

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

Our Product Range

Industrial Freeze Driers

F-SERIES

Food & Industrial Production

Our dedicated food and industrial freeze drying range, the F series are ideal for large scale operations where the entire freeze drying process is completed in a single machine from freezing to final product. All units can be configured to suit your site, production requirements and budget.



F25

AUTOMATED



Fast Drying Capability



Fast Product Freezing



Moveable



Key Features

F-Series driers are designed for food & industrial processes. The entire process from initial freezing to final drying can be done in a single pre-programmed cycle.

The F-Series can perform initial freezing of the product quickly via conduction & blast freezing. This ensures the machines can slot into a fast paced production environment with ease.

The F-25 is ideal for medium scale product development and small-scale production activities. The machine is designed to freeze dry 25kg* of product over a 16-24 hour period.

*dependant on product



Food



Lab



Pharma

Technical Data

F-25

Ice Condenser Capacity	40kg
Ice Condenser Performance	30kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas
Number of Shelves	6+1
Shelf Area	2.6m ²
Shelf Spacing	60mm
Chamber Temperature	-45°C to +80°C
Cooling systems	Air cooled
Refrigeration	46m ³ ph Compressor
Unit Dimensions (H x W x L)	2m x 1.4m x 2.1m
Refrigerant	R404A
Vacuum	Kurt J Lesker RV224
Chamber Dimensions	750mm id x 1250mm
Power Supply	380-415v 20a 3~
Control System	Automatic or Manual Controls



F100

AUTOMATED



High Capacity



Fast Drying
Capability



Fast Product
Freezing

Key Features

F-Series driers are designed for food & industrial processes. The entire process from initial freezing to final drying can be done in a single pre-programmed cycle.

The F-Series can perform initial freezing of the product quickly via conduction & blast freezing. This ensures the machines can slot into a fast paced production environment with ease.

The F-100 is ideal for medium 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



Food



Lab



Pharma

Technical Data

F-100

Ice Condenser Capacity	150kg
Ice Condenser Performance	130kg /24h
Ice Condenser Temperature	-60°C
Defrost	Hot Gas
Number of Shelves	13+1
Shelf Area	10.4m ²
Shelf Spacing	30mm
Chamber Temperature	-50°C to +90°C
Cooling systems	Water or Air Cooled
Refrigeration	155m ³ ph Compressor
Unit Dimensions (H x W x L)	2.1m x 2m x 3.6m
Refrigerant	R404A
Vacuum	Pfeiffer Duo 65
Chamber Dimensions	1268mm id x 2000mm
Power Supply	380-415v 63a 3~
Control System	Automatic Control



F50

AUTOMATED



High Capacity



Fast Drying Capability



Fast Product Freezing

Key Features

F-Series driers are designed for food & industrial processes. The entire process from initial freezing to final drying can be done in a single pre-programmed cycle.

The F-Series can perform initial freezing of the product quickly via conduction & blast freezing. This ensures the machines can slot into a fast paced production environment with ease.

The F-50 is ideal for medium scale product development and small-scale production activities. The machine is designed to freeze dry 50kg* of product over a 16-24 hour period.

*dependant on product



Food



Lab



Pharma

Technical Data

F-50

Ice Condenser Capacity	75kg
Ice Condenser Performance	60kg /24h
Ice Condenser Temperature	-60°C
Defrost	Hot Gas
Number of Shelves	9+1
Shelf Area	5.2m ²
Shelf Spacing	37mm
Chamber Temperature	-50°C to +90°C
Cooling systems	Water or Air cooled
Refrigeration	88m ³ ph Compressor
Unit Dimensions (H x W x L)	2.1m x 1.7m x 3m
Refrigerant	R404A
Vacuum	Pfeiffer Duo 35
Chamber Dimensions	750mm id x 1500mm
Power Supply	380-415v 20a 3~
Control System	Automatic Control



F250

AUTOMATED



Fast Product Freezing



High Capacity



Fast Drying Capability



Key Features

F-Series driers are designed for food & industrial processes. The entire process from initial freezing to final drying can be done in a single pre-programmed cycle.

The F-Series can perform initial freezing of the product quickly via conduction & blast freezing. This ensures the machines can slot into a fast paced production environment with ease.

The F-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

F-250

Ice Condenser Capacity	Continuous Defrost
Ice Condenser Temperature	-60°C
Defrost	Cold Steam
Number of Shelves	19+1
Shelf Area	25m ²
Shelf Spacing	36mm
Chamber Temperature	-50°C to +90°C
Cooling systems	Water or Air Cooled
Refrigeration	403m ³ ph Compressor
Unit Dimensions (H x W x L)	2.1m x 2.2m x 5m
Refrigerant	R404A
Vacuum	Henna 301R (P3) Okta 300
Chamber Dimensions	1500mm id x 1500mm
Power Supply	380-415v 125a 3~
Control System	Automatic Control



F500

AUTOMATED



**Fast Drying
Capability**



**Fast Product
Freezing**



High Capacity

Key Features

F-Series driers are designed for food & industrial processes. The entire process from initial freezing to final drying can be done in a single pre-programmed cycle.

The F-Series can perform initial freezing of the product quickly via conduction. This ensures the machines can slot into a fast paced production environment with ease.

The F-500 is ideal for large scale product development and large 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

F-500

Defrost System	Continuous Defrost
Ice Condenser Temperature	-55°C
Defrost	Cold Steam
Number of Shelves	25+1
Shelf Area	50.4m²
Shelf Spacing	38mm
Chamber Temperature	-50°C to +80°C
Cooling systems	Water Cooled
Refrigeration	Frascold Screw Compressor
Unit Dimensions (H x W x L)	2.4m x 2.4m x 7m
Refrigerant	R404A
Vacuum	Henna 401 & Okta 500
Chamber Dimensions	2000mm id x 2000mm
Power Supply	380-415v 250a 3~
Control System	Automatic Control



FR-SERIES

Food & Industrial Production

The FR range takes the F series and adds radiative heating and a rapid load/unload trolley system to fully fit in your production process from cold store to dry store.

