



# Ultra Low Temperature Freezer with unique features



# Temperature Range: -60°C to -80°C



### **SPECIFICATIONS**

Temperature Range : -60°C to -80°C

Temperature Accuracy : ± 1°C
Temperature Uniformity : ± 3°C

### **Ultra-Low Temperature Freezers**

Newtronic -86°C Ultra-low Temperature Freezers are developed for reliable storage conditions of research samples for laboratories, hospitals, repositories and more. Through research and development, a new focus has been placed on our refrigeration system, controls, alarms/monitoring, ergonomics, construction and energy efficient operation to make our Freezers the reliable solution for long-term storage of cancer cells, stem cells, cord blood, T-cells, organ/tissue and other samples.

### **Key Features**



#### **Refrigeration System**

Imported high-efficiency compressor and EBM fans to energy-saving and efficient refrigeration



### **Five Magic Weapons for Energy Saving**

Imported high-efficiency compressor + separated evaporator + composite heat exchanger + optimized fractional condensation & separation system + high-efficiency thermal insulation system can save energy and reduce power consumption of the freezer by 40%



#### **Low Noise Design**

Low-noise direct cooling circuit + suspension frame & sound absorbing compartment & low-noise fan can reduce noise generated by the entire freezer to the largest extent



#### Three-dimentional Thermal Insulation

The six sides of the cabinet are made from high-efficiency VIP vacuum thermal insulation plate and the thermal insulated designer of the inner door are made from foaming material which can improve the thermal insulation performance of the freezer



### High efficiency insulation with VIP PLUS technology for Optimum Storage

This revolutionary vacuum insulation panel reduces the wall thickness by approximately one half and achieves up to 30% more storage capacity than a conventionally insulated freezer, maximizing storage capacity and saving valuable lab space. Just as importantly, the advanced thermal insulation properties of VIP PLUS improve the energy efficiency of VIP freezers for lower running costs per sample



#### Vacuum release port

It prevents vacuum formation enabling the outer door to be easily opened at anytime



#### Safety

- Keyboard lock and password protection system:
  - Prevents unauthorized change of parameters
- · Audio-Visual Alarm Notifications:
  - · High/Low Temperature Excursions | Door Open
- Door with lock to prevent unauthorized opening
- · Start delay and interval stop system to protect the reliable operation



2nd Generation I-Series Controllers



Touch Screen Display



21CFR PART 1 Ready



Complete Range of alarms



Mobile Alert System

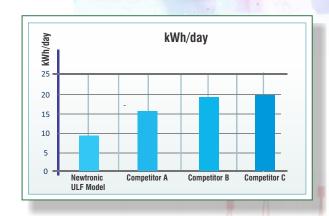
### Proven high precision performance for best quality

### **Low Power Consumption:**

The combination of enhanced technology and design with additional vacuum insulation coverage has reduced the Power Consumption by 23%

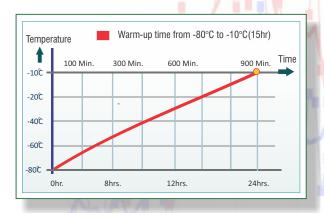
### **Uniformity Test**

- NEWTRONIC Freezer has excellent uniformity under normal operating conditions
- It ensures that samples stored in the chamber is subjected to the same temperature condition
- Additionally, the freezer has a fast recovery time upon door opening event & ensures that the temperature pulls down very quickly



### Extended warm-up time during a power/freezer failure

- Warm-up time measures the time taken for temperature to rise up (from -80°C to -10°C) when there is a power failure / freezer is interrupted.
- With a robust insulation and back up system in place, NEWTRONIC ULT FREEZER has the best warm-up time among other makes.
- Slower warm-up time buys the user time for carrying out a back-up plan.



### ◆ Selection Guide of Ultra Low Freezers (-80℃)

Model	Capacity		Internal Size	External Size	No. of compartment
	CuFt	Liter	(H*W*D)mm	(H*W*D)mm	
NLUF04MI	04	100	820 X 450 X 439	820 X 1006 X 742	02
NLUF14MI	14	398	1266 X 404 X 696	1947 X 788 X 1041	02
NLUF19MI	19	528	1266 x 585 x 696	1947 x 930 x 1041	02
NLUF23MI	23	678	1286 x 750 x 696	1955 x 1090 x 1025	04
NLUF27MI	27	778	1286 x 865 x 696	1955 x 1205 x 1025	04
NLUF30MI	30	858	1378 x 877 x 696	2005 x 1217 x 1025	04
NLUF36MI	36	1008	1378x 1022 x 696	2002 x 1362 x 1025	04

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Low Power Consumption



Extended warm-uptime



Excellent Uniformity

### Also Available: Deep Freezers (-25°C) Plasma Freezers (-40°C)



### Innovation & Quality You Can Rely On





### **Data Storage**



Data storage function: can store relevant operating data, which can be down-loaded and checked, ensuring improved security and reliability of sample storage.



