

# FR-SERIES

Food & Industrial Production

The FR series utilises radiative heating to evenly & efficiently provide heat during the drying cycle. The machines are loaded with pre-frozen product, and so require an external cold-store or similar.

Additionally they also include a continuous defrost system to ensure there are no interruptions in production.



# FR-100

## AUTOMATED



**Fast Drying  
Capability**



**High  
Capacity**



**Radiant  
Heating System**



## Key Features

The FR series utilises radiative heating to evenly & efficiently provide heat during the drying cycle. The machines are loaded with pre-frozen product via a rapid load/unload trolley system to fully fit in your production process from cold store to dry store.

The FR-100 is ideal for large-scale product development and medium-scale production activities. The machine is designed to freeze dry 100kg\* of product over a 16-24 hour period.

\*dependant on product

## Technical Data

## FR-100

Ice Condenser Capacity	150kg / 24hr
Ice Condenser Temperature	-55°C
Defrost	Cold steam
Number of Trays	20
Tray Area	8m²
Shelf Spacing	70mm
Chamber Temperature	Up to 130°C
Cooling systems	Water
Refrigeration	Two-stage Frascold
Unit Dimensions (H x W x L)	2.1m x 2m 3m
Refrigerant	R404A
Vacuum	Pfeiffer Duo 65
Chamber Dimensions	1100mm id x 2000mm
Power Supply	380-415v 63a 3~
Control System	Automatic Control
Loading System	Cassette Trolley



**Food**



**Lab**



**Pharma**

**FROZEN IN TIME**  
Manufacturers of freeze driers and vacuum cold traps

# FR-250

**AUTOMATED**



**Fast Drying  
Capability**



**Continuous  
Defrost**



**Radiant  
Heating System**



## Key Features

The FR series utilises radiative heating to evenly & efficiently provide heat during the drying cycle. The machines are loaded with pre-frozen product via a rapid load/unload trolley system to fully fit in your production process from cold store to dry store.

The unit includes a continuous ice condenser defrost system that prevents the need to defrost the unit between batches.

The FR-250 is ideal for large-scale product development and medium-scale production activities. The machine is designed to freeze dry 250kg\* of product over a 16-24 hour period.

\*dependant on product



**Food**



**Lab**



**Pharma**

## Technical Data

## FR-250

Ice Condenser Capacity	Continuous Defrost
Ice Condenser Temperature	-55°C
Defrost	Cold steam
Number of Trays	96
Tray Area	25m²
Shelf Spacing	60mm
Chamber Temperature	Up to 130°C
Cooling systems	Water
Refrigeration	2 Screw Compressors
Unit Dimensions (H x W x L)	2.2m x 2.2m 5.5m
Refrigerant	R404A
Vacuum	Hena 301S & Okta 300
Chamber Dimensions	1500mm id x 2000mm
Power Supply	380-415v 125a 3~
Control System	Automatic Control
Loading System	Cassette Trolley