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



FR-100

AUTOMATED



**Fast Drying
Capability**



**Continuous
Defrost**



**Radiant
Heating System**



Key Features

The FR Series takes the F Series and adds radiative heating and 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 prevents the need to defrost the unit between batches.

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



Food



Lab



Pharma

Technical Data

FR-100

Ice Condenser Capacity	Continuous Defrost
Ice Condenser Temperature	-55°C
Defrost	Cold steam
Number of Trays	20
Tray Area	8m ²
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

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 takes the F Series and adds radiative heating and 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 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	88
Tray Area	24.5m ²
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 63a 3~
Control System	Automatic Control
Loading System	Cassette Trolley

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

FR-500

AUTOMATED



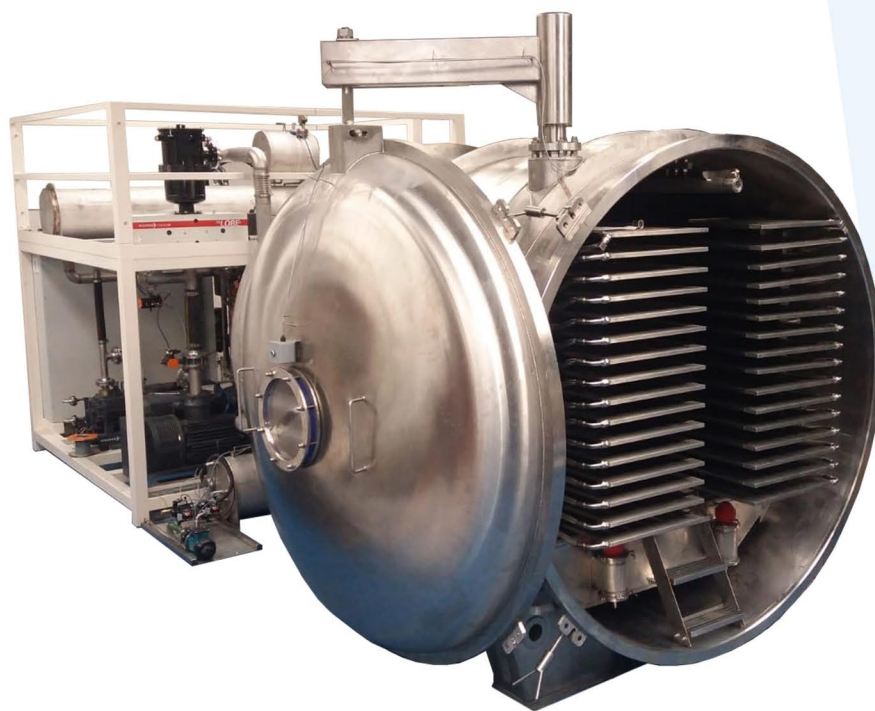
**Fast Drying
Capability**



**Continuous
Defrost**



**Radiant
Heating System**



Key Features

The FR Series takes the F Series and adds radiative heating and 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 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	220
Tray Area	43m ²
Shelf Spacing	60mm
Chamber Temperature	Up to 130°C
Cooling systems	Water
Refrigeration	2 Screw Compressors
Unit Dimensions (H x W x L)	2.1m x 2.3m 6m
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-1000

AUTOMATED



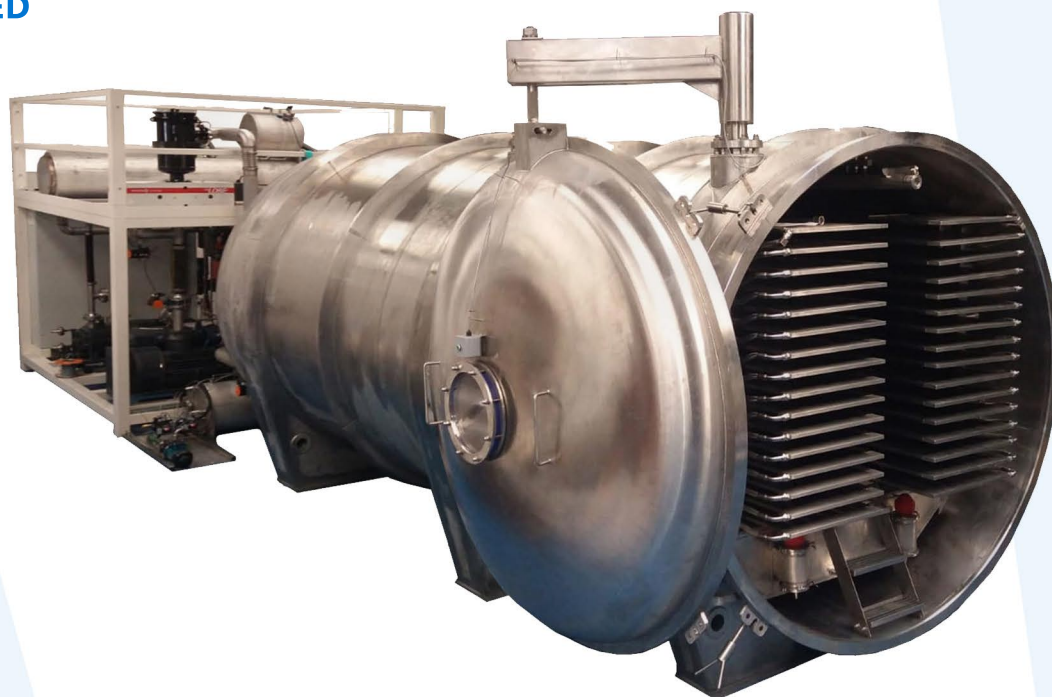
**Fast Drying
Capability**



**Continuous
Defrost**



**Radiant
Heating System**



Key Features

The FR Series takes the F Series and adds radiative heating and 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 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	104m ²
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 250a 3~
Control System	Automatic Control
Loading System	Cassette Trolley

FROZEN IN TIME
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D-SERIES

History & Floral Preservation

Our D-Series includes machines suitable for a wide range of uses, including archaeology, freeze drying flowers, document recovery and taxidermy. Available in a range of sizes and specifications, they can be configured to suit the needs of any application.



