## FD30 INSTANT COFFEE SiccaDania Group

#### SMALL SCALE INSTANT COFFEE FREEZE DRYER

The small scale Instant Coffee Freeze Dryer, type FD30 IC, is a hygienic bulk freeze dryer with an external condenser which optionally can be isolated from the drying chamber. Heating for sublimation is supplied by an external water heating system, circulating water inside the shelves. The water heating system secures a uniform temperature gradient and pressure across the entire tray surface area.

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

#### **APPLICATIONS**

The FD30 IC Freeze Dryer is designed for drying of Instant Coffee.



### **TECHNICAL DATA**

Total tray area 1 m2

Number of trays 8

Input/feed capacity 20 kg (frozen coffee granule)

Cooling coil capacity +30 kg H<sub>2</sub>O

Maximum sublimation capacity 1,6 kg H2O/hour

Product contact steel parts AISI 316

Unit dimensions, WxDxH 1,8x0,8x1,7 m



### SD Freeze Drying «





#### Density of frozen product [kg/m<sup>3</sup>]

DM 20%
DM 30%
DM 40%
DM 50%
DM 60%

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#### **EQUIPMENT:**

#### **BASIC SYSTEM**

- Stainless steel door
- Stainless steel drying chamber
- Stainless steel condenser chamber
- Stainless steel condenser coil
- Complete refrigeration system (water cooled)
- Non-lubricated vacuum pump (dry scoll 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
- Stainless steel frame and cladding
- Defrost of condenser (hardware/software sequence)

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- 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<sub>2</sub>O<sub>2</sub>
- Wireless product temperature probes
- Nitrogen purging
- Pre-cooling of drying chamber
- Double pressure sensor set
- Sterile filters for in-/out-let flows, 0.22 μm
- cGMP software and documentation package
- Batch report
- Additional ports
- Cooling water unit
- Defrost of condensor v. vacuumsteam

#### **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)



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