

## SPECIFICATIONS

Model	NU-99828J
Interior Volume	828 L / 29.2 ft <sup>3</sup>
Exterior Dimensions (W x D x H)	1145 x 980 x 1980 mm / 45.1 x 38.6 x 78.0 in
Interior Dimensions (W x D x H)	870 x 716 x 1310 mm / 34.3 x 28.2 x 51.6 in
Temperature Range	-40°C to -86°C
Net Weight	380 kg / 836 lbs
Noise (dB(A))	50

## PERFORMANCE

Temperature Uniformity	± 5°C
Temperature Accuracy	± 1°C
Cool Down Time (25°C ambient to -80°C)	320 Minutes
Warm Up Time (25°C ambient -80°C to -50°C)	300 Minutes
1 Min Door Open Recovery Time (25°C ambient running temp -75°C)	35 Minutes

## CONSTRUCTION

Insulation	VIP+CFC Free Foaming Agent
Exterior Door Seal	Quadruple Seal on the Outside Door <b>[A]</b>
Interior Door Seal	Single Seal on all Interior Doors <b>[B]</b>
Shelves/Capacity/Dims/Material	3 stainless steel adjustable shelves <b>[C]</b> 856 mm (W) x 677 mm (D) 33.7 in. (W) x 26.6 in. (D) Max capacity per shelf: 108 kg / 238.1 lbs
Casters	All-direction caster with fixing stand
Exterior Material	Color Coating Cold Plate Steel
Interior Material	Color Coating Electric Zinc Steel Plate
Door Thickness	90mm / 3.5 in.
Cabinet Thickness	90mm / 3.5 in.
Inner Doors	Four <b>[D]</b>
Condenser Type	Enhanced Micro-Channel & Forced-Air Cooled
Fan Brand	EBM
Back Up Battery For Alarm Functions	High/low temperature, power failure, door open, sensor failure, high ambient temperature, hot condenser and low battery alarms





-86°C ULT FREEZER | NU-99828J

-86 ULTRA-LOW TEMPERATURE FREEZERS

### REFRIGERATION

Refrigeration System Type	Direct cooling
Compressor Type/Brand/Number	Hermetic Reciprocating Type / SECOP / 2
Compressor Capacity (W)	950
Evaporator Type	Cold Wall With Enhanced Heat Transfer Treatment
Defrost Method	Manual
Refrigerant Charge/Flammable	R290 in 1st Stage / R290 + R170 Mix in 2nd Stage / Flammable

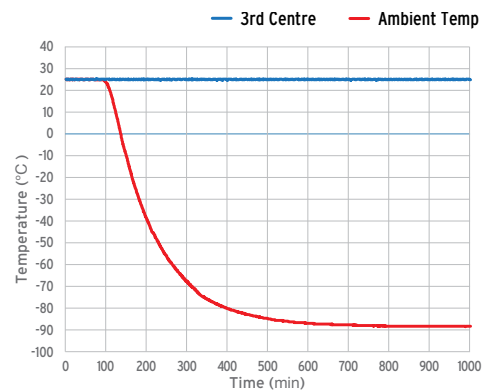
### CONTROLS & SYSTEM FEATURES

Control Panel Location	Eye-level
Power Switch	On-Off with Circuit Breaker
Controller Type	Microprocessor Control, LED Display, USB Data Export
Setpoint Security	Yes
Controller Sensor	PT100
Remote Alarm Terminals	Remote Alarm Port, RS232 / RS485 (Optional)
Adjustable High/Low Temp Alarms	Adjustable
Auto Voltage Safeguard	Included

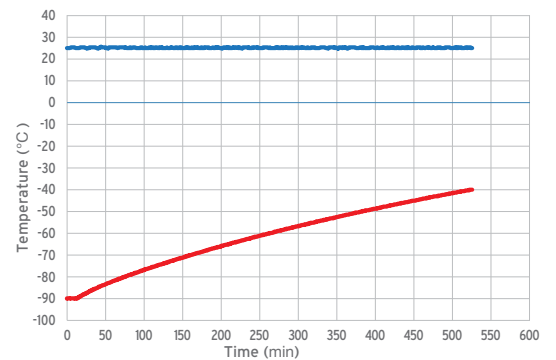
### ENVIRONMENTAL & ELECTRICAL

Electrical Power*	G = 220V / 60Hz
* Add letter suffix to model number to indicate electrical specifications. NU-99728E = 230V / 60Hz	E = 230V / 50Hz
Power (W)	1000
Power Consumption (kW-hr/day)	11.5
Electrical Current (A)	10.0
Building Supply Rating (A)	16
Power Cord Length (m)	2.5
Heat Rejection (BTU/day)	39240
Ambient Temperature	10°C ~ 32°C
Quality Assurance	UL, cUL