Multidrier

“Compact & Versatile”



**Slow Process
Drying**



**Optional
Shelving**



Moveable



Key Features

D-Series Freezedriers are the ideal solution for slow process freeze drying. This is suited for when drying delicate items that could be damaged via alternative methods. Such applications include water damaged document recovery, dried flowers & archaeological artefacts.

The Multidrier Freezedrier is a small-scale machine that can be used for preservation of small sized objects. The shelf sizes & spacing are customisable to the client's requirements making this an incredibly versatile solution to Freeze-drying a variety of objects.

Technical Data

Multidrier

Ice Condenser Capacity	10kg
Ice Condenser Performance	10kg /24h
Ice Condenser Temperature	-50°C
Defrost	Hot Gas
Number of Trays	4-6
Tray Area	1m ² - 1.6m ²
Shelf Spacing	15, 31 or 58mm
Chamber Temperature	Up to 40°C
Cooling systems	Air cooled
Refrigeration	10m ³ ph Compressor
Unit Dimensions (H x W x L)	1.3m x 0.6m x 1.3m
Refrigerant	R404A
Vacuum	Kurt J Lesker RV212
Chamber Dimensions	500mm id x 750mm
Power Supply	220-240 V 50/60 Hz
Control System	Manual Controls

D6-14

“Compact & Versatile”



Slow Process Drying



Optional Shelving



Moveable



Key Features

D-Series Freezedriers are the ideal solution for slow process freeze drying. This is suited for when drying delicate items that could be damaged via alternative methods. Such applications include water damaged document recovery, dried flowers & archaeological artefacts.

The D6-14 Freezedrier is a medium machine that can be used for preservation of small sized objects. The shelf sizes & spacing are customisable to the client’s requirements making this an incredibly versatile solution to Freeze-drying a variety of objects.



Technical Data	D6-14
Ice Condenser Capacity	25kg
Ice Condenser Performance	25kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas
Number of Trays	5-14
Tray Area	2-9m ²
Shelf Spacing	35mm - 110mm
Chamber Temperature	Up to 40°C
Cooling systems	Air cooled
Refrigeration	19m ³ ph Compressor
Unit Dimensions (H x W x L)	1.7m x 1.1m x 2m
Refrigerant	R404A
Vacuum	Kurt J Lesker RV224
Chamber Dimensions	600mm id x 1400mm
Power Supply	415V 20A 3~ 50/60Hz
Control System	Manual Controls



D9-17

“Preserving your history”



**Slow Process
Drying**



**Optional
Shelving**



Moveable

Key Features

D-Series Freezedriers are the ideal solution for slow process freeze drying. This is suited for when drying delicate items that could be damaged via alternative methods. Such applications include water damaged document recovery, dried flowers & archaeological artefacts.

The D9-17 Freezedrier is a medium scale machine that can be used for preservation of medium sized objects. The shelf sizes & spacing are customisable to the client's requirements making this an incredibly versatile solution to Freezedrying a variety of objects.



Documents



Flowers



Cannabis



Technical Data

D9 - 17

Ice Condenser Capacity	50kg
Ice Condenser Performance	50kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas
Number of Trays	18, 24 or 27
Tray Area	14 - 20m ²
Shelf Spacing	80 - 120mm
Chamber Temperature	Up to 40°C
Cooling systems	Air cooled
Refrigeration	46m ³ ph Compressor
Unit Dimensions (H x W x L)	2.1m x 1.4m x 2.8m
Refrigerant	R404A
Vacuum	Pfeiffer Duo 35
Chamber Dimensions	900mm id x 2500mm
Power Supply	380-415v 25amp 3~
Control System	Manual Controls



D9-25

“Preserving your history”



**Slow Process
Drying**



**Optional
Shelving**



Moveable

Key Features

D-Series Freezedriers are the ideal solution for slow process freeze drying. This is suited for when drying delicate items that could be damaged via alternative methods. Such applications include water damaged document recovery, dried flowers & archaeological artefacts.

The D9-25 Freezedrier is a medium scale machine that can be used for preservation of medium sized objects. The shelf sizes & spacing are customisable to the client's requirements making this an incredibly versatile solution to Freezedrying a variety of objects.



Documents



Flowers



Cannabis



Technical Data

D9 - 25

Ice Condenser Capacity	50kg
Ice Condenser Performance	50kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas
Number of Trays	18, 24 or 27
Tray Area	14 - 20m ²
Shelf Spacing	80 - 120mm
Chamber Temperature	Up to 40°C
Cooling systems	Air cooled
Refrigeration	46m ³ ph Compressor
Unit Dimensions (H x W x L)	2.1m x 1.4m x 2.8m
Refrigerant	R404A
Vacuum	Pfeiffer Duo 35
Chamber Dimensions	900mm id x 2500mm
Power Supply	380-415v 25amp 3~
Control System	Manual Controls



D14-30

“Preserving your history”



**Slow Process
Drying**



**Optional
Shelving**



**Large
Capacity**



Key Features

D-Series Freezedriers are the ideal solution for slow process freeze drying. This is suited for when drying delicate items that could be damaged via alternative methods. Such applications include water damaged document recovery, dried flowers & archaeological artefacts.

The D14-30 Freezedrier is a large capacity machine that can be used for preservation of medium sized objects. The shelf sizes & spacing are customisable to the client's requirements making this an incredibly versatile solution to Freezedrying a variety of objects.



