



# -86°C ULTRALOW TEMPERATURE FREEZERS



**The Safer Choice** 





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Cooperative Services



## THE NUAIRE ADVANTAGE

In 1971, Max D. Peters designed his first Biosafety Cab-To better meet the necessities of our customers, we now inet (BSC) from inside his garage at the behest of the offer an array of ultralow temperature freezer models. National Institute of Health (NIH) in Bethesda, Maryland. We pride ourselves on our products' premium quality, The NIH put out a public purchase order (NIH-03-112c) for consistent reliability, overall low cost of ownership, and a machine that could guarantee the safety of scientific environmental sustainability. Our quality management personnel and their research specimens. Max D. Peters system is fully certified to adhere to ISO 9001:2015 helped establish the basic fundamental standards that and 13485:2016 requirements. Our products are also all modern Biosafety Cabinets are held to this very day. celebrated for their ergonomic design, ease of use, and After being awarded the NIH contract, a new laboratory quiet operation. All standard ULT units sold in the US and equipment engineering and manufacturing company, Canada come with a 3 year parts & labor warranty. Our NuAire, was born. Today, NuAire, Inc. is still owned and philosophy is that we succeed only when you succeed; operated by the Peters family in Plymouth, MN. we are committed to guaranteeing 100% satisfaction.

For over half a century, NuAire has consistently led the As NuAire continues to grow, we are committed to industry in safety standards and customer satisfaction. continuously improving our products and expanding We obsess over our customers' needs and continually our offerings. We always strive to provide you with the grow to meet those needs. With invaluable input from optimum level of personnel, environmental, and product customers like you, we now offer a wide range of bioprotection throughout any industry. logical safety cabinets, CO2 incubators, animal handling devices, centrifuges, ultralow freezers, acid-resistant **NuAire's Quality Policy:** polypropylene cabinetry and fume hoods, hospital phar-Satisfy Customers macy compounding isolators, and much more. You can **Comply with System Requirements** rely on us for exceptional value and dependable service, **Continually Improve** the cornerstones of NuAire's reputation as the leading provider of laboratory products around the globe. Choose NuAire as the Safer Choice for Your Laboratory



## -86°C ULTRALOW FREEZER MODELS



Blizzard<sup>®</sup> HC -86°C Ultralow Temperature Freezer (ULT) Models provide dependable performance for storing stem cells, blood & tissue samples, and vaccine vials at an affordable price. Vacuum insulated and/or polyurethane foam filled panels surround the storage chamber to provide greater temperature uniformity and maximize total storage space. Our dual compressor system\* maintains consistent storage temperatures without compromising energy efficiency. Our Blizzard Ultralow Temperature Freezers are the safer choice for your cold storage needs. \*Excludes Blizzard NU-99100J model.

NuAire Blizzard Models			
Model	Configuration	Storage Capacity	
NU-99100J	Under-Counter	3.5 ft <sup>3</sup> /100L	
NU-99338J	Upright	11.9 ft³/ 338 L	
NU-99578J	Upright	20.4 ft <sup>3</sup> / 578 L	
NU-99728J	Upright	25.7 ft <sup>3</sup> / 728 L	
NU-99729VFT	Upright	25.74 ft <sup>3</sup> / 729 L	
NU-99828J	Upright	29.2 ft <sup>3</sup> / 828 L	
NU-99420J	Chest	14.8 ft <sup>3</sup> / 420 L	



#### **HYDROCARBON (HC) NATURAL REFRIGERANTS**

Lower your total cost of ownership while improving reliable performance.

Blizzard Ultralow Temperature Freezers utilize non-toxic hydrocarbon (HC) refrigerants that are eco-friendly alternatives to CFC, HCFC, and HFC fluorocarbons, which are linked to ozone layer damage. HC refrigerants are found naturally in nature, can be acquired at a lower cost, and provide superior energy efficiency.



ULT Model	Model Configuration	Rack Configuration	Rack Capacity	2" [5 cm] High Box Capacity	2 mL Sample Vials Capacity
NU-99100J	Under-Counter	5 Rows / 3 Columns	4	60	6,000
	llaviaht	4 Rows / 4 Columns	6	96	21.000
NU-99338J	Upright	5 Rows / 4 Columns	6	120	21,600
NU-99578J	Upright	5 Rows / 5 Columns	16	400	40,000
NU-99728J	Upright	5 Rows / 5 Columns	20	500	50,000
NU-99729VFT	Upright	5 Rows / 5 Columns	20	500	50,000
NU-99828J	Upright	5 Rows / 5 Columns	24	600	60,000
NU-99420J	Chest	10 Rows / 1 Column	27	270	27,000

## FREEZER RACK CAPACITY BY MODEL



### Freezer Racks for 2" [5 cm] Boxes

## **BLIZZARD FEATURES & OPTIONS**

#### Hydrocarbon (HC) Refrigerants

Commercially available HC refrigerants are efficient, environmentally safe, and non-ozone depleting.

#### Audible & Visible Alarms

The on-board Electronic Control Center comes with internal temperature monitoring and alarm systems with visible and audible notifications.

#### **Battery Backup**

Powers the control center and alarms in the event of an interruption in the primary power source.

#### Insulated Inner Doors\*

Compartmentalizing the inner chambers with individually latching doors greatly increases temperature stability when moving samples in & out of storage.

#### Backup CO<sub>2</sub> / LN<sub>2</sub> Cooling\*

Hook up to a  $CO_2$  and/or  $LN_2$  system to maintain internal storage temperature in the event of a power outage.

#### Adjustable Internal Shelves

Provides extra flexibility in storage rack configuration. They can also be removed and rearranged, if desired.

#### **Front Filter Access**

Allows convenient access for routine maintenance to the washable pre-filter.

An easy-to-open front grill allows convenient access to a washable mesh filter and ULT condenser for routine maintenance.



