



# Cold Storage Solutions

**ARCTIKO**  
true cooling specialists

**Midea** | Biomedical

**Thermo**  
SCIENTIFIC

**MARATHON**  
PRODUCTS, INC.

**sptlabtech**

**ASKION** XILTRIX

# Summary of Contents

ULT Biobanking  
-185°C to -100°C



- HS200 S
- HS200 M
- HS200 L
- C-line® Work Bench

-200°C    -180°C    -160°C    -140°C



**Freezer + Refrigerator**  
-21°C to 4°C

**ULT Freezer**  
-86°C to -40°C

**Freezer**  
-30°C to -10°C

**Refrigerator**  
1°C to 10°C

- LF 100®
- LF 300®
- LF 700®
- LF 1400®

- LR|PR 100®
- LR|PR 300®
- LR|PR 700®
- LR|PR 1400®

- MD-86L458
- MD-86L568
- MD-86L838

- MD-25L96
- MD-25L295

- MC-5L42
- MC-5L92
- MC-5L316
- MC-5L416
- MC-5L756

- 98R AEW-TSC
- 98R AXW-TSC

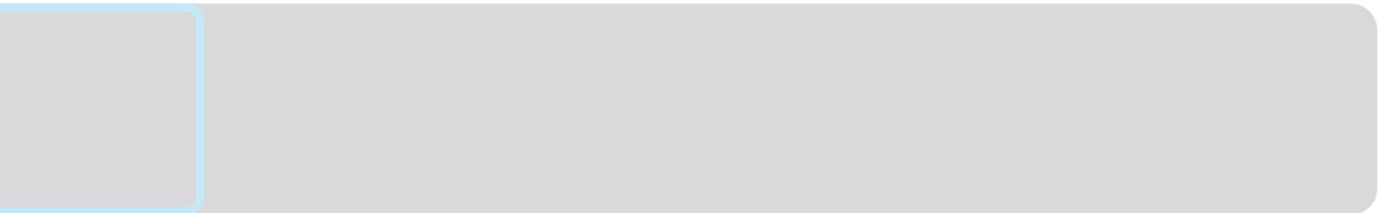
- 158R AEW-TSC
- 158R AXW-TSC

- 263 AEW-TSC
- 263 AXW-TSC

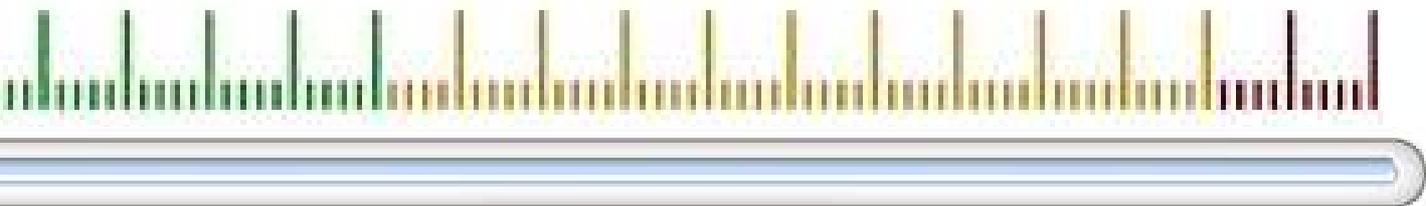
- Arctic® ULT

- Arctic® Freezer
- comPOUND® Freezer

- comPOUND® Refrigerator



-120°C    -100°C    -80°C    -60°C    -40°C    -20°C    0°C    10°C    20°C





**Midea Biomedical  
MD-86L838  
-86°C to -40°C**



**World-famous Components**

Compressor and fan are engineered by world-famous brands - with an increased lifespan up to 20%.



**Multifunction Alarms**

Include high, low temperature, sensor error, power failure, high ambient, door ajar, door open alarm and low battery alarm.



**Active ECO Technology**

Midea active ECO technology can significantly reduce energy consumption and maintain good interior temperature uniformity at the same time.



**Low Energy Consumption**

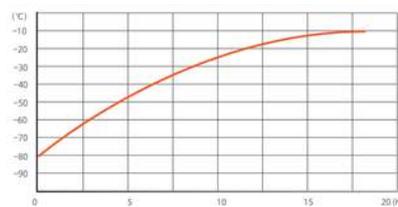
Smart-Inverter freezer coupled with environmentally safe and friendly hydrocarbon refrigeration system, allows the freezers to operate at a low level of energy consumption.



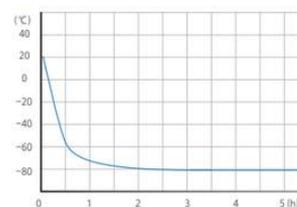
**DualGuard Cooling system**

Within DualGuard's independent Dual Cooling System, efficient ultra-low cooling is achieved through two independent evaporator circuits surrounding the interior chamber.