Artefacts



Documents



Flowers



Cannabis

Technical Data

D14 - 30

Ice Condenser Capacity	100 kg
Ice Condenser Performance	100 kg / 24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas
Number of Trays	18, 24 or 27
Tray Area	42-48m ²
Shelf Spacing	80 - 120mm
Chamber Temperature	Upto to 40°C
Cooling systems	Air cooled
Refrigeration	Two Stage Compressor
Unit Dimensions (H x W x L)	2m x 2.4m x 4m
Refrigerant	R404A
Vacuum	Pfeiffer Duo 65
Chamber Dimensions	1400mm id x 3000mm
Power Supply	380-415v 40amp 3~
Control System	Automatic Controls



H-SERIES

PILOT FREEZE DRIERS

Advanced feature models suitable for high end pharmaceutical, clean room, pilot and production use. Features of the HS range include advanced temperature, pressure and time control, as well as easy recipe development and optimisation.



HS-1

SINGLE STAGE REFRIGERATION



**Clean Room
Compatible**



**Shelf
Stopping**



Moveable



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our H-Series range provides the user advanced temperature, pressure & time control as well as an accurate shelf stopping system.

The HS-1 is a general-purpose, high performance pilot unit ideal for drying a variety of products in controlled environments. It is available in a clean room version where the accessible parts are external to the clean room. The HS-1 is suited for product development & small-scale production.



Research



Lab



Pharma

Technical Data

HS-1

Ice Condenser Capacity	15kg
Ice Condenser Performance	10kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas & Electric
Number of Shelves	4+1
Shelf Area	0.48m ²
Shelf Spacing	60mm
Chamber Temperature	-45°C to +60°C
Cooling systems	Air cooled
Refrigeration	Frigopool Single Stage
Unit Dimensions (H x W x L)	2m x 0.9m x 1.1m
Refrigerant	R404A
Vacuum	Kurt J Lesker RV2 12
Chamber Dimensions	500mm id x 500mm
Power Supply	380-415v 20a 3~
Control System	Manual or Automatic Control



HS-2

SINGLE STAGE REFRIGERATION



**Clean Room
Compatible**



**Shelf
Stopping**



Moveable



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our H-Series range provides the user advanced temperature, pressure & time control as well as an accurate shelf stopping system.

The HS-2 is a general-purpose, high performance pilot unit ideal for drying a variety of products in controlled environments. It is available in a clean room version where the accessible parts are external to the clean room. The HS-2 is suited for product development & small-scale production.



Research



Lab



Pharma

Technical Data

HS-2

Ice Condenser Capacity	25kg
Ice Condenser Performance	15kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas & Electric
Number of Shelves	5+1
Shelf Area	1m ²
Shelf Spacing	60mm
Chamber Temperature	-45°C to +60°C
Cooling systems	Air cooled
Refrigeration	Frigopool Single Stage
Unit Dimensions (H x W x L)	2m x 0.9m x 1.1m
Refrigerant	R404A
Vacuum	Kurt J Lesker RV2 12
Chamber Dimensions	650mm id x 650mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control



HS-3

SINGLE STAGE REFRIGERATION



**Clean Room
Compatible**



**Shelf
Stopping**



**Nitrogen Purge
Optional**

Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our H-Series range provides the user advanced temperature, pressure & time control as well as an accurate shelf stopping system.

The HS-3 is a general-purpose, high performance pilot unit ideal for drying a variety of products in controlled environments. It is available in a clean room version where the accessible parts are external to the clean room. The HS-3 is suited for product development & medium-scale production.



Research



Lab



Pharma



Technical Data

HS-3

Ice Condenser Capacity	35kg
Ice Condenser Performance	20kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas & Electric
Number of Shelves	6+1
Shelf Area	1.95m ²
Shelf Spacing	60mm
Chamber Temperature	-45°C to +60°C
Cooling systems	Air cooled
Refrigeration	Frigopool Single Stage
Unit Dimensions (H x W x L)	2.1m x 1.5m x 2m
Refrigerant	R404A
Vacuum	Kurt J Lesker RV224
Chamber Dimensions	850mm id x 850mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control



HS-4

SINGLE STAGE REFRIGERATION



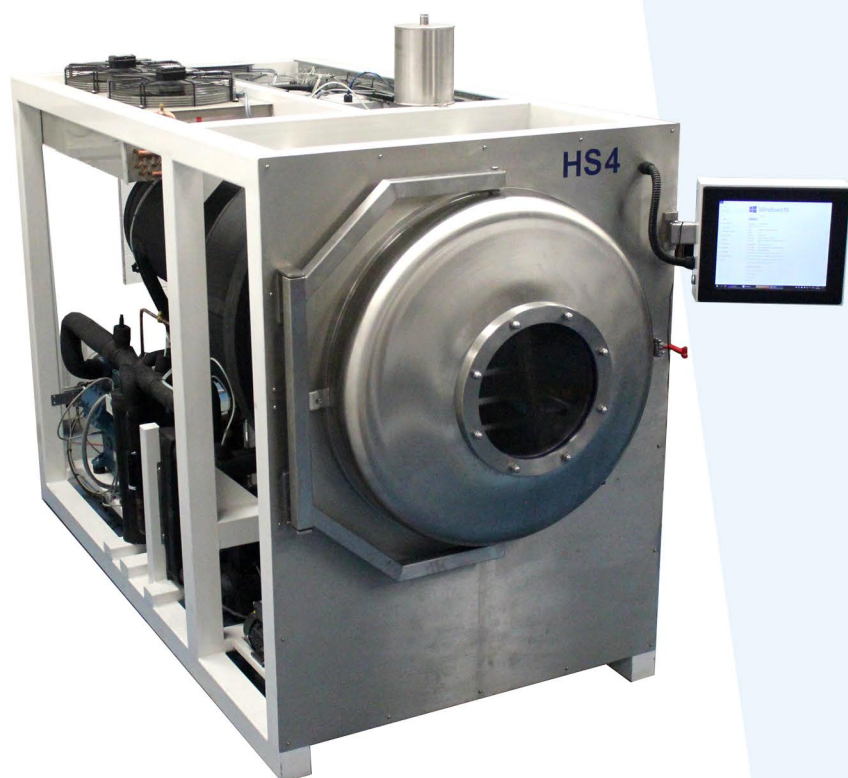
**Clean Room
Compatible**



**Shelf
Stoppering**



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our H-Series range provides the user advanced temperature, pressure & time control as well as an accurate shelf stopping system.