#### Vacuum Insulated Panels (VIP)

The freezer cabinet structures integrate a high density, low conductivity polyurethane foam and vacuum insulation panels (VIP) to improve temperature stability and maximize storage capacity.

#### Circular Chart Recorder\*

A circular chart recorder can be optionally mounted on the front of your ULT for independent internal temperature monitoring and recording.





### Outer Door Handle w/ Locking Claw Latch

Maintains a tight seal to minimize frost built-up, yet requires minimal effort to open the freezer door. The outer door can be locked with included key or padlocked via the double loop attached to the front of the handle and unit.

### Individual Latching Inner Doors\*

### **Quadruple Gasket Outer Door**

The four gaskets on the outer door ensure a pressure-tight seal, reducing icing.

#### Single Gasket Inner Doors\*

The additional gaskets on the inner doors protect against thermal intrusion.

## Pressure Equalization Port\*

The Pressure Equalization Port is heated with a spring assisted mechanism to help prevent icing, allowing the freezer door to be opened shortly after adding samples.



## **USB Data Port**

Easily download freezer data via the USB port located on the electronic control center.



#### **Remote Alarm & RS485 Ports**

Standard remote alarm and RS485 ports, located in the power switch panel, can be used to transmit freezer temperature and alarm data to independent software for monitoring and recording.

\*Note: Listed feature/option is unavailable on the Blizzard NU-99100J model.

Individual claw latches on the insulated inner doors ensure that each compartment stays pressure-tight, yet accessible.



## Sample Ports

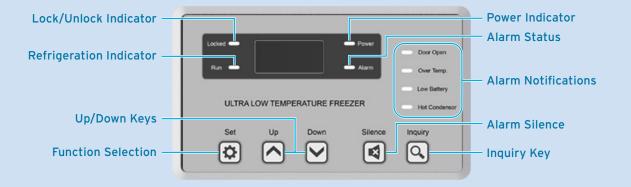
Two sample ports are located on the top and bottom of the freezer backwall for the convenient access of independent monitoring tools.

(The NU-99100J model only has one sample port located on its left wall)



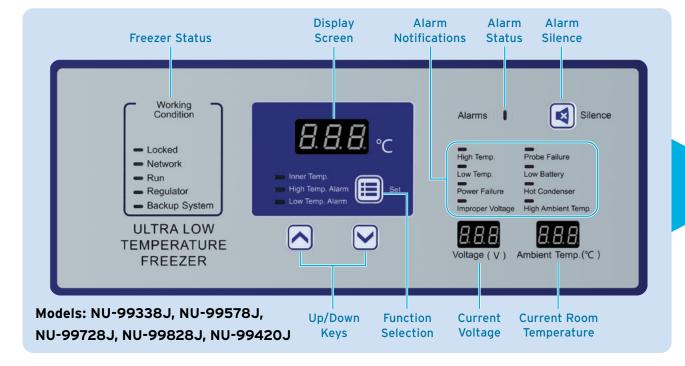
NU-99728.J

## **CONTROL PANELS**



Alarm Indicator	
High/Low Temperature	Internal Terr
High Ambient Temperature	
Power Failure	
Door Ajar	Door Openin
Sensor Error	E E E
Low Battery	Internal Batt
Condenser Fault	Condenser Filter Blo

#### Model: NU-99100J





Alarm Indicator	
High Temperature	Inte
Low Temperature	Inte
High Ambient Temperature	
Power Failure	
Door Ajar	Door Openin
Sensor Error	
Low Battery	Internal B
Condenser Fault	Condenser Filter
	High Temperature Low Temperature High Ambient Temperature Power Failure Door Ajar Sensor Error Low Battery

Alarm Indicator	Event	Indicator Color*
High/Low Temperature	Internal Temperature Exceeds Setpoint Parameters	Red
Power Failure	Loss of Power to Unit	Red
Door Ajar	Door Opening Exceeds Setpoint Parameters	Red
High Ambient Temperature	Ambient Temperature Exceeds 35°C	Yellow
Heat Exchanger Fault	Heat Exchanger Blocked or Exceeds 35°C	Yellow
Sensor Fault	Main Temperature Reading Sensor Failure	Yellow
Battery Fault	Internal Battery is Low on Power / Battery Switch is Off	Yellow
Condenser Fault	Condenser Filter Blocked or Overheating	Yellow
Backup System Fault	Unit Loses Connection to Backup System	Yellow

\*Red indicates Alarm Types affect internal temperature of ULT. Yellow indicates Alarm Types do not affect internal temperature.



## **ALARM CODES**

Event
ernal Temperature Ventures Outside Setpoint Parameters
Ambient Temperature Exceeds 35°C
Loss of Power to Unit
or Opening Exceeds Setpoint (Adjustable 0 to 20 Minutes)
E10 - Temperature Control Sensor Failure E11 - Ambient Sensor Failure E12 - Condenser Sensor Failure
rnal Battery is Close to End of Life / Battery Switch is Off
Filter Blocked or Overheating Due to High Ambient Temperature

Event

ernal Temperature Above Setpoint Parameters

ernal Temperature Below Setpoint Parameters

Ambient Temperature Exceeds 35°C

Loss of Power to Unit

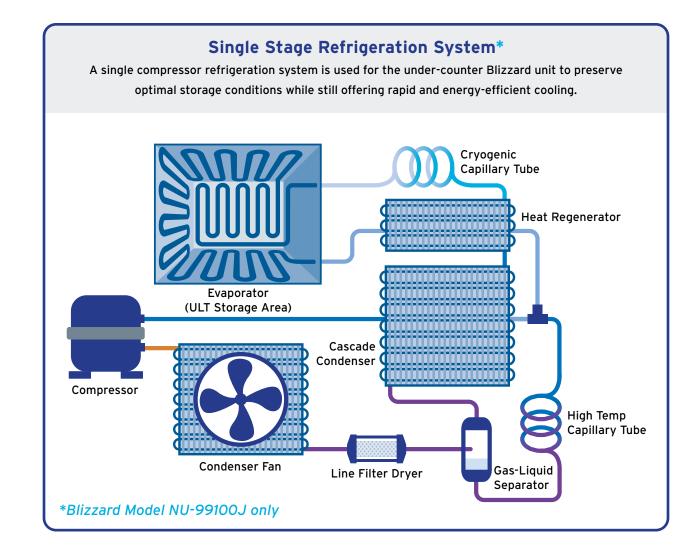
ng Exceeds Set Time Limit (Adjustable 0 to 20 Minutes)