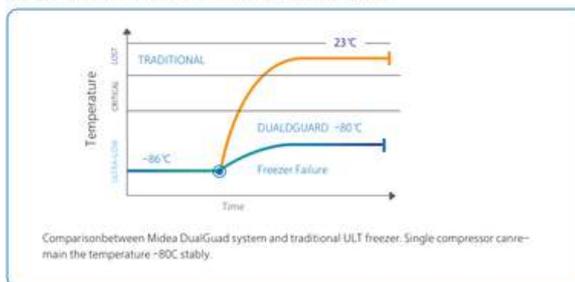
■ Temperature recover curve



■ Temperature cool down curve



■ Discover the DualGuard -86°C Refrigeration System



-86°C	MD-86L458	MD-86L568	MD-86L838
	458L	568L	838L
	32000	40000	60000
	885 x 855 x 1990 (mm)	885 x 995 x 1990 (mm)	1175 x 995 x 1990 (mm)



**Midea Biomedical**  
**MD-25L308**  
-25°C to -10°C



### Active ECO Technology

Midea active ECO technology can significantly reduce energy consumption and maintain good interior temperature uniformity at the same time.



### Low Energy Consumption

Smart-Inverter freezer coupled with environmentally safe and friendly hydrocarbon refrigeration system, allows the freezers to operate at a low level of energy consumption.



### Multifunction Alarms

Include high, low temperature, sensor error, power failure, high ambient, door ajar, door open alarm and low battery alarm.



### Temperature Control

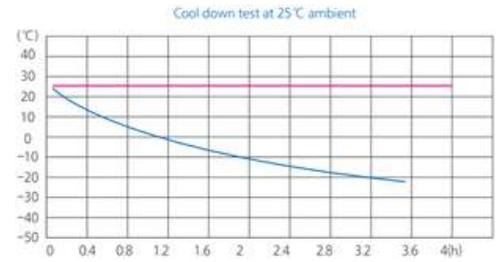
High precision of temperature control. Compressor overheating protection, effectively improving the service life of the core part.



### Refrigeration System

LBA Forming Technology: Better insulation, more energy-saving. Built-in air duct and top cooling design - ensure temperature in the top of chamber is cool enough for storage.

### Temperature cool down curve



### DC Turbo Fan

Item	Turbo	Traditional
Temperature	High	Low
Power	High	High
Rotation speed	Low	High
Noise	Low	High
Efficiency	High	Low
Life	High	Low

Decrease noise level by 8%  
Integrated DC Turbo Fan works with smaller vibration and higher efficiency.  
Safer for daily use  
No strong electric component in chamber, safer & more reliable.

-25°C	MD-25L308
	314L
	Manual defrost
	700 x 690 x 1920 (mm)



**Midea Biomedical**  
**MC-5L416**  
2°C to 8°C



### Top Cooling

Improves temperature variation performance by 40%. Improve cooling efficiency by 15%



### Humanized Design

Electric heating glass door design, effectively for preventing condensation. Built-in USB data logger, all data can be traced and printed. Multi-layer shelves design - removable and with label card.



### Refrigeration System

LBA Forming Technology: Better insulation, more energy-saving. Built-in air duct and top cooling design - ensure temperature in the top of chamber is cool enough for storage.



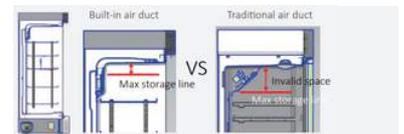
### Temperature Control

High precision of temperature control. Compressor overheating protection, effectively improving the service life of the core part.



### Dual display

Display both real-time temperature and humidity. Safer for stored products management. The alarm temperature can be set as required.



### Built-in air duct

Increase interior space by 10% - Less interior space occupancy. Built-in air duct with top cooling design, it is to ensure temperature of the top chamber is cool enough for storage.



### DC Turbo Fan

Decrease noise level by 8%  
Integrated DC Turbo Fan works with smaller vibration and high efficiency. Safe and reliable for daily use.

2°C	MC-5L42	MC-5L416	MC-5L756	MC-5L1006
	42L	416L	756L	1006L
	Frost-free	Frost-free	Frost-free	Frost-free
	480 x 450 x 550 (mm)	690 x 660 x 1920 (mm)	970 x 780 x 1920 (mm)	1220 x 808 x 1920 (mm)

\*Other models available



**Arctiko LF 1400®**  
-30°C to -10°C

Your Top Cold Storage Solutions



**Great Cooling Performance**

Air forced cooling provides superior temperature uniformity and stability. Forcing the airflow around the shelves and the stored items, ensures that all parts of the unit is equally cold and avoids any cold or hot spots. Distributed by a powerful fan and open air flow areas along the sides, the air is always distributed evenly throughout the fully loaded unit.



