

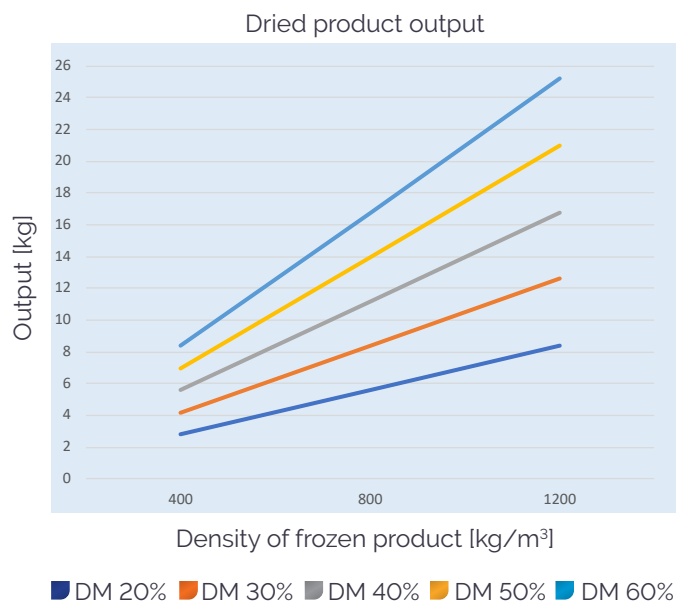
FD30

SMALL SCALE FREEZE DRYER

With its small size and but high capacity, the FD30 is perfect for various setups and applications. The FD30 Pilot scale freeze dryer represents the next generation of freeze dryer solutions.

The small scale freeze dryer, type FD30, is a hygienic bulk freeze dryer with an external condenser which optionally can be isolated from the drying chamber. Heating for sublimation is as standard supplied by electrical heating elements. The heating shelves secure a uniform temperature gradient and pressure across the entire tray surface area. They offer the highest level of hygienic design and reduces the maintenance costs.

The design is optimised for up-scaling and ease of maintenance. The FD30 dryer has as an option CIP nozzles installed for full coverage of CIP liquid. It is manufactured from stainless steel (AISI 316L), and all surfaces wetted by CIP-liquid can be documented with either 3.1, FDA and/or FCM certificate.



Applications

The FD30 freeze dryer is designed for drying of nutraceuticals, food and pharmaceuticals:

- Probiotic bacteria
- Enzymes
- Algae
- Coffee
- Ready to serve food
- Fruit and vegetable (sliced, puree or extract)

TECHNICAL DATE	
Total tray area	1 m ²
Number of trays	8
Input/feed capacity	30-40 kg
Cooling coil capacity	+30 kg H ₂ O
Maximum sublimation capacity	1.6 kg H ₂ O/hour
Product contact steel parts	AISI 316
Unit dimensions, W x D x H	1.8 x 0.8 x 1.7 m

Equipment

STANDARD EQUIPMENT

Stainless steel door
Stainless steel drying chamber
Stainless steel condenser chamber
Stainless steel condenser coil
Stainless steel frame and cladding
Complete refrigeration system (water cooled)
Non-lubricated vacuum pump (dry scroll pump)
Pressure sensors (high and low)
Electrical heating shelves (individually controlled)
Stainless steel sheeted thermocouples for product temperature measurement
Touch screen control panel with PLC
Data logging
Defrost of condenser (hardware/software sequence)
FAT, SAT and CE-documentation
Hygienic design prepared for CIP
Isolation valve
Additional port

OPTIONS

3.2/2.1 certificates for all product wetted parts
CIP equipment for both chambers
CIP return equipment
Disinfection v.e.g. H ₂ O ₂
Wireless product temperature probes
Nitrogen purging
Pre-cooling of drying chamber
Double pressure sensor set
GMP software and documentation package
Batch report
Additional ports
Cooling water unit
Defrost of condenser via vacuum steam

OTHER VERSIONS

SIP-able + equipment
Silicone heating/cooling shelves including system
Water heating/cooling shelves including system
Realtime product weighing (in chamber)
Air cooled refrigeration system
Alternative refrigerant (R404A, R744, R747)

Product drawings