The HS-4 is a general-purpose, high performance pilot unit ideal for drying a variety of products in controlled environments. It is available in a clean room version where the accessible parts are external to the clean room. The HS-4 is suited for product development & large-scale production.



Research



Lab



Pharma

Technical Data

HS-4

Ice Condenser Capacity	45kg
Ice Condenser Performance	30kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas & Electric
Number of Shelves	6+1
Shelf Area	3.4m ²
Shelf Spacing	60mm
Chamber Temperature	-45°C to +60°C
Cooling systems	Water or Air cooled
Refrigeration	Frascold Single Stage
Unit Dimensions (H x W x L)	2m x 1.4m x 3m
Refrigerant	R404A
Vacuum	Pfieffer Duo 35
Chamber Dimensions	1000mm id x 1000mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

HS-5

SINGLE STAGE REFRIGERATION



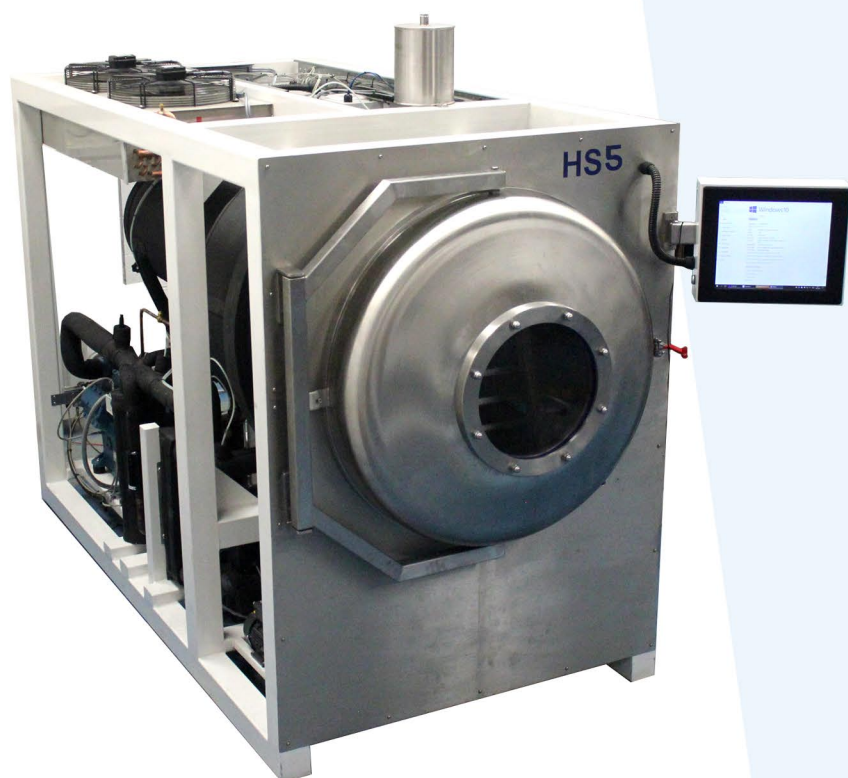
**Clean Room
Compatible**



**Shelf
Stopping**



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our H-Series range provides the user advanced temperature, pressure & time control as well as an accurate shelf stopping system.

The HS-5 is a general-purpose, high performance pilot unit ideal for drying a variety of products in controlled environments. It is available in a clean room version where the accessible parts are external to the clean room. The HS-5 is suited for product development & large-scale production.



Research



Lab



Pharma

Technical Data

HS-5

Ice Condenser Capacity	80kg
Ice Condenser Performance	60kg /24h
Ice Condenser Temperature	-55°C
Defrost	Hot Gas & Electric
Number of Shelves	7+1
Shelf Area	6.5m ²
Shelf Spacing	60mm
Chamber Temperature	-45°C to +60°C
Cooling systems	Water cooled
Refrigeration	Frascold Single Stage
Unit Dimensions (H x W x L)	2m x 1.7m x 3.5m
Refrigerant	R404A
Vacuum	Pfieffer Duo 65
Chamber Dimensions	1268mm id x 1000mm
Power Supply	380-415v 63a 3~
Control System	Automatic Control





HSL-1

CASCADE REFRIGERATION



**Low
Temperature**



**Shelf
Stoppering**



Moveable



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our low temperature H-Series range provides the capability to reach temperatures as low as -85°C , as well as features such as advanced temperature, pressure & time control.

The HSL-1 is a general-purpose, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSL-1 is suited for product development & small-scale production.



Research



Lab



Pharma

Technical Data

HSL-1

Ice Condenser Capacity	15kg
Ice Condenser Performance	10kg /24h
Ice Condenser Temperature	-85°C
Defrost	Hot Gas & Electric
Number of Shelves	4+1
Shelf Area	0.48m^2
Shelf Spacing	60mm
Chamber Temperature	-65°C to $+60^{\circ}\text{C}$
Cooling systems	Air cooled
Refrigeration	Frigpopol Cascade
Unit Dimensions (H x W x L)	2m x 0.9m x 1.1m
Refrigerant	R404A & R1150
Vacuum	Kurt J Lesker RV2 12
Chamber Dimensions	500mm id x 500mm
Power Supply	380-415v 20a 3~
Control System	Manual or Automatic Control

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps





HSL-2

CASCADE REFRIGERATION



**Low
Temperature**



**Shelf
Stoppering**



Moveable



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our low temperature H-Series range provides the capability to reach temperatures as low as -85°C , as well as features such as advanced temperature, pressure & time control.