**Flexible Storage Solutions**

Arctiko's LF range is a highly customizable allowing you to choose between a wide range of universal shelves and drawers. This allows the user to organize their unit exactly as desired. Our universal shelf and drawer guides allow you to mix shelves and drawers for flexible storage.



**Stainless Steel Interior**

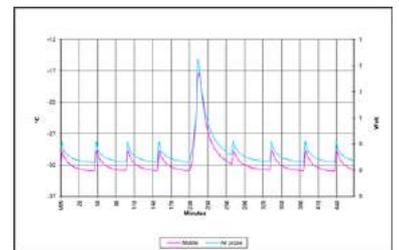
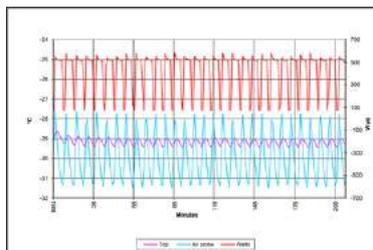
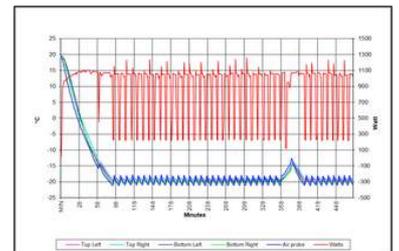
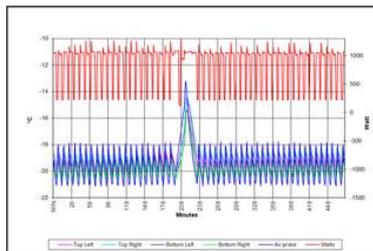
Made of stainless steel interior for stronger and more resistant equipment, good hygiene, and easy maintenance.



**Key Lock On Door**

Door locks on all models for optimal security and safety of your samples.

**Solid Door Freezer**



	-30°C	LF 100®	LF 300®	LF 700®	LF 1400®
		94L	346L	618L	1361L
		610 x 659 x 790 (mm)	520 x 700 x 1997 (mm)	720 x 860 x 1997 (mm)	1440 x 860 x 1997 (mm)

## Solid Door Refrigerator



**Arctiko LR 700®**  
1°C to 10°C

**ATEX<sup>Ex</sup>**  
CERTIFIED



AIR FORCED  
COOLING



### Great Cooling Performance

Air forced cooling provides superior temperature uniformity and stability, forcing the airflow around the shelves and samples. This ensures the temperature is constant at every spots and well distributed evenly throughout the fully loaded unit.



### Flexible Storage Solutions

It is customizable, allowing you to choose between a wide range of universal shelves and drawers. This allows you to organize the unit exactly as desired. Universal shelf and drawer guides allow you to mix shelves and drawers for flexible storage.



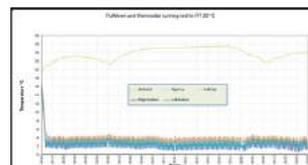
### Stainless Steel Interior

Made of stainless steel interior for stronger and more resistant equipment, good hygiene, and easy maintenance.



### Key Lock On Door

Door locks on all models for optimal security and safety of your samples.



1°C	LR 100®	LR 300®	LR 700®	LR 1400®
	94L	346L	618L	1361L
	610 x 659 x 790 (mm)	520 x 700 x 1997 (mm)	720 x 860 x 1997 (mm)	1440 x 860 x 1997 (mm)

## Glass Door Refrigerator



**Arctiko PR 700®**  
1°C to 10°C

**ATEX<sup>Ex</sup>**  
CERTIFIED



AIR FORCED  
COOLING



### Great Cooling Performance

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### Flexible Storage Solutions

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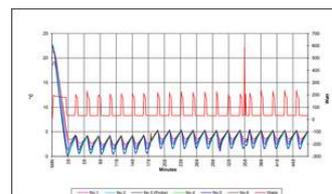
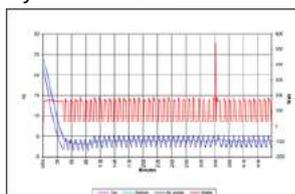
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1°C	PR 100®	PR 300®	PR 700®	PR 1400®
	94L	346L	618L	1361L
	610 x 659 x 790 (mm)	520 x 700 x 1997 (mm)	720 x 860 x 1997 (mm)	1440 x 860 x 1997 (mm)



**Thermo Scientific**  
**263C-AEW-TSC**  
-25°C to -18°C | 1°C to 10°C



### Safe Sample Storage

ES Series spark-free flammable material storage (FMS) are ideal for storing ethyl ether, acetone, alcohol, benzene, butane, gasoline, hexane, lacquer solvent and naphtha along with other potentially flammable material in general laboratory locations.