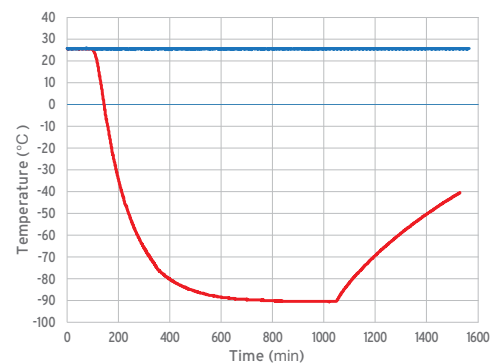
### TYPICAL PERFORMANCE CHARACTERISTICS (25° C AMBIENT)



Temperature Cool Down Curve



Temperature Recovery Curve



Comprehensive Curve





-86°C ULT FREEZER | NU-99828J

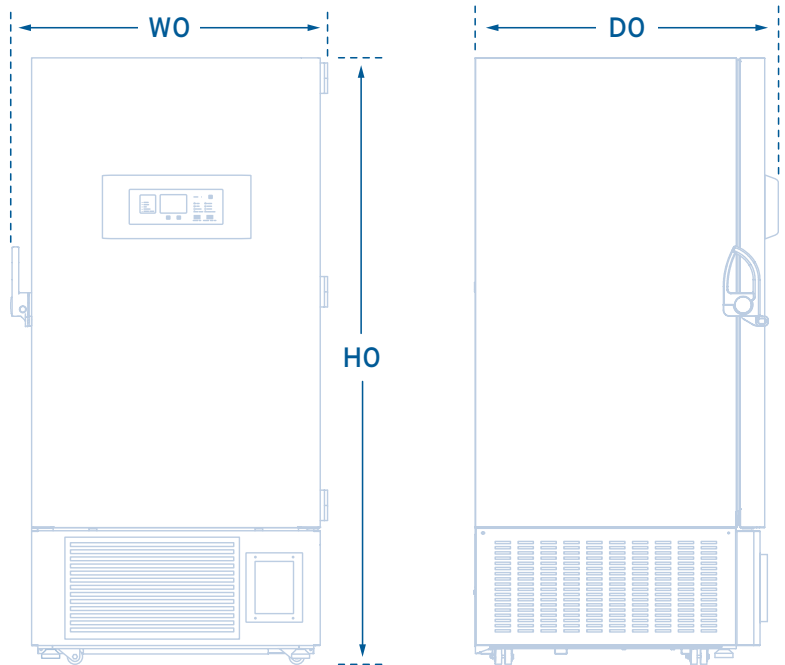
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PRODUCT DIMENSIONS

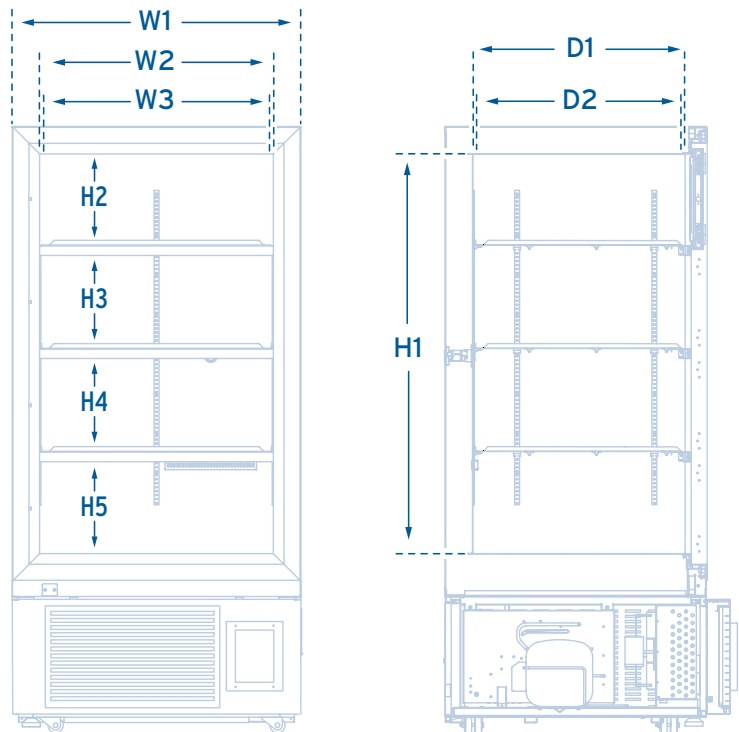
WO	W1	W2	W3	HO
1145 mm	1050 mm	870 mm	850 mm	1980 mm