### **Human-oriented**



The new designed assisting handle and vacuum release to open and close the outer door. The inner door made from stainless steel 304 for medical use is low-temperature tolerant, corrosion-resistant, has a long service life and is easy to clean

### Thermal Insulation System



The low-layer heat insulation foamed door with inner and outer seal and the insulation design of the outer door system can prevent loss of refrigerating capacity in an effective way; The six side of the cabinet are made from high-performance VIP vacuum insulation material, improving thermal insulation performance to a large extent.

### Supplies for Cryo preservation



Inventory racks/ boxes for cryopreservation are optional

## **5** Refrigerator

**System** 



The imported high-efficiency compressor and EBM fan are energy-saving and highly efficient. The large finned condenser with space between fins ≤2mm, providing effective heat dissipation

### **Optional Accessories**



**Temperature Recording** 



**Safety Gloves** 



Cryo Racks & Boxes

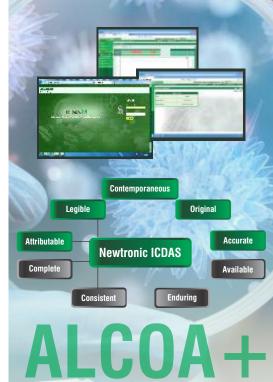
### Web-base Software (ICDAS)

### Remote Chambers Management

### Access Anytime Anywhere

### Instantly connect and control your chamber from anywhere without installing software

NEWTRONIC's ICDAS software changes the landscape of Stability Operations & Chamber Management. While it very effectively complies to the requirements of 21 CFR Part 11, it also meets the increasing demands for improved operational efficiencies. This serverbased software gives the flexibility to operate the chambers remotely through any web browser and gives additional capabilities of going Paperless and system-based alert notifications of pending tasks.







#### Installation

- Server-based; Web-based Software accessible through
- Installation that is one-time for Lifetime! Eliminate the need for multiple software installation & qualifications!



### **Data Management**

GO PAPERLESS!! e-Review, e-Approval, e-Signature, e-Comments of:

#### Data Logs | Alarms | Audit Trails

- Multi-level data authorization (through e-review & e-approval)
- Comprehensive Audit Trails of Alarms, User activity. Equipment settings, email & SMS generation
- Stay Audit-Ready every single day through Supervisory Email facility!
- Run-time calculation of MKT
- Real-time display of all connected equipment in single screen



#### Safe & Secure

footer, etc.)

Automatic & Manual daily data backup facility. Automatic data backup can be done both, remotely & locally

Department-wise segregation of users, equipment &

Plant-wide harmonization of reporting format (header,

Configure the type & no. of alarms to be sent via

email/SMS & configure delay time too

Additional features of Data Archival & Data Restore

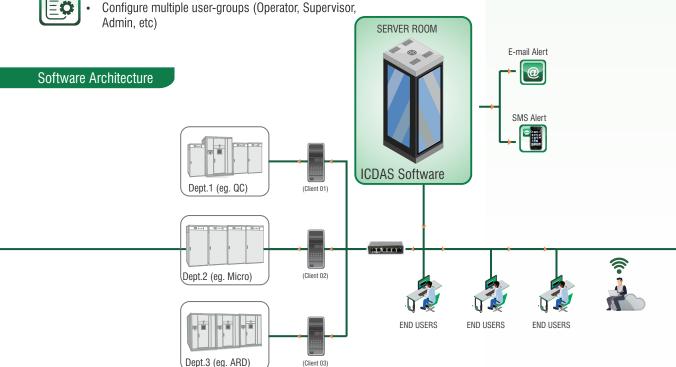


### **Other Features**

- Viewing I/O Status & Running Hours of all major components.
- Component running hours to determine the shelf-life of major components
- Centralized user-defined Alarms, Alerts & Notifications through SMS & emails
- System Diagnosis for troubleshooting via Team Viewer
- Software to keep you USFDA 21 CFR Part 11 Ready



#### Configuration





### **Global Reach**

Our reach extends to the corners of the world...



### **Newtronic Service centers:**

#### Domestic:

Ahmedabad Hyderabad / Vizag Baddi Indore Bangalore Kolkata / Sikkim Chennai Mumbai Delhi Pune Goa

### International:

Australia Malaysia Bangladesh Mexico China Nepal Dominican Republic New Zealand Dubai Phillipines Egypt Singapore Indonesia Thailand Jordan Turkey

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<sup>\*</sup> Newtronic reserves the right to change product specifications without prior notice