### Integrated Digital System

ES Series' integrated digital controller with temperature display, door ajar alarm, and high/low temperature alarms is easy-to-use and maintains the correct cabinet temperature.



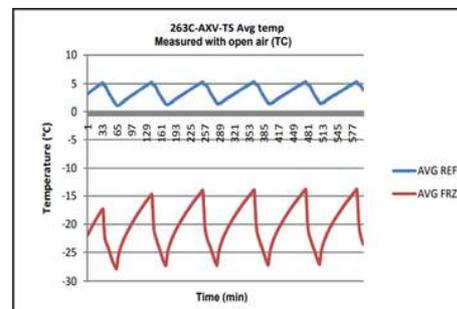
### Ergonomic Design

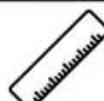
ES Series models are fitted with standard door locks for enhanced sample security and peace-of-mind. Built with sleek and edge-less handle that ensure a safe and easy opening of fridge/freezer.



### Temperature Alarm

Alarm sensor that detects high and low temperature, power failure and door ajar alarm. This will not only helps to identify low-performing fridge/freezer but also reduce potentially costly product loss.



-20°C   5°C	263C-AEW-TSC	263C-AW-TSC
	263L	263L
	540 x 600 x 1680 (mm)	540 x 600 x 1680 (mm)

ES Series Combination Lab Refrigerator/Freezer (Set Point Adjustment Range: Ref +4°C to +6°; Frz -19°C to -21°C)					
Model	Capacity (Litre)	Voltage	Plug Type	Includes	Defrost Type
263C-AEW-TSC	159 Fridge 104 Freezer	230V/50Hz	UK	3 shelves, 2 half baskets (Fridge) 1 shelf, 2 baskets (Freezer)	Automatic (Fridge) Manual (Freezer)
ES Series ATEX Certified Spark-Free Combi Lab Refrigerator/Freezer (Set Point Adjustment Range: Ref +4°C to +6°; Frz -19°C to -21°C)					
Model	Capacity (Litre)	Voltage	Plug Type	Includes	Defrost Type
263C-AW-TSC	159 Fridge 104 Freezer	230V/50Hz	UK	3 shelves, 2 half baskets (Fridge) 1 shelf, 2 baskets (Freezer)	Automatic (Fridge) Manual (Freezer)

**ATEX<sup>Ex</sup>**  
CERTIFIED



### Safe Sample Storage

ES ATEX Series are ideal for storing ethyl ether, acetone, alcohol, benzene, butane, gasoline, hexane, lacquer solvent and naphtha along with other potentially flammable material in general laboratory locations.



### Integrated Digital System

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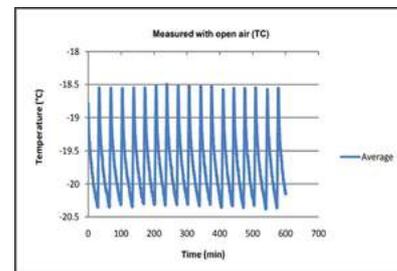
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Alarm sensor that detects high and low temperature, power failure and door ajar alarm. This will not only helps to identify low-performing fridge/freezer but also reduce potentially costly product loss.



-20°C	98F-AEW-TSC	98F-AXW-TSC
	98L	98L
	559 x 658 x 850 (mm)	559 x 658 x 850 (mm)



**Thermo Scientific**  
**98F-AEW-TSC**  
-25°C to -18°C

ES Series Lab Freezers Operating Temperature Range: -18°C to -25°C (Set Point Adjustment Range -19°C to -21°C)					
Model	Capacity (Litre)	Voltage	Plug Type	Includes	Defrost Type
98F-AEW-TSC	98	230V/50Hz	UK	3 Glass Shelves/ Plastic Drawers	Manual

ES Series ATEX Certified Spark-Free Lab Freezers Operating Temp. Range: -18°C to -25°C (Set Point Adjustment Range -19°C to -21°C)					
Model	Capacity (Litre)	Voltage	Plug Type	Includes	Defrost Type
98F-AXW-TSC	98	230V/50Hz	UK	3 Glass Shelves/ Plastic Drawers	Manual

**ATEX<sup>Ex</sup>**  
CERTIFIED



### Safe Sample Storage

ES ATEX Series are ideal for storing ethyl ether, acetone, alcohol, benzene, butane, gasoline, hexane, lacquer solvent and naphtha along with other potentially flammable material in general laboratory locations.