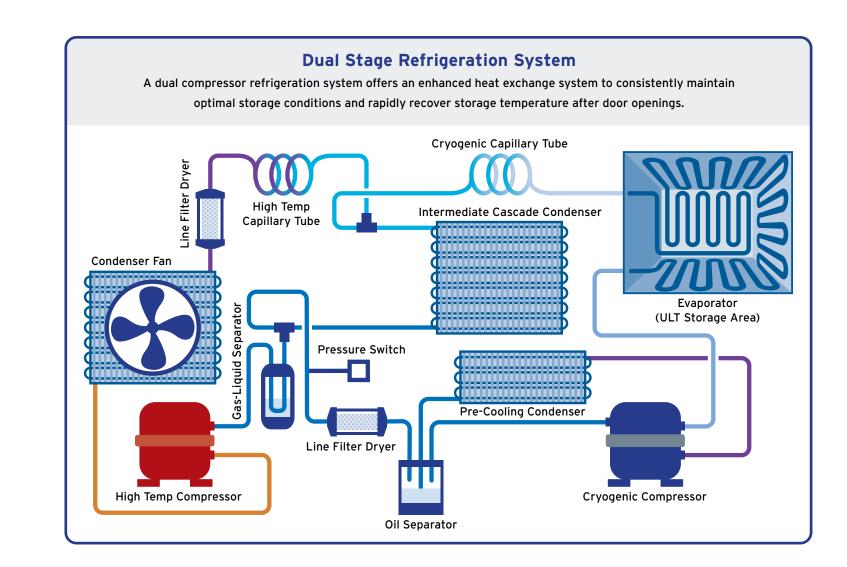
- Ambient Sensor Failure EO -
- E1 -Condenser Sensor Failure
- E2 Temperature Control Sensor Failure
- E3 Heat Exchanger Sensor Failure
- E4 Heat Exchanger Temperature Failure

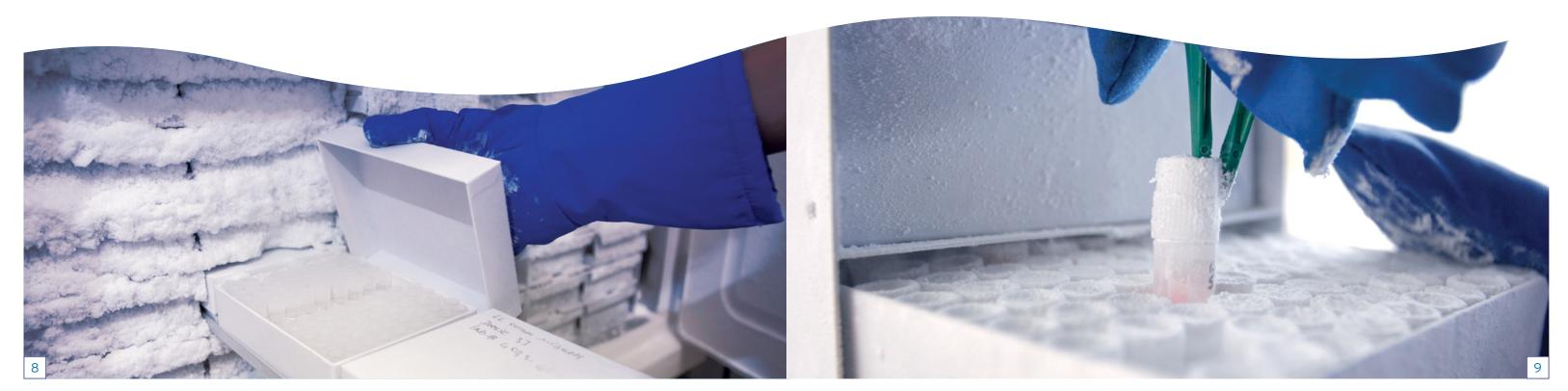
Battery is Close to End of Life / Battery Switch is Off

Blocked or Overheating Due to High Ambient Temperature

## **ULT FREEZER CONSTRUCTION**







## **NU-99100J UNDER-COUNTER**

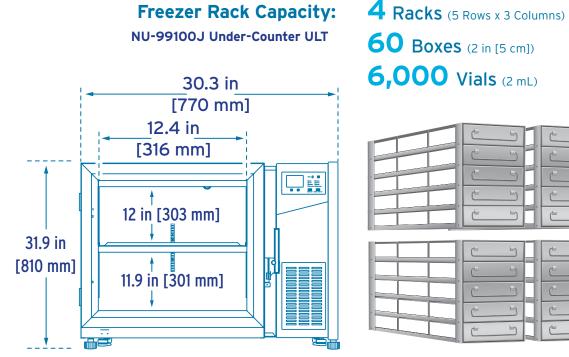
Capacity: 3.5 ft<sup>3</sup> / 100 L

The Blizzard HC (Hydrocarbon) -86°C Under-Counter Ultralow Mini-Freezer features reliable performance for the storage of stem cells, blood & tissue samples, and vaccine vials while occupying the smallest space among our ultralow freezers. The NU-99100J also fits under standard counters, which is ideal for small pharmacies and labs with limited floorspace available for cold-storage.