**FROZEN IN TIME**  
Manufacturers of freeze driers and vacuum cold traps

# FR-500

**AUTOMATED**



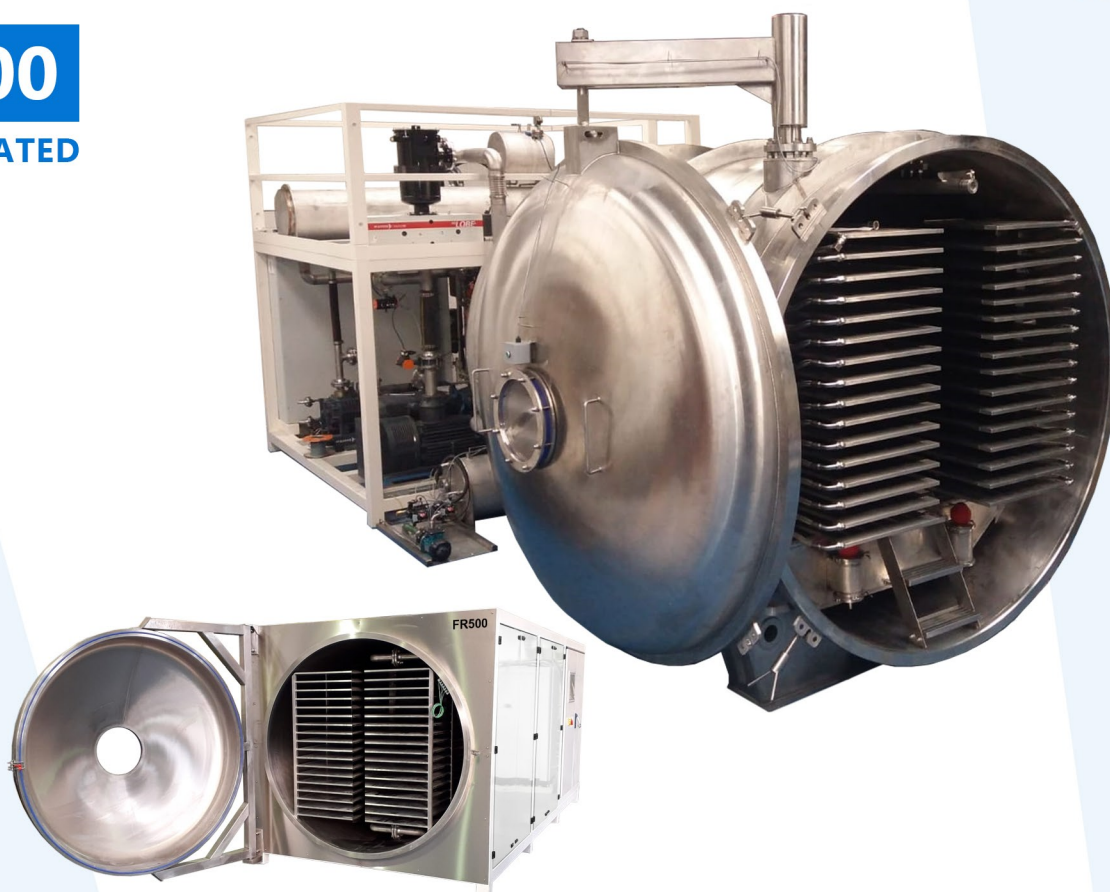
**Fast Drying  
Capability**



**Continuous  
Defrost**



**Radiant  
Heating System**



## Key Features

The FR series utilises radiative heating to evenly & efficiently provide heat during the drying cycle. The machines are loaded with pre-frozen product via a rapid load/unload trolley system to fully fit in your production process from cold store to dry store.

The unit includes a continuous ice condenser defrost system that prevents the need to defrost the unit between batches.

The FR-500 is ideal for large-scale product development and medium-scale production activities. The machine is designed to freeze dry 500kg\* of product over a 16-24 hour period.

\*dependant on product



**Food**



**Lab**



**Pharma**

## Technical Data

## FR-500

Ice Condenser Capacity	Continuous Defrost
Ice Condenser Temperature	-55°C
Defrost	Cold steam
Number of Trays	180
Tray Area	50m²
Shelf Spacing	60mm
Chamber Temperature	Up to 130°C
Cooling systems	Water
Refrigeration	2 Screw Compressors
Refrigerant	R404A
Vacuum	Hena 401S & Okta 600
Chamber Dimensions	2500mm id x 3000mm
Power Supply	380-415v 3~
Control System	Automatic Control
Loading System	Cassette Trolley

**FROZEN IN TIME**  
Manufacturers of freeze driers and vacuum cold traps

# FR-1000

AUTOMATED



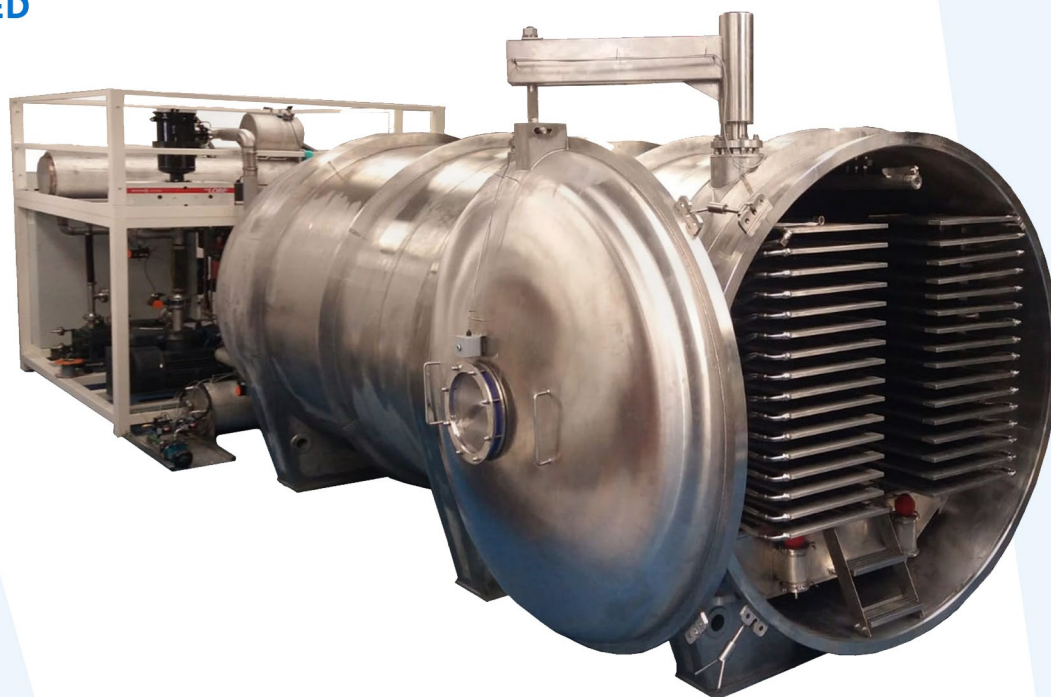
**Fast Drying  
Capability**



**Continuous  
Defrost**



**Radiant  
Heating System**



## Key Features

The FR series utilises radiative heating to evenly & efficiently provide heat during the drying cycle. The machines are loaded with pre-frozen product via a rapid load/unload trolley system to fully fit in your production process from cold store to dry store.

The unit includes a continuous ice condenser defrost system that prevents the need to defrost the unit between batches.

The FR-1000 is ideal for large-scale product development and medium-scale production activities. The machine is designed to freeze dry 1000kg\* of product over a 16-24 hour period.

\*dependant on product



**Food**



**Lab**



**Pharma**

## Technical Data

## FR-1000

Ice Condenser Capacity	Continuous Defrost
Ice Condenser Temperature	-55°C
Defrost	Cold steam
Number of Trays	300
Tray Area	104m²
Shelf Spacing	75mm
Chamber Temperature	Up to 130°C
Cooling systems	Water
Refrigeration	2 Screw Compressors
Unit Dimensions (H x W x L)	2.9m x 2.7m 8m
Refrigerant	Ammonia or Freon
Vacuum	Hena 301S & Okta 300
Chamber Dimensions	1500mm id x 2000mm
Power Supply	380-415v 3~
Control System	Automatic Control
Loading System	Cassette Trolley

**FROZEN IN TIME**  
Manufacturers of freeze driers and vacuum cold traps