drying of Powders, Filter & Centrifuge Cakes, and Low Temperature Calcining

VERTICAL FLASH DRYER

### FEATURES & ADVANTAGES

- Once through flow of product which protects temperature sensitive material
- Product is evenly dispersed into hot air stream providing uniform treatment
- Static classifier sends finer dry material directly to product outlet and keeps larger particles in the air stream until dry
- Controlled residence time is adjustable to provide sufficient time for drying or for other chemical reaction
- Vertical construction minimize's floor space
- Minimum operator attention required
- Energy efficient complete Custom Engineering Drying Systems

### PROCESS DESCRIPTION

Material is introduced into a hot air stream using a venturi or screw feeder. If the product needs to be de-agglomerated, the hot air and product are conveyed pneumatically to a disperser/ventilator which breaks up the large agglomerates and further completes the mixing process between the hot air and product. If de-agglomeration is not necessary, then the hot air and product is combined in a heated air stream, with no internal moving parts.

The combination of hot air and product enter the vertical column and static classifier where the bulk of the material is dried. Smaller particles dry immediately, and are sent to the outlet of the dryer where they are pneumatically conveyed to the product collection system. The coarser still wet material is retained in the dryer column until it dries, and then it is conveyed to the product collection system. The larger particles will collide against one another exposing the wet material to the heated air stream, which in turn, will dry the product.

Gas heating can be direct or indirect using steam or direct fired. Combustors can be designed for gaseous or liquid fuels with controls meeting current standards. System controls are set-up to run in either manual or automatic mode with PLC integration as an option for controlled start-up and shutdown sequencing.

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| Drying Process: | Continuous direct contact |
| Drying Media: | Air, nitrogen, superheated steam |
| Inlet Temperature Range: | 180 to 1800 F |
| Outlet Temperature Range: | 130 to 1600 F |
| Material Residence Time: | 2 to 12 seconds |

### Abbreviated Application List:

Calcium Carbonate
Metallic Stearates
Metallic Oxides
Minerals, fine/course
Pigments
Polymers
Starches
Spent grains
Clays

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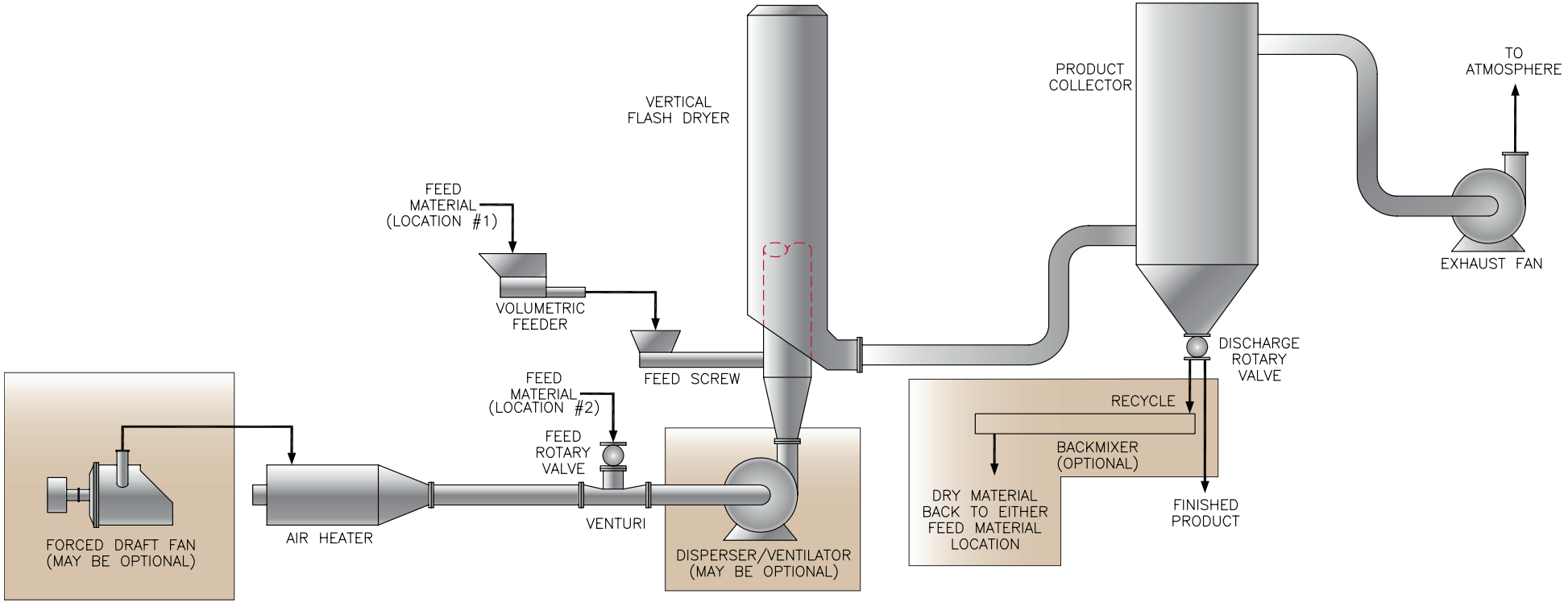



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