FD500 CONTINUOUS SiccaDania Group

FULL SCALE FREEZE DRYER

For an automated and continuous production, several FD500 standard freeze dryer units can be arranged in a system, e.g. 5 in a row, representing an input capacity of 2500 kg product per cycle. The loading and unloading of the freeze dryers is automated and requires no manual labor. Capacity can be raised or lowered simply by adding or removing FD500 dryer units to or from the system. The automation system is capable of handling up to 20 units.

APPLICATIONS

The FD500 Continuous Freeze Dryer System is designed for drying of e.g. probiotic bacteria, colostrum, enzymes and allergen extracts.



TECHNICAL DATA

Example: The technical data and output graphs shown below is for a continuous system with 5 x FD500 freeze dryer units.





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BENEFITS OF THE FD500:

Fast and low-cost capacity increase: Capacity can be increased by adding standard FD500 freeze drying units to the system

No risk when up-scaling production: Using a standard FD500 dryer unit and known recipe parameters results in identical output products from all chambers

Production flexibility: Different products can be dried simultaneously

Reduced utility investment costs: E.g. size of the CIP unit is minimized since only one drying unit is CIP'ed at a time

Manual operations are reduced: The fully automatic system reduces the need for manual labor and OPEX

Foot-print flexibility: The layout of the freeze drying units, emptying station etc. is tailored to customer needs, allowing large systems to be fitted into existing buildings. Units can even be in 2 levels

Clean and hygienic: The racks are transported to and from the drying chambers in a sealed enclosure (the Clean-Factory-System) - all equipment is designed based on the highest hygienic standards

Easy maintenance: One unit can be shut down for maintenance while the remaining units are in use

For GMP applications: Lower qualifying costs - the qualifying documentation for the first unit can be used as a template for the subsequent units

EQUIPMENT:

BASIC SYSTEM

- Up to 20x FD500 units, with condenser chamber below drying chamber and automated double doors (opposite each other as pass-through unit)
- Vacuum pump system with a roots and a rotary vane pump
- Refrigeration system
- Control system with PLC incl. touch screen and data logging
- Stainless steel support structure and maintenance platform for 1-level-layout with condenser chamber below drying chamber
- FAT, SAT and CE documentation

OPTIONS

- CIP return equipment
- Clean-Factory-System for loading/un-loading robot system (sealed hygienic and CIP-able enclosure wagons)
- cGMP software and documentation package
- Modularized fully automatic tray filling system
- Modularized fully automatic tray emptying system

OTHER VERSIONS

• Layout of dryers according to customer facility, e.g. in 2 rows with only 1 loading/un-loading system



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