The HSL-2 is a general-purpose, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSL-2 is suited for product development & small-scale production.



Research



Lab



Pharma

Technical Data

HSL-2

Ice Condenser Capacity	25kg
Ice Condenser Performance	15kg /24h
Ice Condenser Temperature	-85°C
Defrost	Hot Gas & Electric
Number of Shelves	5+1
Shelf Area	1m ²
Shelf Spacing	60mm
Chamber Temperature	-65°C to $+60^{\circ}\text{C}$
Cooling systems	Air cooled
Refrigeration	Frigopool Cascade
Unit Dimensions (H x W x L)	2m x 0.9m x 1.1m
Refrigerant	R404A & R1150
Vacuum	Kurt J Lesker RV2.12
Chamber Dimensions	650mm id x 650mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps





HSL-3

CASCADE REFRIGERATION



**Low
Temperature**



**Shelf
Stoppering**



**Clean Room
Compatible**



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our low temperature H-Series range provides the capability to reach temperatures as low as -85°C , as well as features such as advanced temperature, pressure & time control.

The HSL-3 is a general-purpose, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSL-3 is suited for product development & small-scale production.



Research



Lab



Pharma

Technical Data

HSL-3

Ice Condenser Capacity	35kg
Ice Condenser Performance	20kg /24h
Ice Condenser Temperature	-85°C
Defrost	Hot Gas & Electric
Number of Shelves	6+1
Shelf Area	1.95m ²
Shelf Spacing	60mm
Chamber Temperature	-65°C to $+60^{\circ}\text{C}$
Cooling systems	Air cooled
Refrigeration	Frigopool Cascade
Unit Dimensions (H x W x L)	2.1m x 1.5m x 1.1m
Refrigerant	R404A & R1150
Vacuum	Kurt J Lesker RV224
Chamber Dimensions	850mm id x 850mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps





HSL-4

CASCADE REFRIGERATION



**Low
Temperature**



**Shelf
Stoppering**



**Clean Room
Compatible**



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our low temperature H-Series range provides the capability to reach temperatures as low as -85°C , as well as features such as advanced temperature, pressure & time control.

The HSL-4 is a general-purpose, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSL-4 is suited for product development & small-scale production.

Technical Data

HSL-4

Ice Condenser Capacity	45kg
Ice Condenser Performance	30kg /24h
Ice Condenser Temperature	-85°C
Defrost	Hot Gas & Electric
Number of Shelves	6+1
Shelf Area	3.4m ²
Shelf Spacing	60mm
Chamber Temperature	-65°C to $+60^{\circ}\text{C}$
Cooling systems	Water or Air cooled
Refrigeration	Frascold Cascade
Unit Dimensions (H x W x L)	2.1m x 1.5m x 1.1m
Refrigerant	R404A & R1150
Vacuum	Pfeiffer Duo 35
Chamber Dimensions	1000mm id x 1000mm
Power Supply	380-415v 32a 3~
Control System	Manual or Automatic Control



Research



Lab



Pharma

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps





HSL-5

CASCADE REFRIGERATION



**Low
Temperature**



**Shelf
Stoppering**



**Clean Room
Compatible**



**Nitrogen Purge
Optional**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our low temperature H-Series range provides the capability to reach temperatures as low as -85°C , as well as features such as advanced temperature, pressure & time control.

The HSL-5 is a general-purpose, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSL-5 is suited for product development & large-scale production.

Technical Data

HSL-5

Ice Condenser Capacity	80kg
Ice Condenser Performance	60kg /24h
Ice Condenser Temperature	-85°C
Defrost	Hot Gas & Electric
Number of Shelves	7+1
Shelf Area	6.5m ²
Shelf Spacing	60mm
Chamber Temperature	-65°C to $+60^{\circ}\text{C}$
Cooling systems	Water cooled
Refrigeration	Frascold Cascade
Unit Dimensions (H x W x L)	2m x 1.7m x 3.5m
Refrigerant	R404A & R1150
Vacuum	Pfeiffer Duo 65
Chamber Dimensions	1268mm id x 1000mm
Power Supply	380-415v 63a 3~
Control System	Automatic Control



Research



Lab



Pharma

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps





HSLS-4

STEAM STERILISABLE



**Low
Temperature**



**Shelf
Stoppering**



**Clean Room
Compatible**



**STEAM
STERILISE**



Key Features

H-Series Freeze Driers are the ideal solution for high end pharmaceutical, clean room, pilot & production use.

Our steam sterilisable variations provide the capability to reach temperatures as low as -85°C , and sterilise the internal surfaces with 2.5bar of steam pressure at 135°C .

The HSLS-4 is a steam sterilisable, high performance pilot unit ideal for drying a variety of products at low temperatures. It is available in a clean room version where the accessible parts are external to the clean room. The HSLS-4 is suited for product development & medium scale production.



Research



Lab



Pharma

Technical Data

HSLS-4

Ice Condenser Capacity	45kg
Ice Condenser Performance	30kg /24h
Ice Condenser Temperature	-85°C
Defrost	Hot Gas & Electric
Number of Shelves	8+1
Shelf Area	3.8m ²
Shelf Spacing	60mm
Chamber Temperature	-70°C to $+60^{\circ}\text{C}$
Cooling systems	Water or Air cooled
Refrigeration	Frigopool Cascade
Unit Dimensions (H x W x L)	2.1m x 1.5m x 1.1m
Refrigerant	R404A & R1150
Vacuum	Pfeiffer Duo 35
Chamber Dimensions	1000mm id x 1000mm
Power Supply	380-415v 32a 3~
Control System	Automatic Control
Sterilisation Temperature	135°C
Clean Steam Pressure	2.5bar

FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps



L-SERIES

Lab & Research Industry

Designed with laboratory, university and research applications in mind, the Lablyo is a series of high quality benchtop and floor standing lyophilizers, available in a range of capacities and temperatures. All Lablyo models can be easily adapted with the addition of a wide range of accessories.