Blizzard NU-99100J Specifications		
Configuration	Under-Counter	
Storage Capacity	3.5 ft <sup>3</sup> [100 L]	
Temperature Range	-40°C to -86°C	
Certifications	UL listed, CE	
Interior Dimensions	13 x 18.9 x 24.8 in	
(W x D x H)	[330 x 481 x 630 mm]	
Exterior Dimensions (W x D x H)	30.3 x 26 x 31.9 in [770 x 660 x 810 mm]	
Net Weight	238 lbs [108 kg]	
Temperature Uniformity	±5°C	
Temperature Accuracy	±1°C	
Cool Down Time (25°C Ambient to -80°C)	310 Minutes	
Warm Up Time (-80°C to -50°C)	120 Minutes	
1 min Door Open Recovery Time (25°C Ambient; -75°C Setpoint)	100 Minutes	
Noise Level	Up to 47 dba	
Electrical*	GA = 120 V / 60 Hz / 680 W E = 230 V / 50 Hz / 680 W	
Power Consumption	5.5 kWh/day	
Insulation	VIP + High Density Polyurethane Foam	
Door Seal	Outer: Quadruple Silicone Gasket	
Door Seal	Inner: No Seal	
Number of Inner Doors 2 Stainless Steel w/ Magnetic Latch		
	1 Adjustable Stainless Steel Shelf	
Shelf Info (W x D)	12.4 x 16.7 in [316 x 424 mm]	
	Max Weight: 30 lbs [13.6 kg]	
Casters	4 One-Direction Casters w/ 2 Front Leg Levelers	
Exterior Material	Zinc-Coated Steel w/ Matte Finish	
Interior Material	Zinc-Coated Steel	
Enclosure Thickness	2.75 in [70 mm]	
Door Thickness	Outer: 3.5 in [90 mm]	
	Inner: 0.1 in [3 mm]	
Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled	
Refrigeration System Type	Air Cooling	
Compressor Type / Brand / Number	Hermetic Reciprocating / SECOP / 1	
Compressor Capacity	950 W	
Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment	
Defrost Method	Manual	
Refrigerant Charge / Flammable	R600A + R1150 + R50 Blend / Flammable	
Controller Type	Microprocessor Control, LED Display, USB Data Export	
Setpoint Security	Yes	
Remote Data Terminals Remote Alarm + RS485 Ports		
Power Cord Length	8.2 ft [2.5 m]	

\*Note: Add letter suffix to model number to indicate electrical specifications. (ex. NU-99100JE = 230V / 50Hz / 680W)



Unit Depth: 26 in [660 mm] Shelf Depth: 16.7 in [424 mm]



Ċ	5	Ċ	5
Ċ	5	Ċ	5
Ċ	5	Ċ	Ъ
Ċ	5	Ċ	5
Ċ	5	Ċ	5

**Electrical:** 115V / 60Hz 230V / 50Hz



\*Contact your local NuAire distributor for international warranty details.

## NU-99338J UPRIGHT

Capacity: 11.9 ft<sup>3</sup> / 338 L

The Blizzard HC NU-99338J -86°C Upright Ultralow Freezer features reliable performance ideal for storing stem cells, blood & tissue samples, and vaccine vials. Multiple, polyurethane foam insulated interior doors allow easy access with minimal temperature loss to racks set on the stainless-steel shelves inside. The NU-99338J has a storage capacity of 11.9 ft<sup>3</sup> [338 L] and accommodates up to six 4x4, plus six 5x4 ULT freezer racks (216 total 2" [5 cm] high boxes).

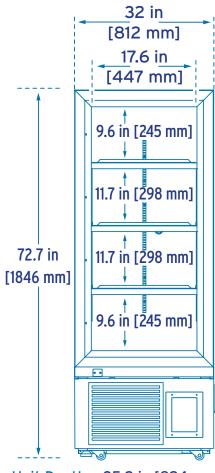


	Blizzard NU-993	38J Specifications
	Configuration	Upright
	Storage Capacity	11.9 ft <sup>3</sup> [338 L]
	Temperature Range	-40°C to -86°C
	Certifications	UL listed, CE
	Interior Dimensions (W x D x H)	18.3 x 24.8 x 45.9 in [465 x 630 x 1165 mm]
	Exterior Dimensions (W x D x H)	32 x 35.2 x 72.7 in [812 x 894 x 1846 mm]
	Net Weight	525 lbs [238 kg]
1	Temperature Uniformity	±5°C
	Temperature Accuracy	±1°C
(2	Cool Down Time 25°C Ambient to -80°C)	195 Minutes
Warn	n Up Time (-80°C to -50°C)	200 Minutes
	n Door Open Recovery Time C Ambient; -75°C Setpoint)	25 Minutes
	Noise Level	Up to 50 dba
	Electrical*	GA = 115 V / 60 Hz / 1,000 W G = 220 V / 60 Hz / 1,000 W E = 230 V / 50 Hz / 650 W
	Power Consumption	8 kWh/day
	Insulation	VIP + CFC Free Foaming Agent
		Outer: Quadruple Silicone Gasket
Door Seal		Inner: Single Silicone Gasket
	Number of Inner Doors	2 Individual Latching Doors
		3 Adjustable Stainless Steel Shelves
	Shelf Info (W x D)	17.6 x 23.4 in [447 x 595 mm]
	(	Max Weight: 110 lbs [50 kg]
	Casters	4 All-Direction Casters w/ 2 Front Leg Levelers
	Exterior Material	Zinc-Coated Steel w/ Matte Finish
	Interior Material	Zinc-Coated Steel
	Enclosure Thickness	5.1 in [130 mm]
	Door Thickness	Outer: 3.5 in [90 mm]
		Inner: 1.4 in [35 mm]
	Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled
Re	efrigeration System Type	Direct Cooling
Compr	essor Type / Brand / Number	Hermetic Reciprocating / SECOP / 2
	Compressor Capacity	950 W
	Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment
	Defrost Method	Manual
Refri	igerant Charge / Flammable	R290 + R170 / Flammable
Refri		R290 + R170 / Flammable Microprocessor Control, LED Display, USB Data Export
Refri	igerant Charge / Flammable	Microprocessor Control, LED Display,
	igerant Charge / Flammable Controller Type	Microprocessor Control, LED Display, USB Data Export

<sup>\*</sup>Note: Add letter suffix to model number to indicate electrical specifications. (ex. NU-99338JE = 230V / 50Hz / 650W)

## Freezer Rack Capacity:

NU-99338J Upright ULT



Unit Depth: 35.2 in [894 mm] Shelf Depth: 23.4 in [595 mm]

Electrical:	115V / 60Hz
	220V / 60Hz
	230V / 50Hz

2	WARRANTY
	PARTS + LABOR
YEAR	<b>United States &amp; Canada</b>

\*Contact your local NuAire distributor for international warranty details.