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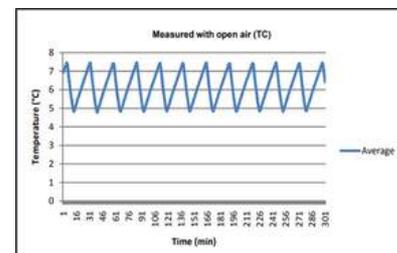
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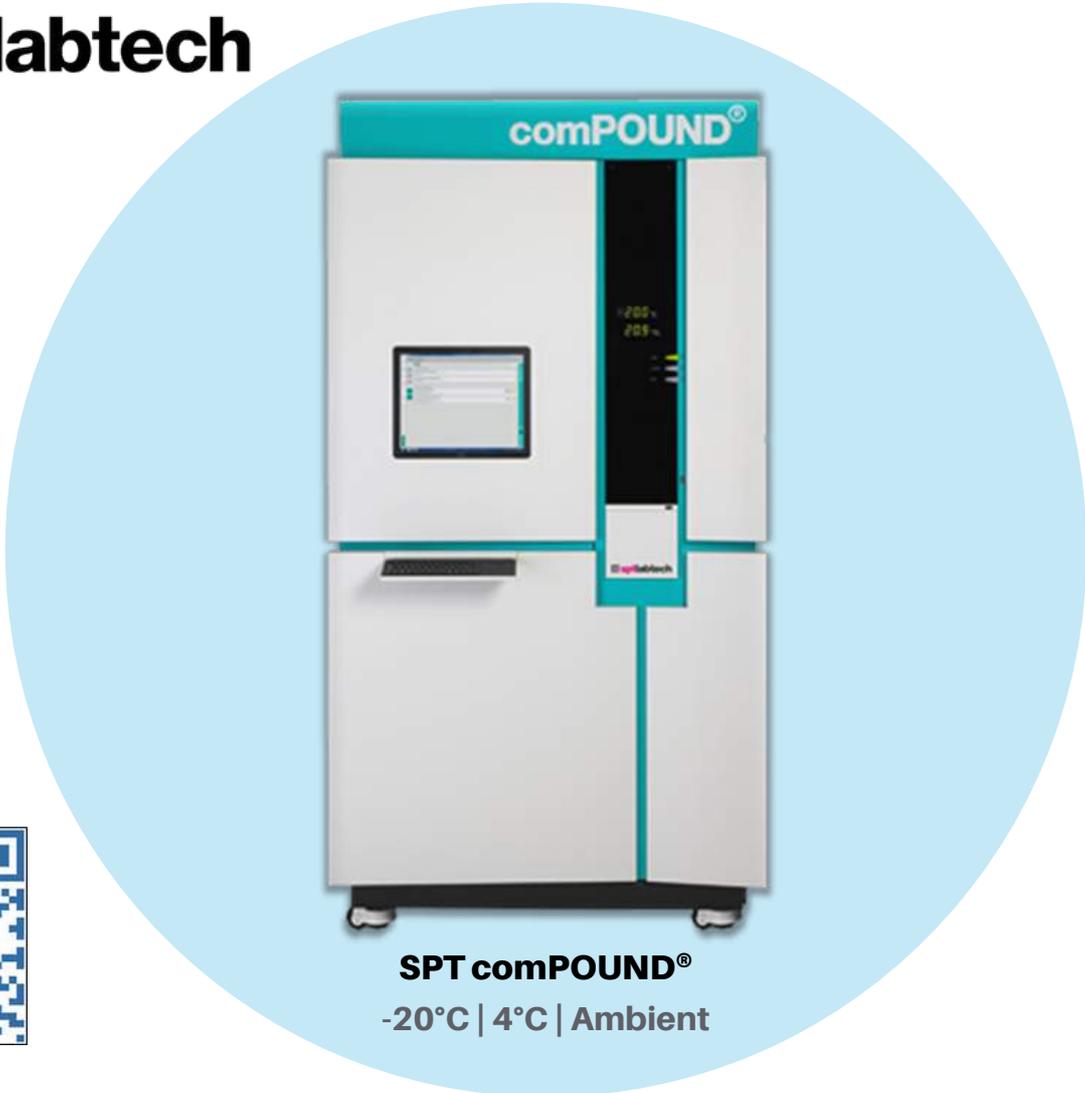
5°C	158R-AEW-TSC	158R-AXW-TSC
	158L	158L
	559 x 658 x 850 (mm)	559 x 658 x 850 (mm)



