

SDMICRO™ Spray Dryer

- Ideal for research and development
- Designed for spray drying of small volumes of high value pharmaceutical and chemical formulations
- Water or organic solvent based formulations can be spray dried by using compressed air or inert process gas
- Two-fluid nozzle atomization
- High efficiency cyclone and bag filter
- Easy to dismantle for cleaning and fast product switch



Nozzle atomizer

Process gas disperser





SDMicro™ Spray Dryer

The new SDMicro™ Spray Dryer helps pharmaceutical or chemical companies to evaluate spray drying during the early stages of product development. It enables companies to identify the most appropriate isolation technique for the product to guarantee the most efficient manufacturing process.

The SDMicro™ is a fully functional spray drying plant in very small scale. Computational Fluid

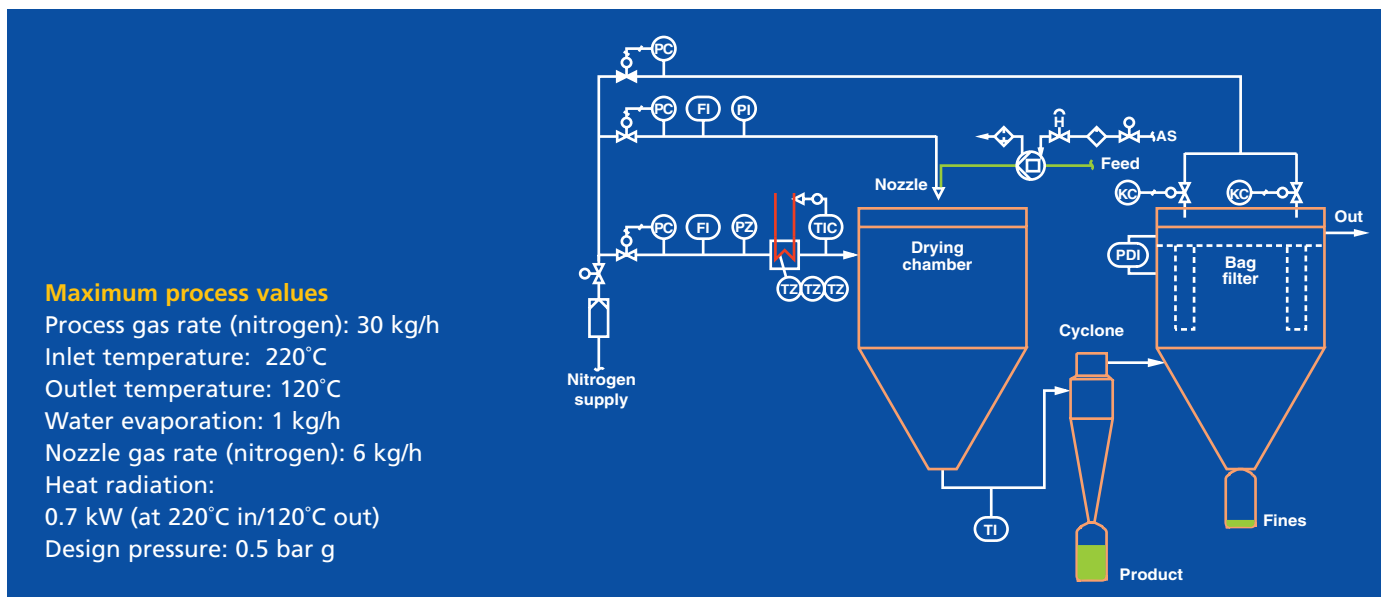
Dynamics have been used to design the smallest possible spray drying chamber that retained the same air flow pattern as a full scale production model. The resulting equipment can make test volumes of product at the smallest possible scale (100 - 200 ml).

The Intrinsically Safe operation makes the SDMicro™ suitable for use with Nitrogen for products dissolved in organic sol-

vents. Compressed air is used for drying of aqueous fluids.

The cyclone is used for the initial powder collection, and the bag filter collects fine particles passing through the cyclone. The cyclone may be by-passed completely for collecting very fine powders in the bag filter.

The SDMicro™ is easy to dismantle for simple cleaning and fast product switching.



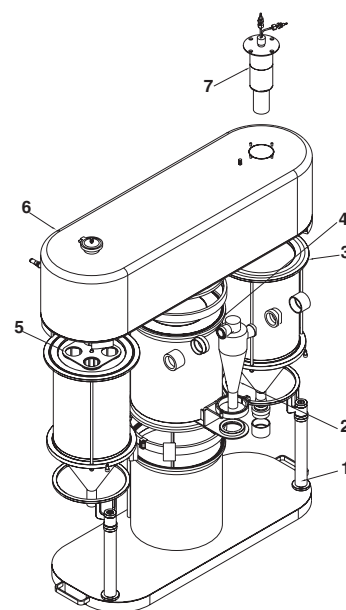
Configuration example

- Item 1: Lower part
- Item 2: Cyclone, stainless steel or glass, with powder recovery
- Item 3: Drying Chamber including the two-fluid nozzle. Cylinder made of glass
- Item 4: Middle section including the electrical heater, 2 kW, class EEx de IIC T1, T2, T3
- Item 5: Exhaust gas bag filter. Cylinder made of glass. 4 bags of PTFE. Filter area: 0.3 m²
Continuous 'pulse jet' cleaning.
- Item 6: Upper part
- Item 7: Process gas disperser

Control system with animated HMI LC display
 Glass type: Boro Silicate
 Stainless steel: AISI 316

Dimensions

Assembled LxWxH: 1200 x 600 x 1700 mm
 Weight (exclusive of control panel): 200 kg
 Control panel: 150 kg



GEA Niro A/S

Powder Technology
 Division