12\* Racks (<sup>6x 4 Rows / 4 Columns</sup>) 216 Boxes (2 in [5 cm]) 21,600 Vials (2 mL)

\*Due to the unique two inner door design on the NU-99338J model, 6 sets of 5x5 freezer racking and 6 sets of the 4x5 freezer racking can be used to maximize storage capacity.





## NU-99578J UPRIGHT

Capacity: 20.4 ft<sup>3</sup> / 578 L

The Blizzard HC NU-99578J -86°C Upright Ultralow Freezer features a storage capacity of 20.4 ft<sup>3</sup> [578 L] and reliable performance for the storage of stem cells, blood & tissue samples, and vaccine vials. The NU-99578J model accommodates up to sixteen 5x5 ULT freezer racks (400 total 2" [5 cm] high boxes). The dual compressor refrigeration system employs an enhanced heat exchange apparatus that consistently maintains optimal storage conditions and rapidly recovers internal temperature after door openings.

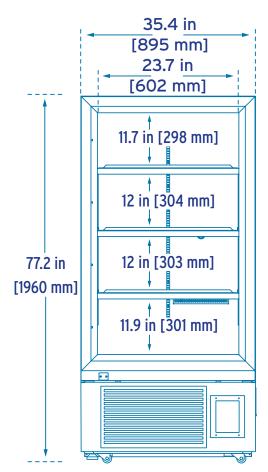


Blizzard NU-99578J Specifications				
Configuration	Upright			
Storage Capacity	20.4 ft <sup>3</sup> [578 L]			
Temperature Range	-40°C to -86°C			
Certifications	UL listed, CE			
Interior Dimensions	24.4 x 28.2 x 51.6 in			
(W x D x H)	[620 x 716 x 1310 mm]			
Exterior Dimensions (W x D x H)	35.4 x 38.6 x 77.2 in [895 x 980 x 1960 mm]			
Net Weight	661 lbs [300 kg]			
Temperature Uniformity	±5°C			
Temperature Accuracy	±1°C			
Cool Down Time (25°C Ambient to -80°C)	270 Minutes			
Warm Up Time (-80°C to -50°C)	260 Minutes			
1 min Door Open Recovery Time (25°C Ambient; -75°C Setpoint)	30 Minutes			
Noise Level	Up to 50 dba			
Electrical*	GA = 115 V / 60 Hz / 1,000 W G = 220 V / 60 Hz / 1,000 W E = 230 V / 50 Hz / 750 W			
Power Consumption	8.5 kWh/day			
Insulation	VIP + CFC Free Foaming Agent			
Deer Ceel	Outer: Quadruple Silicone Gasket			
Door Seal	Inner: Single Silicone Gasket			
Number of Inner Doors	4 Individual Latching Doors			
	3 Adjustable Stainless Steel Shelves			
Shelf Info (W x D)	23.7 x 26.8 in [602 x 680 mm]			
	Max Weight: 110 lbs [50 kg]			
Casters	4 All-Direction Casters w/ 2 Front Leg Levelers			
Exterior Material	Zinc-Coated Steel w/ Matte Finish			
Interior Material	Zinc-Coated Steel			
Enclosure Thickness	3.5 in [90 mm]			
/	Outer: 3.5 in [90 mm]			
Door Thickness	Inner: 1.4 in [35 mm]			
Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled			
Refrigeration System Type	Direct Cooling			
Compressor Type / Brand / Number	Hermetic Reciprocating / SECOP / 2			
Compressor Capacity	950 W			
Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment			
Defrost Method	Manual			
Refrigerant Charge / Flammable	R290 + R170 / Flammable			
Controller Type	Microprocessor Control, LED Display, USB Data Export			
Setpoint Security	Yes			
Remote Data Terminals	Remote Alarm + RS232 / RS485 Ports			

<sup>\*</sup>Note: Add letter suffix to model number to indicate electrical specifications. (ex. NU-99578JE = 230V / 50Hz / 750W)

### Freezer Rack Capacity:

NU-99578J Upright ULT



Unit Depth: 38.6 in [980 mm] Shelf Depth: 26.8 in [680 mm]

Electrical:	115V / 60Hz
	220V / 60Hz
	230V / 50Hz



\*Contact your local NuAire distributor for international warranty details.

## 16 Racks (5 Rows x 5 Columns) 400 Boxes (2 in [5 cm]) 40,000 Vials (2 mL)





## NU-99728J UPRIGHT

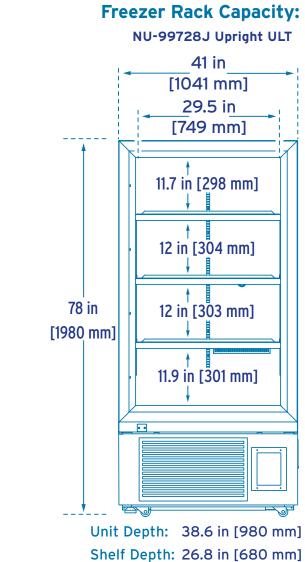
Capacity: 25.7 ft<sup>3</sup> / 728 L

The Blizzard HC NU-99728J -86°C Upright Ultralow Freezer efficiently stores samples by using HC refrigerants and protects them within a stainless steel enclosure. The ULT is insulated with composite VIP and polyurethane foam. The NU-99728J has a storage capacity of 25.7 ft<sup>3</sup> [728 L] and accommodates up to twenty 5x5 ULT freezer racks (500 total 2" [5 cm] high boxes). Operation parameters are displayed on the front electronic control panel in real-time and can be downloaded via the USB port for long term data logging.