**Thermo Scientific**  
**158R-AEW-TSC**  
1°C to 10°C

ES Series Lab Refrigerators Operating Temperature Range: +1°C to +10°C (Set Point Adjustment Range +4°C to +6°C)					
Model	Capacity (Litre)	Voltage	Plug Type	Includes	Defrost Type
158R-AEW-TSC	158	230V/50Hz	UK	3 Shelves, 1 Basket	Automatic

ES Series ATEX Certified Spark-Free Lab Refrigerators Operating Temp. Range: +1°C to +10°C (Set Point Adjustment Range +4°C to +6°C)					
Model	Capacity (Litre)	Voltage	Plug Type	Includes	Defrost Type
158R-AXW-TSC	158	230V/50Hz	UK	3 Shelves, 1 Basket	Automatic



**SPT comPOUND®**  
-20°C | 4°C | Ambient



**Trackable Samples**

2D barcoded labware - samples are tracked and stored and retrieved with the simplicity and speed of a vending machine



**Novel Pneumatic Technology**

The innovative pneumatic technology minimizes the use of electrical and mechanical components in the cold zone to ensure exceptional reliability. Harnessing pneumatic power enables fast cherry picking of samples and seamless onward transportation to remote locations.



**Secure Storage Solutions**

Each store is self-contained, as well as compact - modules can be located anywhere and samples delivered remotely. Samples are stored individually under dry air (or nitrogen) in a hermetically-sealed chamber at a user-defined temperature ranging from -20°C to ambient. Only requested microvials are retrieved, avoiding unnecessary freeze/thaw cycles.



**Innovative Carousel System**

The innovative carousel system optimizes storage capacity, allowing facilities to capitalize on available space and proactively control overheads by maintaining low running costs.



**Space and Cost Effective**

Minimized lab space required due to comPOUND's small footprint but high-density storage capacity. With the pneumatic technology, time taken in picking and pilot screening were significantly reduced. Altogether, solution was cost neutral by year 4.



**Sleek Design**

The user-friendly and convenient vending machine style design enables easy and secure access to samples. The ability to only retrieve requested microvials avoids unnecessary freeze/thaw cycles and maintains full sample integrity.

-20°C   4°C	comPOUND®
	<b>600 vials/hour</b>
	<b>100 000 x 1.4 mL vials 200 000 x 0.5 mL vials</b>
	<b>1200 x 1650 x 2400 (mm)</b>



**SPT Arctic®**  
-80°C | -20°C



**Trackable Samples**

2D barcoded labware - samples are tracked and stored and retrieved with the simplicity and speed of a vending machine



**Novel Pneumatic Technology**

Pneumatic technology uses a cushion of compressed air and a system of flexible tubes to transport samples. All mechanical robotic elements remain outside the cold environment to ensure reliable operation even at -80°C. Harnessing pneumatic power enables fast cherry picking of samples and seamless onward transportation to remote locations.



**Secure Storage Solutions**

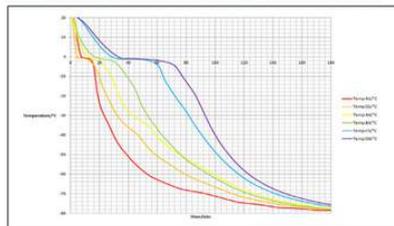
The system offers extensive monitoring and fail safe back-up systems to ensure that the correct conditions are maintained throughout the life of the sample while robust tracking ensures that no specimen is mislaid. Continuous system monitoring for early diagnosis of any issues.



**Design To Save**

High storage density optimizes capacity, allowing biostorage facilities to capitalize on available space and proactively control overheads, maintain low running costs and maximize return on investment. Rapid sample retrieval, saving hundreds of manual hours per year. Easy system setup which only takes a day.

Freezing profiles for different positions in an SBS rack



-80°C	Arctic®
	450 vials/hour
	60 000 x 1.0 mL vials 139 000 x 0.5 mL vials
	1350 x 800 x 1980 (mm)

**Compliment your biobanking storage network with**



Arctic® XC

**What is Arctic® XC**

An automated biobanking solution bringing together a network of Arctic® units into a single high integrity, affordable and scalable bio-storage system. Different locations can be linked using novel and reliable pneumatic technology with direct benchtop access for highly optimized workflows.



**Multiple Connectivity**

XC connects a maximum of 10 individual Arctic® modules across different locations and enables transport of samples directly to the laboratory bench via a compact remote connect ac unit.



**Process Efficiency**

The modular approach offers facilities ultimate flexibility to increase capacity in line with demand and keep the cost per sample stable while advancing research goals. This helps to save cost and improve productivity in a long run.