Lablyo Mini

BENCH TOP FREEZEDRIER



**Clean Room
Compatible**



Benchtop



Key Features

L-Series Freeze Driers are the ideal solution for laboratories, universities & research centres.

Our Lablyo range is designed as a benchtop machine with a multitude of accessories ensuring this is an incredibly versatile unit for the most demanding of laboratory processes.

The Lablyo-Mini utilises simple manual controls with temperature display. This unit has a 3kg ice capacity and will collect 2kg of ice in 24 hours.

An external vacuum pump will be required to run this unit, as well as suitable accessories.

Compatible Accessories

- | | |
|-----------------------------|--------------------------|
| Acrylic drying chamber | 8 port flask manifold |
| 6 shelf rack | 48 port ampoule manifold |
| 6 heated shelf rack | Spin Freezer |
| 4 shelf vial closing device | |



Research



Lab



Pharma

Technical Data	Lablyo
Ice Chamber Capacity	3kg
Ice Collection Performance	2kg /24h
Ice Chamber Temperature	-55°C
Cooling systems	Air cooled
Refrigeration	Secop Single Stage
Unit Dimensions (H x W x L)	43cm x 57cm x 57cm
Refrigerant	R404A
Vacuum	External
Chamber Dimensions	200mmØ x 250mm
Power Supply	240v 13a
Control System	Temperature Control

Recommended

Welch CRV Pro8

- 158 L/min
- 50 dBA
- NW16



FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

Lablyo

BENCH TOP FREEZEDRIER



**Clean Room
Compatible**



Benchtop

Key Features

L-Series Freeze Driers are the ideal solution for laboratories, universities & research centres.

Our Lablyo range is designed as a benchtop machine with a multitude of accessories ensuring this is an incredibly versatile unit for the most demanding of laboratory processes.

The Lablyo utilises touch screen controls, with data logging, temperature & vacuum display. This unit has a 5kg ice capacity and will collect 3kg of ice in 24 hours.

An external vacuum pump will be required to run this unit, as well as suitable accessories.

Compatible Accessories

Acrylic drying chamber	8 port flask manifold
6 shelf rack	48 port ampoule manifold
6 heated shelf rack	Spin Freezer
4 shelf vial closing device	



Research



Lab



Pharma



Technical Data	Lablyo
Ice Chamber Capacity	5kg
Ice Collection Performance	3kg /24h
Ice Chamber Temperature	-55°C
Defrost	Heater cable
Mobile Probes	1
Cooling systems	Air cooled
Refrigeration	Secop Single Stage
Unit Dimensions (H x W x L)	52cm x 65cm x 65cm
Refrigerant	R404A
Vacuum	External
Chamber Dimensions	200mmØ x 350mm
Power Supply	240v 13a
Control System	Manual Touchscreen

Recommended

Welch CRV Pro8

- 158 L/min
- 50 dBA
- NW16



FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

Lablyo -85°C

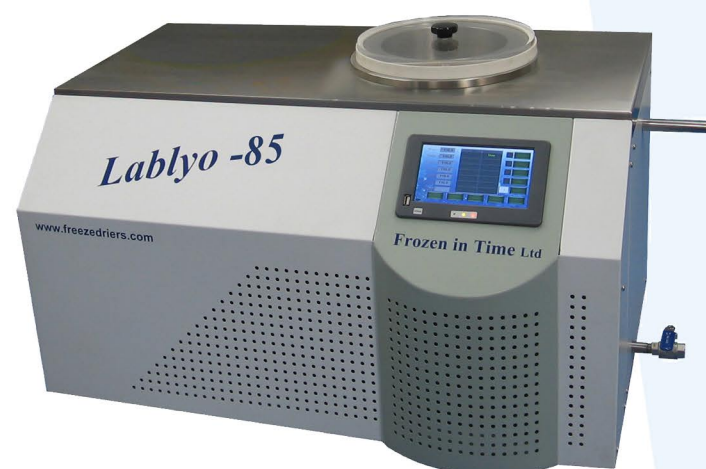
BENCH TOP FREEZEDRIER



**Clean Room
Compatible**



Benchtop



Key Features

L-Series Freeze Driers are the ideal solution for laboratories, universities & research centres.

Our Lablyo range is designed as a benchtop machine with a multitude of accessories ensuring this is an incredibly versatile unit for the most demanding of laboratory processes.

The Lablyo -85 utilises touch screen controls, with data logging, temperature & vacuum display. This unit has a 5kg ice capacity and will collect 3kg of ice in 24 hours. It is capable of temperatures as low as -85°C.

An external vacuum pump will be required to run this unit, as well as suitable accessories.

Compatible Accessories

Acrylic drying chamber	8 port flask manifold
6 shelf rack	48 port ampoule manifold
6 heated shelf rack	Spin Freezer
4 shelf vial closing device	



Research



Lab



Pharma

Technical Data

Lablyo -85°C

Ice Chamber Capacity	5kg
Ice Collection Performance	3kg /24h
Ice Chamber Temperature	-85°C
Defrost	Heater cable
Mobile Probes	1
Cooling systems	Air cooled
Refrigeration	Dual Secop Single Stage
Unit Dimensions (H x W x L)	52cm x 90cm x 65cm
Refrigerant	R404A & R1150
Vacuum	External
Chamber Dimensions	200mmØ x 350mm
Power Supply	240v 13a
Control System	Manual Touchscreen

Recommended

KJL RV 212

- 179 L/min
- 68 dBA
- KF25



FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

Lablyo Plus

BENCH TOP FREEZEDRIER



**Clean Room
Compatible**



Benchtop



Key Features

L-Series Freeze Driers are the ideal solution for laboratories, universities & research centres.