Blizzard NU-99728J Specifications				
Configuration	Upright			
Storage Capacity	25.7 ft <sup>3</sup> [728 L]			
Temperature Range	-40°C to -86°C			
Certifications	UL listed, CE			
Interior Dimensions	30.2 x 28.2 x 51.6 in			
(W x D x H)	[766 x 716 x 1310 mm]			
Exterior Dimensions (W x D x H)	41 x 38.6 x 78 in [1041 x 980 x 1980 mm]			
Net Weight	761 lbs [345 kg]			
Temperature Uniformity	±5°C			
Temperature Accuracy	±1°C			
Cool Down Time (25°C Ambient to -80°C)	310 Minutes			
Warm Up Time (-80°C to -50°C)	270 Minutes			
1 min Door Open Recovery Time (25°C Ambient; -75°C Setpoint)	45 Minutes			
Noise Level	Up to 50 dba			
Electrical*	GA = 115 V / 60 Hz / 1,000 W G = 220 V / 60 Hz / 1,000 W E = 230 V / 50 Hz / 1,000 W			
Power Consumption	10.5 kWh/day			
Insulation	VIP + CFC Free Foaming Agent			
	Outer: Quadruple Silicone Gasket			
Door Seal	Inner: Single Silicone Gasket			
Number of Inner Doors	4 Individual Latching Doors			
	3 Adjustable Stainless Steel Shelves			
Shelf Info (W x D)	29.5 x 26.8 in [749 x 680 mm]			
(₩ x D)	Max Weight: 110 lbs [50 kg]			
Casters	4 All-Direction Casters w/ 2 Front Leg Levelers			
Exterior Material	Zinc-Coated Steel w/ Matte Finish			
Interior Material	Zinc-Coated Steel			
Enclosure Thickness	3.5 in [90 mm]			
	Outer: 3.5 in [90 mm]			
Door Thickness	Inner: 1.4 in [35 mm]			
Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled			
Refrigeration System Type	Direct Cooling			
Compressor Type / Brand / Number	Hermetic Reciprocating / SECOP / 2			
Compressor Capacity	950 W			
Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment			
Defrost Method	Manual			
Refrigerant Charge / Flammable				
Controller Type	R290 + R170 / Flammable Microprocessor Control, LED Display,			
	USB Data Export			
Setpoint Security	Yes			
Remote Data Terminals	Remote Alarm + RS232 / RS485 Ports			
Power Cord Length	8.2 ft [2.5 m]			

\*Note: Add letter suffix to model number to indicate electrical specifications. (ex. NU-99728JE = 230V / 50Hz / 1,000W)



Electrical: 115V / 60Hz

220V / 60Hz 230V / 50Hz



\*Contact your local NuAire distributor for international warranty details.

## 20 Racks (5 Rows x 5 Columns) 500 Boxes (2 in [5 cm]) 50,000 Vials (2 mL)



## NU-99729VFT UPRIGHT

Capacity: 25.74 ft<sup>3</sup> / 729 L

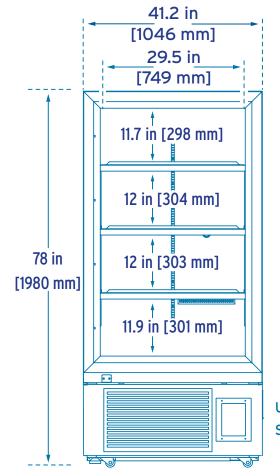
The Blizzard NU-99729VFT (Variable Frequency & Touchscreen) -86°C Upright Ultralow Freezer features an intuitive LCD touchscreen control center that can catalogue ULT inventory, allows user account creation, graphs past freezer performance, and produces visual/audible alarms. Because this model utilizes a variable frequency motor, it can be operated on a wide array of electrical outputs. The ultra-silent compressor motor is also Energy Star Certified for US and Canada.