**Integrated Storage Solutions**

The system offers extensive monitoring and fail safe back-up systems to ensure the correct conditions of all the Arctic® modules are maintained throughout the life of the sample while robust tracking ensures that no specimen is mislaid.

-80°C	Arctic®
	140,000 maximum capacity per Arctic module; Max. 10 Arctic modules per bank
	708 x 764 x 800 (mm)



**ASKION HS200S**  
Cryogenic -185°C  
S | M | L

Your Top Cold Storage Solutions



### Advanced Automation

Increased sample safety and performance, it is able to handle SBS rack, single tube and record all parameters for each sample and system automatically. Controlled environmental conditions ensure low temperature differences during storage, guarantees high sample quality and uninterrupted cooling chain. The storage and retrieval process are controlled and documented by C-Line® control.

-185°C	HS200 S	HS200 M	HS200 L
	300 vials/hour	300 vials/hour	300 vials/hour
	47 100 x 1.0 mL vials 21 100 x 1.8 mL vials	121 700 x 1.0 mL vials 64 500 x 1.8 mL vials	395 600 x 1.0 mL vials 172 000 x 1.8 mL vials
	1250 x 1800 x 2450 (mm)	3000 x 2500 x 2700 (mm)	4500 x 3500 x 3200 (mm)

\*Other Format Available



### Ergonomic and Safe Operation

To avoid these operator risks and support sample safety and quality at the same time, all C-line® components (ASKION C-line® hermetic storage, ASKION C-line® work bench, ASKION C-line® automated work bench) offer protection against the contact with nitrogen gas and liquid nitrogen. The use of these robots prevent sample mix-up and all sample movements are monitored and recorded at the same time.



### Maximum Flexibility

Modularity and individualization, the useable sample formats range from vials, with different filling volume and dimensions (e. g. 6.0 ml tissue vials), to high volume sample formats, e. g. blood bags, up to formats like straws or tissue cassettes. To meet the individual needs and requirements of the respective operator, the relevant C-line® components will be adapted to the used sample format. The system also allows the extension of the useable sample formats

### Compliment your biobanking storage network with

#### C-line® Work Bench



#### What is Work Bench

Work bench is the flexible operating area for all manual sample handling activities in a cryogenic environment. The main part is a well-spaced working area, which may be equipped by two (WB220) or three (WB230) automated and monitored freezers.



**Versatile And Ergonomic**  
C-line® work bench can be equipped up to three independently working automatic freezers. It is built with touchscreen user control, soft and hardware supported monitoring system and two operator ports with heated gloves. Ergonomic electrical height adjustment and free programmable freezing curves



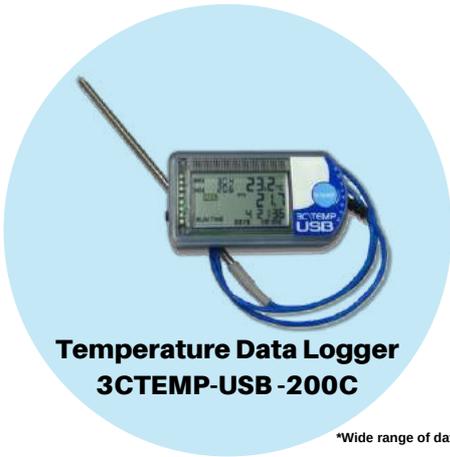
**Maximum Flexibility**  
Modularity and individualization, the useable sample formats range from vials, with different filling volume and dimensions (e. g. 6.0 ml tissue vials), to high volume sample formats, e. g. blood bags, up to formats like straws or tissue cassettes.



**Trackable Samples**  
A barcode based sample management system for sample tracking is available as well as the connection to the users LIMS via ASKION C-line® control. Integrated 1D and 2D barcode scanners with optional ColdEye rack scanner.

-130°C	C-line® Work Bench
	1860 x 970 x 2030 (mm)

# Cold Storage Accessories



**Temperature Data Logger  
3CTEMP-USB-200C**

\*Wide range of data loggers available



### Real Time LCD Display

Real-time viewing of Current temperature, Max/Min Temperature, Run Time, Alarm Status, and Recording Status.



### Advanced Technology

The internal firmware is user programmable and provides the following features: start time delay, sampling intervals, high and low alarm window values, recording status, and measurement data. They are NIST-Traceable and come with Certificates of Calibration.



### Visual Alarms

All our data loggers can be programmed with alarm limits. Should the temperature reach levels outside these limits, the LCD will display "ALARM."



### Memory Storage

Storing a maximum data of 8000.