H1	H2	H3	H4	H5
1310 mm	296 mm	296 mm	296 mm	296 mm

DO	D1	D2
980 mm	710 mm	700 mm

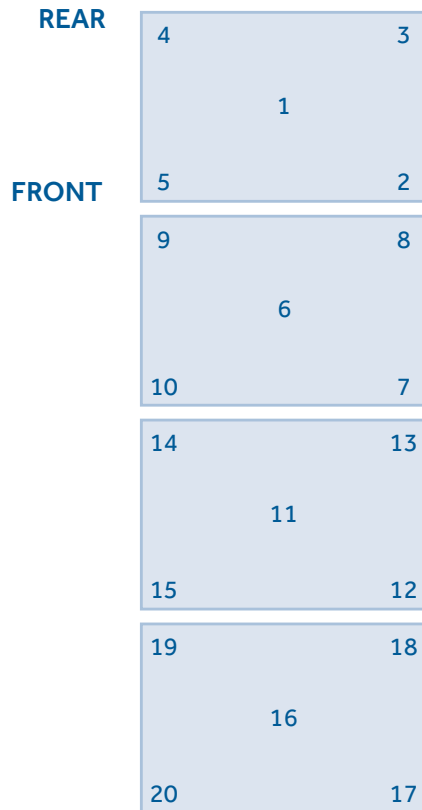


- WO - Total Width
- W1 - Freezer Width
- W2 - Inner Cabinet Width
- W3 - Shelf Width
- DO - Total Depth
- D1 - Inner Cabinet Depth
- D2 - Shelf Depth
- HO - Total Height
- H1 - Inner Cabinet Height
- H2 - 1st Compartment Height
- H3 - 2nd Compartment Height
- H4 - 3rd Compartment Height
- H5 - 4th Compartment Height

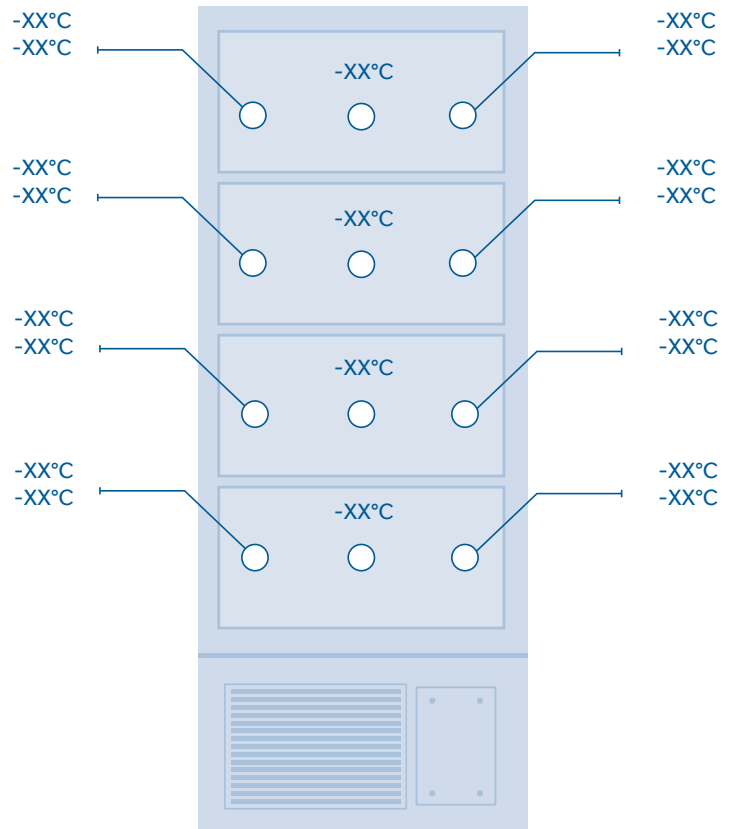


## TYPICAL CABINET TEMPERATURE MAP

### TOP VIEW OF SHELVES



### FRONT VIEW OF SHELVES



°C	1	2	3	4	5	6	7	8	9	10
Max.	-79.5	-79.9	-79.9	-79.7	-79.5	-78.5	-78.2	-78.3	-78.5	-78.2
Min.	-83.4	-83.3	-83.5	-82.6	-82.5	-79.8	-79.5	-79.5	-79.7	-79.5
Avg.	-81.5	-81.6	-81.7	-81.2	-81.0	-79.2	-78.9	-78.9	-79.1	-78.9

°C	11	12	13	14	15	16	17	18	19	20
Max.	-80.6	-80.8	-80.4	-80.5	-80.6	-78.8	-79.5	-79.3	-79.3	-79.2
Min.	-81.9	-82.2	-83.0	-82.3	-82.5	-80.0	-80.9	-80.8	-80.4	-80.3
Avg.	-81.3	-81.5	-81.7	-81.4	-81.6	-79.4	-80.2	-80.1	-79.9	-79.8