GEA Process Engineering Division

Niro

IFD MINOR™ Spray Dryer

New small scale spray dryer with integrated filters and fluid bed

The production of agglomerated powders in a “one pot” process resulting in:

- High level of product containment
- Simplified powder handling as external bag filter, cyclone and fines recycle are eliminated
- Compact design reducing space requirements
- Higher yield
- Ideal for research and development as well as small scale production

Can be configured as a multi-purpose pilot plant to be operated as:

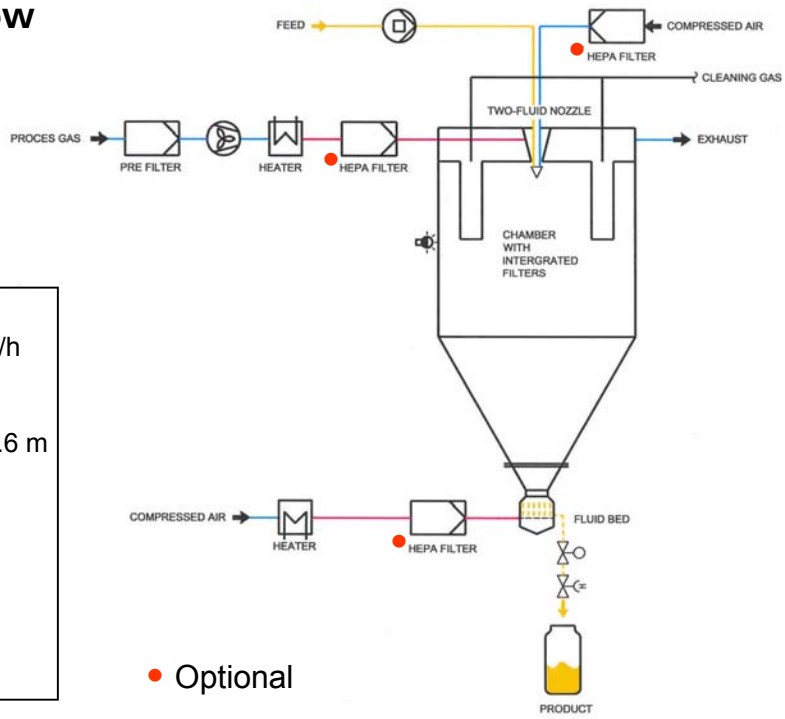
- Integrated Filter Dryer - IFD™
- Fluidized Spray Dryer - FSD™
- Conventional spray dryer
- Spray cooler

with post drying facilities in IFD™ and FSD™ modes

Complete installation including drying chamber system, supporting platform, service housing with control system, heater and fan

Filter bags integrated in the drying chamber

Typical IFD MINOR™ process flow



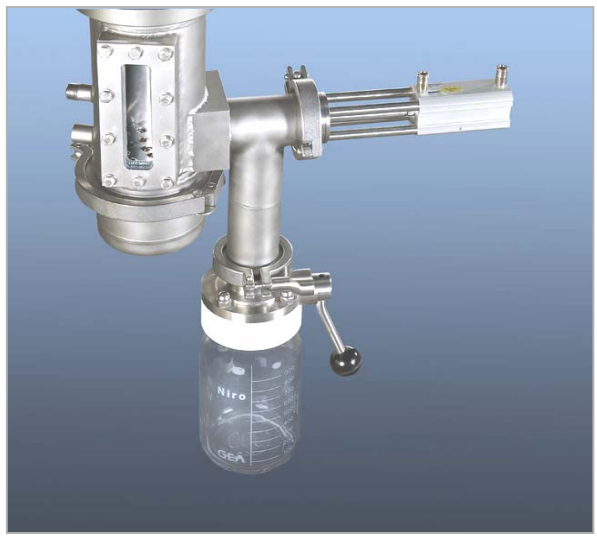
- Nominal process gas flow at 200 ºC: 80 kg/h
- Electrical heater: 9 kW
- Fan: 0,75 kW
- Space requirements: LxWxH: 4.0 x 1.3 x 3.6 m

Plant capacity:
Water evaporation capacity from
0.5 to 5.0 kg/h depending on product and temperature profile.

Special configurations available

Reinforced drying chamber with explosion relief membrane for products exhibiting a powder explosion risk when ambient air is selected as drying gas.

Special layout for operation with organic solvents using nitrogen as drying gas – either in open cycle or closed cycle mode.



Continuous powder collection under the fluid bed

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