### Temperature Range

Internal Sensor: -29°C to +72°C  
External Probe: -200°C to +72°C



**24/7 Laboratory  
Monitoring Systems**



### Multi Parameters Monitoring

XiltriX systems are able to monitor temperature, CO2 and O2, pressure, particles, humidity, door sensors, conductivity, shaking and etc. Up to 1000 parameters setup in a single system.



### Quality Standards

XiltriX systems meets the quality requirements and processes for both internal and external compliances and validation (FDA CFR part 11, GLP, GMP, GxP, GAMP, AAALAC, AABB, CAP and others.



### Alarm Monitoring

If a monitored parameter goes out of limits, XiltriX can alert the user in many different ways. such as as sirens or flashing lights can be located centrally or in the laboratory itself, automatic SMS or e-mail messages can be generated automatically, directly to the user's personal computer or phone. You are able to view the status of the entire system in the laboratory or at home. Detailed reports, statistics and historical data are available at all times.



**Monitoring Systems  
Allegro S310**



### Remote Controls

Remote setting of phone numbers  
Remote query of phone group, input & output status  
Remote add/edit/delete phone group, & repeat time  
Configurable for all input and output messages



### Ease Of Handling

Easy to install and maintenance  
Simple to use and minimum administrative effort  
Can be deployed world-wide under GSM coverage  
Standalone with 3hours internal backup battery  
24 x 7 in operation  
No need any external application software

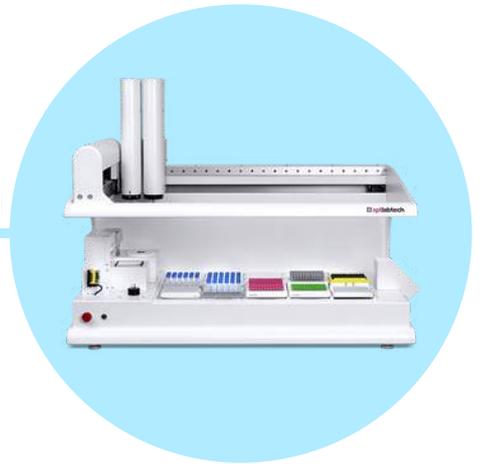


### Alarm Monitoring

If a monitored parameter goes out of limits, S310 alert the user through automatic SMS, directly to the user's personal phone. You are able to view the status of the entire system in the laboratory or at home. Detailed reports, statistics and historical data are available at all times.

# Sample Management

**XL100/XL200**  
**Automated Tube Handler**



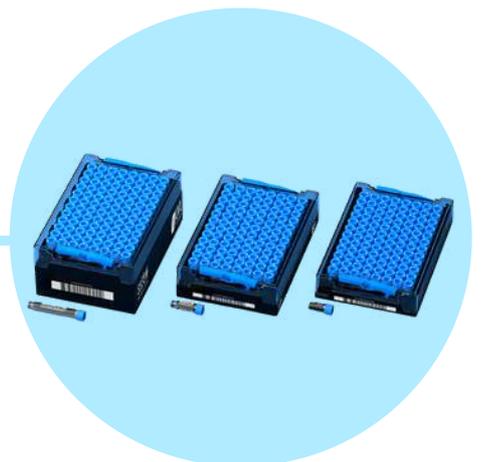
**VC100/384**  
**VolumeCheck**

**LabelPro**  
**Auto Labeller**



**SAFE®**  
**96-Channel Capper/ Decapper**

**SAFE®**  
**2D Barcoded Tubes**



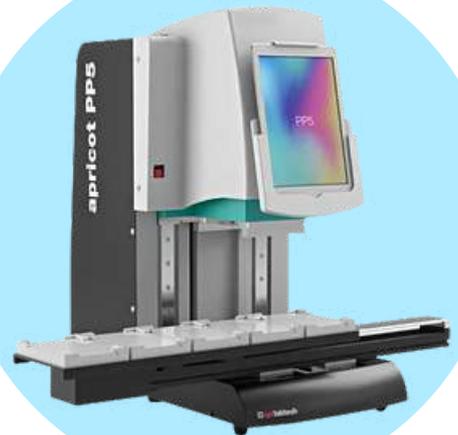
# Liquid Handling

**Echo  
Acoustic Dispenser**



**Dragonfly®  
Dispenser**

**Apricot  
Semi-Automated Pipettor**



**Multidrop™  
Liquid Dispenser**



## **Bio Laboratories Pte Ltd**

10 Ubi Crescent, Lobby A #06-02  
Ubi Techpark  
Singapore 408564

Tel: (65) 6713-5288

Fax: (65) 6846-7477

**Email: [biolab@biolab.com.sg](mailto:biolab@biolab.com.sg)**

**Web: [www.biolab.com.sg](http://www.biolab.com.sg)**