

SPRAY DRYER SPD-M-111

Spray drying is the most widely used industrial process involving particle formation and drying. It is highly suited for the continuous production of dry solids in either powder, granulate or agglomerate form from liquid feed stocks as solutions, emulsions and pumpable suspensions. Therefore, spray drying is an ideal process where the end-product must comply to precise quality standards regarding particle size distribution, residual moisture content, bulk density, and particle shape in crystalline or amorphous powder. Spray drying involves the atomization of a liquid feedstock into a spray of droplets and contacting the droplets with hot air in a drying chamber. Evaporation of moisture from the droplets and formation of dry particles proceed under controlled temperature and airflow conditions. It is the ultimate solution to R&D and analytical needs and is the key for standardization of product.



Chemicals | Polymers / Resins | Food Industry | Natural oils / oleoresins / Fish Oils
 Fragrances / Perfumes | Flavours | Soaps & Detergents | Textiles Dyes & Pigments
 Spices | Ceramics | Beverages | Metallurgical



Applications

- ◆ Calciums / Carbonators / Aluminum Chloride, Zeolite etc.
- ◆ Misc polymers and resins for allied industries
- ◆ Milk, milk derivatives, soyabean products, tea, coffee, instant foods, baby foods, weaning
- ◆ Foods, egg products, chocolate etc.
- ◆ Palm / Orange / sandalwood/ ground nut / Cod liver oil etc.
- ◆ Encapsulated fragrances / perfumes like day to day body odours – Brut, Eu-de-cogn, Musk, Lavender, Rose, Sandalwood etc.
- ◆ Encapsulated Flavours – Natural synthetically Developed etc.
- ◆ Cloth washing powders
- ◆ Textiles chemicals, encapsulated, fragrant dyes, heat / electrical protective dyes etc.
- ◆ Reactive / disperse dyes for cloth dyeing &
- ◆ Engineering pigments, optical whiteners etc.
- ◆ Mono / mixed spices etc.
- ◆ Quality Ceramics with special electro-mechanical properties for tiles, ceramic, Ortho-dentistry etc.
- ◆ Ready to make soft drinks / cocktails etc.
- ◆ Specialty alloys, precious metals etc.

Technical Data:

- ◆ Evaporation Rate: Approx. 1Lit./Hr. (H₂O)
- ◆ IN Air Temperature: Ambient to 280° C.
- ◆ Heater Capacity: 3 KW.
- ◆ Feed Pump Flow rate: 0 – 1200ml/hr.
- ◆ Blockage cleaning for Nozzle: Variable Plunger Frequency.
- ◆ Spray System: 0.5/0.7/1.0 mm jet tips.
- ◆ Spray / Hot air flow: Co-Current.
- ◆ Power Supply: 220-240 VAC 50 Hz Single Phase Max.12A.
- ◆ Dimensions: 1000mm x 650mm x 650mm (H X W X D)
- ◆ MOC: MS powder coated
- ◆ Unit Weight: 45kg (Without Glassware)
- ◆ Drying Air Throughput/hr ---> variable from 20m³ to 80m³/hr.
- ◆ Aspirator Blower---> capacity 80m³/hr 0.5HP X 2800 RPM 3 phase FLP motor.
- ◆ Air Heater Body ---> SS 316.
- ◆ Threaded covers for product receivers.
- ◆ Tubing for Peristaltic Pump ---> Silicon Tubing.
- ◆ Fresh Air Filter ---> Pre Filter 5 Microns. Hepa Filter 0.3 Microns.

Features:

- ◆ Table Top Model.
- ◆ Plugin unit
- ◆ Aseptic GMP Unit.
- ◆ Aqueous / Solvent feed solutions.
- ◆ Co-Current Spray Nozzle.
- ◆ Twin (High Efficiency) Cyclons.
- ◆ Microcontroller Based
- ◆ 9" Chamber Dia.
- ◆ Digital Vacuum / Pressure Indicator.
- ◆ Built in hotplate & stirrer
 - ◆ Two way communication with PC & Machine through RS 485 port.

Optional Features:

- ◆ Counter current Spray Nozzle.
- ◆ SS/MS Trolley for mobility.
- ◆ Air Compressor (Oil Free)
- ◆ PC Software

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