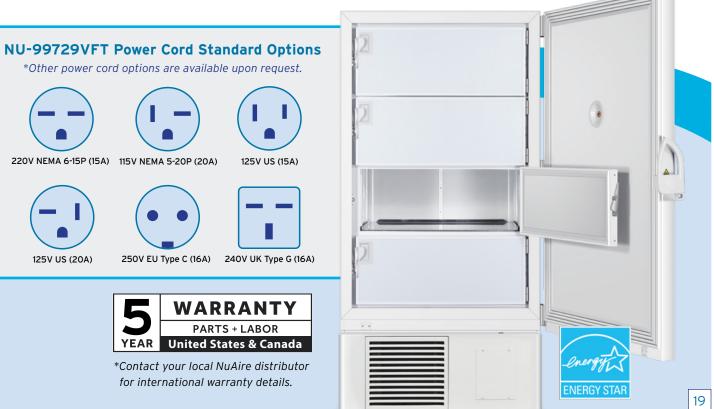


Blizzard NU-99729	<b>VFT Specifications</b>	
Configuration	Upright	
Storage Capacity	25.74 ft <sup>3</sup> [729 L]	
Temperature Range	-40°C to -86°C	
Certifications	UL listed, CE, Energy Star	
Interior Dimensions	30.2 x 28.2 x 51.6 in	
(W x D x H)	[766 x 716 x 1310 mm]	
Exterior Dimensions (W x D x H)	41.2 x 38.9 x 78 in [1046 x 998 x 1980 mm]	
Net Weight	771 lbs [350 kg]	
Temperature Uniformity	±3°C	
Temperature Accuracy	±1°C	
Cool Down Time (25°C Ambient to -80°C)	310 Minutes	
Warm Up Time (-80°C to -50°C)	300 Minutes	
1 min Door Open Recovery Time (25°C Ambient; -75°C Setpoint)	45 Minutes	
Noise Level	Up to 43.5 dba	
Electrical	100-230 V / 50-60 Hz / 15-20 A / 1,100 W	
Power Consumption	8 kWh/day	
Insulation	VIP + CFC Free Foaming Agent	
	Outer: Quadruple Silicone Gasket	
Door Seal	Inner: Single Silicone Gasket	
Number of Inner Doors	4 Individual Latching Doors	
	3 Adjustable Stainless Steel Shelves	
Shelf Info (W x D)	29.5 x 26.8 in [749 x 680 mm]	
(1 4 2)	Max Weight: 110 lbs [50 kg]	
Casters	4 All-Direction Casters w/ 2 Front Leg Levelers	
Exterior Material	Zinc-Coated Steel w/ Matte Finish	
Interior Material	Zinc-Coated Steel	
Enclosure Thickness	3.5 in [90 mm]	
Door Thickness	Outer: 3.5 in [90 mm]	
Door Inickness	Inner: 1.4 in [35 mm]	
Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled	
Refrigeration System Type	Direct Cooling	
Compressor Type / Brand / Number	Fully Closed / NLV12.6CN-SECOP / 2	
Compressor Capacity	950 W	
Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment	
Defrost Method	Manual	
Refrigerant Charge / Flammable	R290 + R170 / Flammable	
Controller Type	Microprocessor Control, LCD Touch- screen Display, USB Data Export	
Setpoint Security	Yes	
Remote Data Terminals	Remote Alarm + RS485 Ports	
	8.2 ft [2.5 m]	



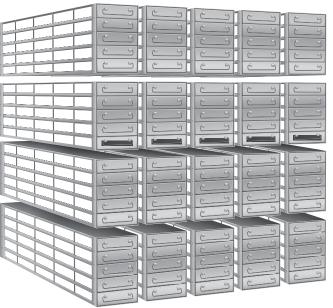
NU-99729VFT Upright ULT







## 20 Racks (5 Rows x 5 Columns) **500** Boxes (2 in [5 cm]) 50,000 Vials (2 mL)



## Unit Depth: 38.9 in [988 mm] Shelf Depth: 26.8 in [680 mm]

**Electrical:** 100-230 V 50-60 Hz 15-20 A

## NU-99828J UPRIGHT

Capacity: 29.2 ft<sup>3</sup> / 828 L

The Blizzard HC NU-99828J -86°C Upright Ultralow Freezer features the largest storage capacity among NuAire Blizzard models of 29.2 ft<sup>3</sup> [828 L] and accommodates up to twenty-four 5x5 ULT freezer racks (600 total 2" [5 cm] high boxes). The Pressure Equalization Port, located on the interior of the coated steel outer door, helps prevent icing and allows the freezer door to be easily opened again shortly after adding or removing samples.

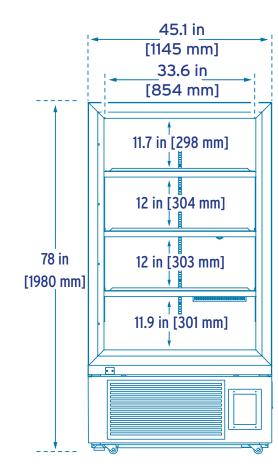


Blizzard NU-99828J Specifications				
Configuration	Upright			
Storage Capacity	29.2 ft <sup>3</sup> [828 L]			
Temperature Range	-40°C to -86°C			
Certifications	UL listed, CE			
Interior Dimensions	34.3 x 28.2 x 51.6 in			
(W x D x H) Exterior Dimensions (W x D x H)	[870 x 716 x 1310 mm] 45.1 x 38.6 x 78 in [1145 x 980 x 1980 mm]			
Net Weight	836 lbs [380 kg]			
Temperature Uniformity	±4°C			
Temperature Accuracy	±1°C			
Cool Down Time (25°C Ambient to -80°C)	320 Minutes			
Warm Up Time (-80°C to -50°C)	300 Minutes			
1 min Door Open Recovery Time (25°C Ambient; -75°C Setpoint)	50 Minutes			
Noise Level	Up to 50 dba			
Electrical*	G = 220 V / 60 Hz / 1,000 W E = 230 V / 50 Hz / 1,000 W			
Power Consumption	12 kWh/day			
Insulation	VIP + CFC Free Foaming Agent			
	Outer: Quadruple Silicone Gasket			
Door Seal	Inner: Single Silicone Gasket			
Number of Inner Doors	4 Individual Latching Doors			
	3 Adjustable Stainless Steel Shelves			
Shelf Info	33.6 x 26.8 in [854 x 680 mm]			
(W x D)	Max Weight: 110 lbs [50 kg]			
Casters	4 All-Direction Casters w/ 2 Front Leg Levelers			
Exterior Material	Zinc-Coated Steel w/ Matte Finish			
Interior Material	Zinc-Coated Steel			
Enclosure Thickness	3.5 in [90 mm]			
	Outer: 3.5 in [90 mm]			
Door Thickness	Inner: 1.4 in [35 mm]			
Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled			
Refrigeration System Type	Direct Cooling			
Compressor Type / Brand / Number	Hermetic Reciprocating / SECOP / 2			
Compressor Capacity	950 W			
Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment			
Defrost Method	Manual			
Refrigerant Charge / Flammable	R290 + R170 / Flammable			
<b>.</b>	Microprocessor Control, LED Display, USB Data Export			
Controller Type	Yes			
Controller Type Setpoint Security	Yes			
	Yes Remote Alarm + RS232 / RS485 Ports			

\*Note: Add letter suffix to model number to indicate electrical specifications. (ex. NU-99828JE = 230V / 50Hz / 1,000W)



NU-99828J Upright ULT



Unit Depth: 38.6 in [980 mm] Shelf Depth: 26.8 in [680 mm]

Electrical: 220V / 60Hz 230V / 50Hz



\*Contact your local NuAire distributor for international warranty details.

