

Laboratory Freeze Dryers

A comprehensive range of large capacity floor standing research, process development and small scale production freeze dryers offering.

Sophistication with Simplicity of operation with condenser temperatures to -95°C and pre-freeze to -80°C for bulk or vial drying to 1.2 m^2 .

»ScanVac
- Innovation from Experience



CoolSafe 95/55-80 Pro or Superior

a superlative and versatile range of advanced floor standing freeze dryers that have evolved from over 40 years experience and expertise which are the perfect choice for research, process development and small scale production.

Available in 3 configurations:

- Superior Bulk
- Superior Vial
- Pro

All with a choice of either -55 °C or -95 °C condenser temperatures. All models offer both simplicity of operation and the highest performance characteristics to meet the demands of today's research and development laboratories.

Today the CoolSafe Freeze Dryers have a proven track-record in:

- Quality control and research of food materials, bacteria, meat and dairy products
- Improved Preservation and presentation of floral materials and arrangements

- Pharmaceutical research, production and pilot studies/ scale-up protocols
- Vaccines and Anti-toxins
- Food preservation i.e. fish, shell-fish, milk and milk products, vegetables, edible mycelia, soft fruits and berries etc.
- Tissues and cells for electron microscopy
- Human and animal tissue and bone, excreta etc. in medical research
- Conservation of archaeological items such as wood, leather, textiles etc.
- Restoration of water damaged books, documents and paper materials





CoolSafe 95/55-80 Superior
with flask manifold & shelves in condenser.

CoolSafe 95/55-80 Superior - Flexibility of Choice

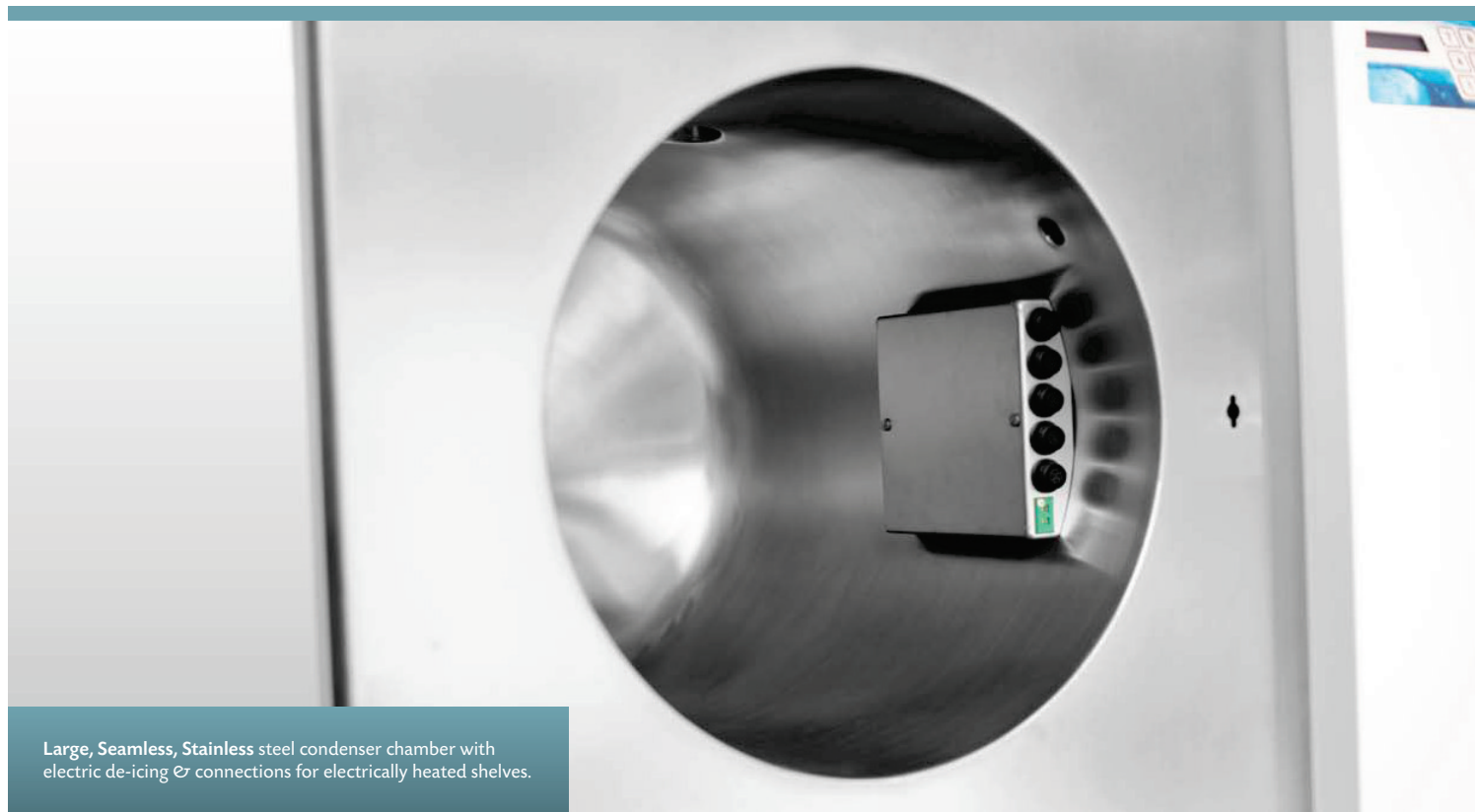
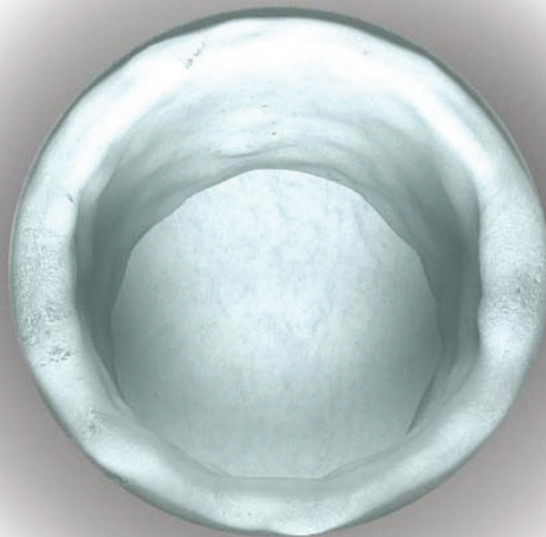
- Automatic Freeze Drying with pre-freeze facility down to -40 °C or -80 °C
- Automatic modes of operation with auto switching, allowing programming in 15 discrete steps through PC
- Choice of condenser temperature, -55 °C for eutectic formers or -95 °C for "glass" formers or samples containing organic solvents or acids
- Choice of configuration for either Bulk or Vial drying
- 5 x 3/4 inch rubber valve attachment for simultaneously flask drying or connection of other CoolSafe freeze drying chambers from the full programme of Add-On accessories – See CoolSafe Bench top models
- High capacity RZ6 vacuum pumps with oil mist elimination and anti blow back valve with pressure to 0.001 mbar (optional choice of any vacuum pump)