Our Lablyo range is designed as a benchtop machine with a multitude of accessories ensuring this is an incredibly versatile unit for the most demanding of laboratory processes.

The Lablyo plus includes a drying chamber and full cooling & heating control. Samples can be frozen using the machine, eliminating the need to pre-freeze samples.

An external vacuum pump will be required to run this unit, as well as suitable accessories.

Compatible Accessories

Acrylic drying chamber	8 port flask manifold
6 shelf rack	48 port ampoule manifold
6 heated shelf rack	Spin Freezer
4 shelf vial closing device	



Research



Lab



Pharma

Technical Data

Lablyo Plus

Ice Chamber Capacity	4kg
Ice Collection Performance	2kg /24h
Ice Chamber Temperature	-55°C
Drying Chamber Temperatures	-40°C to 40°C
Cooling systems	Air cooled
Refrigeration	Secop Single Stage
Unit Dimensions (H x W x L)	43cm x 57cm x 57cm
Refrigerant	R404A
Vacuum	External
Drying Chamber Dimensions	300mmØ x 370mm
Condenser Chamber Dimensions	200mmØ x 220mm
Power Supply	240v 13a
Control System	Manual Touch Screen

Recommended

KJL RV 212

- 179 L/min
- 68 dBA
- KF25



FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

Lablyo Ultra

FLOOR STANDING FREEZEDRIER



**Clean Room
Compatible**



Moveable

Key Features

L-Series Freeze Driers are the ideal solution for laboratories, universities & research centres.

Our Lablyo range is designed with a variety of operations in mind, and is compatible with a multitude of accessories. This ensures it is an incredibly versatile unit for the most demanding of laboratory processes.

The Lablyo Ultra utilises touch screen controls, with data logging, temperature & vacuum display. This unit has a 10kg ice capacity and will collect 6kg of ice in 24 hours.

An external vacuum pump will be required to run this unit, as well as suitable accessories.

Compatible Accessories

Acrylic drying chamber	8 port flask manifold
6 shelf rack	48 port ampoule manifold
6 heated shelf rack	Spin Freezer
4 shelf vial closing device	



Research



Lab



Pharma



Technical Data	Lablyo Ultra
Ice Chamber Capacity	10kg
Ice Collection Performance	6kg /24h
Ice Chamber Temperature	-55°C
Cooling systems	Air cooled
Mobile Temperature probes	1
Refrigeration	Secop Single Stage
Unit Dimensions (H x W x L)	94cm x 46cm x 60cm
Refrigerant	R404A
Vacuum	External
Condenser Chamber Dimensions	270mmØ x 500mm
Power Supply	240v 13a
Control System	Manual Touch Screen

Recommended

KJL RV 212

- 179 L/min
- 68 dBA
- KF25



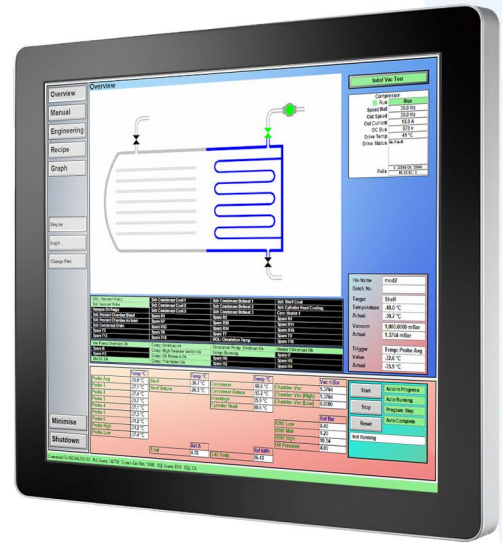
FROZEN IN TIME
Manufacturers of freeze driers and vacuum cold traps

AUTOMATED SCADA SYSTEM

High performance touch screen Scada system combined with an Omron PLC. This enables advanced recipes to be written and implemented into an Automatic Freeze Drying cycle, ensuring consistency & user error avoidance.

The system also provides the operator with detailed information on pressures, temperatures & valve positions, as well as advanced options & graph output.

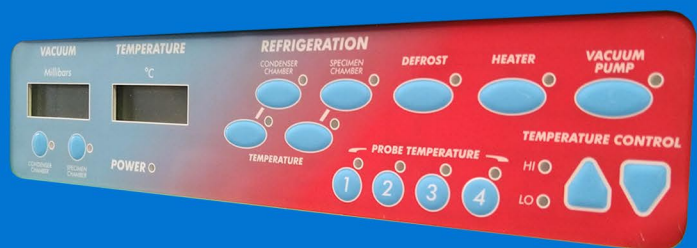
Our automated systems have on-going technical support, as well as remote operation & troubleshooting via a stable internet connection.



- 17" & 19" Screens available
- Anti-scratch, 10 point Multi-touch surface
- Fanless Intel Core i7 CPU
- Mini PCIe expansion slots for WiFi/4G
- 250gb SSD & USB 3.0
- IP65 Front Panel Protection

MANUAL LCD DISPLAY

- LCD Display
- RS232 Application for Data Logging
- Manually operated valve controls
- Step change controls



Manual touch keypad with LCD vacuum & temperature displays as well as manually operated valves. This system is supplied with a RS232 computer application that can log data and control step changes giving it a simplified computer led programmed profile to follow.

The manual system is ideal for slow process freeze-drying, and processes where less user input & information tracking is required. The operating system is updateable with a removable PIC chip, and Frozen in Time provides on-going technical support as required.