

NANO SPRAY DRYER

for nano particle generation & drying



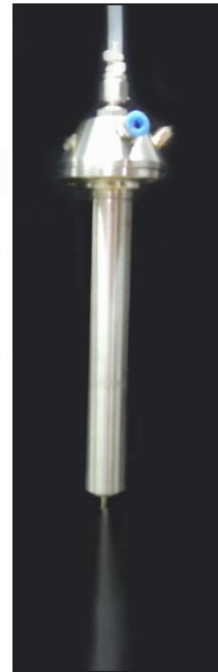
NANO SPRAY DRYER for nano particle generation & drying

Nano Spray Dryer results into sub-micron particles by increasing the surface contact area. The solution is fed through a Syringe pump to the Ultrasonic Spray Nozzle, The solution is sprayed with the Ultrasonic Spray Nozzle into the Drying Chamber at set Temperature with accuracy of $\pm 1^{\circ}\text{C}$. Resulting in a fine spray (Mist) of droplets coming in contact with the hot air as per set temperature, evaporation of moisture from droplets (Mist) & formation of dry particles (Sub-micron) proceed under controlled temperature & Air flow conditions. The Ultrasonic Nozzle can handle PH in range of 0 to 14. Orifice of 0.8mm results in very less clogging & can handle solutions of high viscosity.

Technical Data:

- ◆ Evaporation Rate: Approx. 400ml./Hr. (H₂O)
 - ◆ Inert Air Temperature: Ambient to 150° C.
 - ◆ Heater Capacity: 3 KW.
 - ◆ Power Supply: 220-240 VAC 50 Hz
Single Phase Max.15A.
 - ◆ MOC: S.S with dull pharma finish.
 - ◆ Aspirator Blower--->
0.5HP X 2800 RPM 3 phase FLP motor.
 - ◆ Fresh Air Filter ---> Pre Filter 5 Microns.
Hepa Filter 0.3 Microns.

 - ◆ Nozzle operating Frequency - 60/120KHz.
 - ◆ Nozzle Tip - Titanium Alloy 6Al - 4V.
 - ◆ Max. Operating Temperature - 130 °C (Inlet Air Temperature).
 - ◆ Droplet size for 60 KHz Nozzle < 100 microns*
for 120 KHz Nozzle < 50 microns*
- * Droplet size will depend on Flow rate, Viscosity & Liquid Media.
- ◆ Air Compressor(Oil free).
 - ◆ Syringe Pump.



Features:

- ◆ Plug-in Model.
- ◆ Aseptic GMP Unit.
- ◆ Aqueous / Solvent feed solutions.
- ◆ Co-Current Spray.
- ◆ Twin (High Efficiency) Cyclons.
- ◆ PLC based with 7" Touch screen.
- ◆ Temperature Graphs on HMI.
- ◆ 9" Chamber Dia.
- ◆ Dimensions in mm (700 x 650 x 1600)