CoolSafe with stoppering unit connection.

Features of Quality

- Large capacity, seamless stainless steel condenser, with external cooling coils and electric de-icing as standard
- Seamless condenser for longer life, easy cleaning and de-ice
- Microprocessor Control and display of Condenser, Shelf and Product Temperatures
- Front-loading for ease of access, loading and supervision
- Fully automatic control of pre-freeze in 5 steps for correct ice crystal formation and then primary drying and secondary drying phases in 10 programmable steps
- Shelf temperature control from -80 °C to +80 °C on -95 °C models
- The shelf temperature control allows ramping in the pre-freeze for complete control of ice crystal formation to give optimal conditions for freeze drying
- Condenser Ice capacity of 10 kg/24 hours
- Total workable ice capacity of 40 kg
- Large condenser area of more than 1.0 m² for high uniform performance during freeze drying process
- Mounted on lockable castors for ease of locating/positioning of floor and versatility
- Alarms for low/high temperature/vacuum
- Easy service and maintenance
- Optional Teflon coating of condenser chamber
- Optional vacuum regulation for control of primary drying phase



Large, Seamless, Stainless steel condenser chamber with electric de-icing & connections for electrically heated shelves.

CoolSafe 95/55-80 Superior Bulk

This is the model of choice for “bulk” drying of materials on shelves, with the unique chamber design that is located inside the condenser. This allows for easy loading and removal of the trays and offers superior, reproducible freeze drying performance, with incremental pre-freeze temperature steps.

This together with a short vapour pathway, ensures reproducible results with maximum recovery of the sample, time after time.

The chamber can accommodate up to 5 or 8 electrically heated shelves, with trays, giving a total area up to 0.75m² (bulk-1) or 1.2m² (bulk-2). Furthermore, because of the chamber design and configuration inside the condenser, pre-freezing down to -80 °C can be achieved (-95 °C models only) allowing uniform ice crystal formation, avoidance of product collapse and with automatic trouble free transition to the primary drying phase.