20

## 24 Racks (5 Rows x 5 Columns) 600 Boxes (2 in [5 cm]) 60,000 Vials (2 mL)



## **NU-99420J CHEST** Capacity: 14.8 ft<sup>3</sup> / 420 L



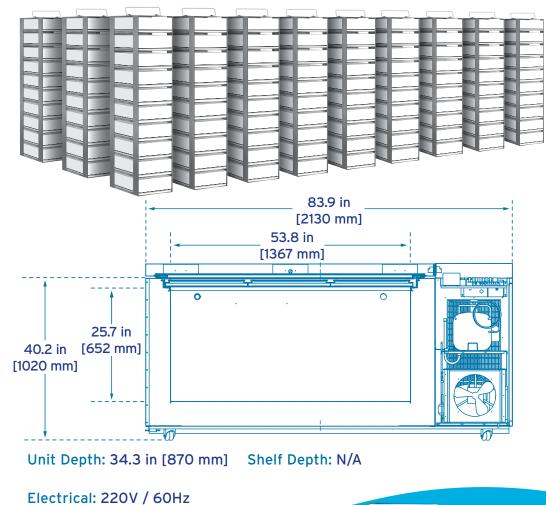
#### The Blizzard HC NU-99420J -86°C Chest Ultralow

Freezer features a storage capacity of 14.8 ft<sup>3</sup> [420 L] and reliable performance for the storage of stem cells, blood & tissue samples, and vaccine vials in labs with limited vertical space. The chest ULT configuration accommodates up to twenty-seven 10x1 ULT freezer racks (270 total 2" [5 cm] high boxes).

Blizzard NU-99420J Specifications				
Configuration	Chest	Number of Inner Doors	3 Individual Doors	
Storage Capacity	14.8 ft <sup>3</sup> [420 L]	Casters	4 All-Direction Casters w/ 2 Front Leg Levelers	
Temperature Range	-40°C to -86°C	Exterior Material	Zinc-Coated Steel w/ Matte Finish	
Certifications	UL listed, CE	Interior Material	Zinc-Coated Steel	
Interior Dimensions (W x D x H)	53.8 x 18.2 x 25.7 in [1367 x 462 x 652 mm]	Enclosure Thickness	5.5 in [140 mm]	
Exterior Dimensions (W x D x H)	83.9 x 34.3 x 40.2 in [2130 x 870 x 1020 mm]	Door Thickness	Outer: 3.94 in [100 mm]	
Net Weight	682 lbs [310 kg]		Inner: 1.57 in [40 mm]	
Temperature Uniformity	±5°C	Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled	
Temperature Accuracy	±1°C	Refrigeration System Type	Direct Cooling	
Cool Down Time (25°C Ambient to -80°C)	240 Minutes	Compressor Type / Brand / Number	Hermetic Reciprocating / SECOP / 2	
Warm Up Time (-80°C to -50°C)	150 Minutes	Compressor Capacity	950 W	
1 min Door Open Recovery Time (25°C Ambient; -75°C Setpoint)	30 Minutes	Evaporator Type	Cold Wall w/ Enhanced Heat Transfer Treatment	
Noise Level	Up to 50 dba	Defrost Method	Manual	
Insulation	VIP + CFC Free Foaming Agent	Setpoint Security	Yes	
Electrical*	G = 220 V / 60 Hz / 1,000 W E = 230 V / 50 Hz / 1,000 W	Refrigerant Charge / Flammable	R290 + R170 / Flammable	
Power Consumption	12 kWh/day	Controller Type	Microprocessor Control, LED Display, USB Data Export	
Deer Seel	Outer: Single Silicone Gasket	Remote Data Terminals	Remote Alarm + RS232 / RS485 Ports	
Door Seal	No Gasket Seal	Power Cord Length	8.2 ft [2.5 m]	

## Freezer Rack Capacity:

NU-99420J Chest ULT



230V / 50Hz



\*Contact your local NuAire distributor for international warranty details.

\*Note: Add letter suffix to model number to indicate electrical specifications. (ex. NU-99420JE = 230V / 50Hz / 1,000W)

## 27 Racks (10 Rows x 1 Column) **270** Boxes (2 in [5 cm]) 27,000 Vials (2 mL)



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.... ....

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In every NuAire product you'll find brilliant yet practical needs. We routinely reshape our cabinet's inner and outer design with keen attention to detail in every phase of the dimensions to neatly fit within any space inside your lab. fabrication and assembly process; you'll always receive We often add computer arms, monitors, and microscope thoroughly tested equipment at outstanding value, and windows into our standard cabinets, as well. Another with dependable customer service guaranteed. These are common customization involves installing an IV bar and the fundamentals for NuAire's international reputation smooth interiors for efficient and ergonomic pharmacy and the reasoning behind our universal recognition as the compounding. Regardless of what type of modification world's finest. Despite our engineers' finely honed genius, your lab and research may require, NuAire is capable of your lab may require something that has never been done meeting any esoteric laboratory need and provide you before. Luckily, our custom sales department has nearly with excellent troubleshooting support for years to come, half a century's worth of experience in crafting all sorts of ensuring your custom equipment continues to perform at new and innovative lab equipment to meet your specific peak levels for the entirety of its lifespan.

### If your lab requires a unique solution, give us a call; we love a challenge.





This Class I BSC was created at a nominal width of 8' [2.4 m], with clear polypropylene sidewalls, and a custom mounted IV bar.



A custom model NU-240 was designed to offer a broader and taller work zone to accommodate a single workflow process involving microscopes. A customized isolation table was added to eliminate vibration in the work surface. The extended work surface allows a technician to perform several protocols without having to leave the work zone.



## -86°C ULTRALOW TEMPERATURE FREEZERS



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