The **Microprocessor Controller** (available on all models) with digital display of temperature and pressure allows for programming of shelf temperature in 15 distinct steps, 5 for incremental pre-freezing control and 10 for heat transfer control during the primary and secondary drying phases. This gives complete programming for the complete drying cycle.

Precise temperature regulation, with uniformity better than ± 0.5 °C, and shelf to shelf deviation less than ± 0.5 °C, and with temperature control of each shelf by Pt sensors, one per shelf. This provides both reproducibility and batch uniformity.

The option for remote control and data capture/storage with GMP-documentation via USB and PC interface connection, is available and is required for full programming capability.



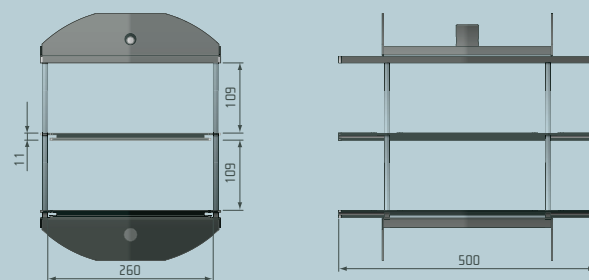
CoolSafe 95/55-80

Bulk with manifold for flask drying and electrically heated shelves for bulk drying on trays.

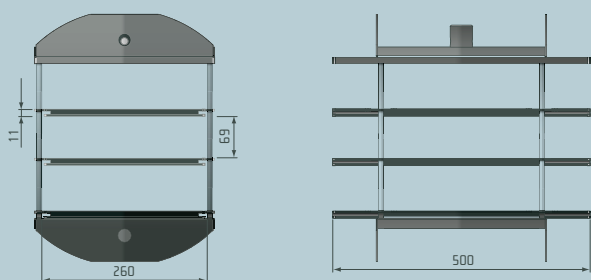
Dimension Superior



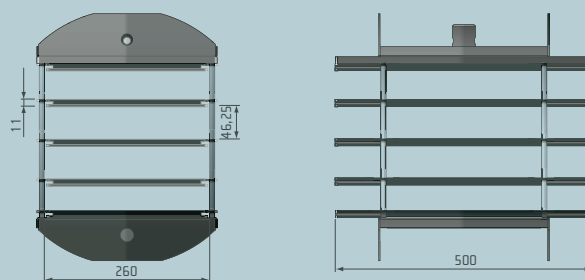
Distance between 2 shelf stoppering superior



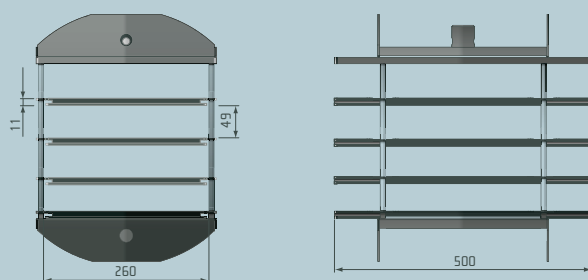
Distance between 3 shelf stoppering superior



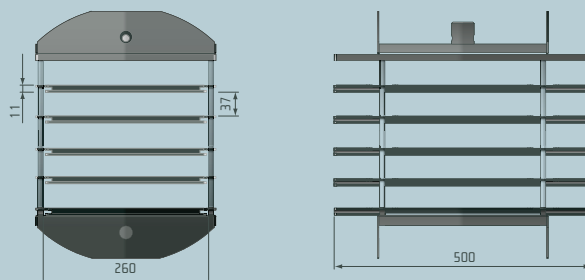
Distance between 4 shelf and 1 radiation shelf stoppering superior



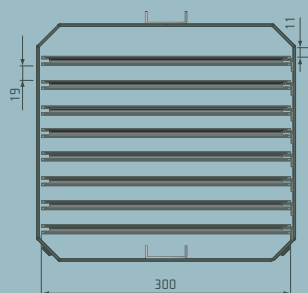
Distance between 4 shelf stoppering superior



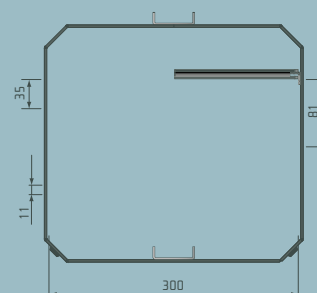
Distance between 5 shelf stoppering superior



Bulk-2 Assembly specification - 8 shelf Pic



Bulk-1 Assembly specification - 5 shelf



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OFFENDING COMMAND: .buildshading2

STACK:

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