



# -86°C ULT Freezer

## ULT-86-29H (220V60Hz)



### GENERAL

Storage Capacity(L/Cu.Ft)		828/29.2
Temperature Range(°C)		-40 ~ -86
Noise (dB(A))		50
Net/Gross Weight (kg)		380/410
Exterior Dimensions(W*D*H)	mm	1145*980*1980
	in	45.1*38.6*78.0
Interior Dimensions (W*D*H)	mm	870*716*1310
	in	34.3*28.2*51.6

### ENVIRONMENTAL & ELECTRICAL DATA

Electrical Power (V/Hz)	220 ~ 240/50	208 ~ 230/60
Power (W)	1000	1100
Power Consumption (kW-hr/day)	12	12
Electrical Current (A)	10	10
Building Supply Rating (A)	16	16
Power Lead Length (m)	2.5	2.5
Heat Rejection (btu/hr)	39240	39240
Ambient Temperature	10°C ~ 32°C	10°C ~ 32°C

### REFRIGERATION CONFIGURATION

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

### CONTROLLER/ELECTRICAL SYSTEM FEATURES

Controller Level	Top
Power Switch	On-Off with Circuit Breaker
Controller Type	Microprocessor Control, Bright 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	/

### CONSTRUCTION

Insulation	VIP+CFC Free Foaming Agent
Exterior Door Seal	Four Seal On The Outside Door Seal Strip
Interior Door Seal	One Seal On The Interior Door Seal Strip
Shelves/Capacity/Dims/Material	3 stainless steel adjustable shelves with dimension 856*677 mm(W*D), max capacity per shelf:108 kg,238.1 lbs
Casters	All-direction caster with fixing stand
Exterior Material	Color Coating Steel Plate
Interior Material	Color Coating Steel Plate
Door Thickness	90mm
Cabinet Thickness	90mm
Inner Door	Four Solid Door
Condenser Type	Enhanced Micro-Channel and Forced-Air Cooled
Fan Brand	EBM
Back Up Battery For Alarm Functions	Support high/low temperature, power failure, door open, sensor failure, high ambient temperature, hot condenser and low battery alarms

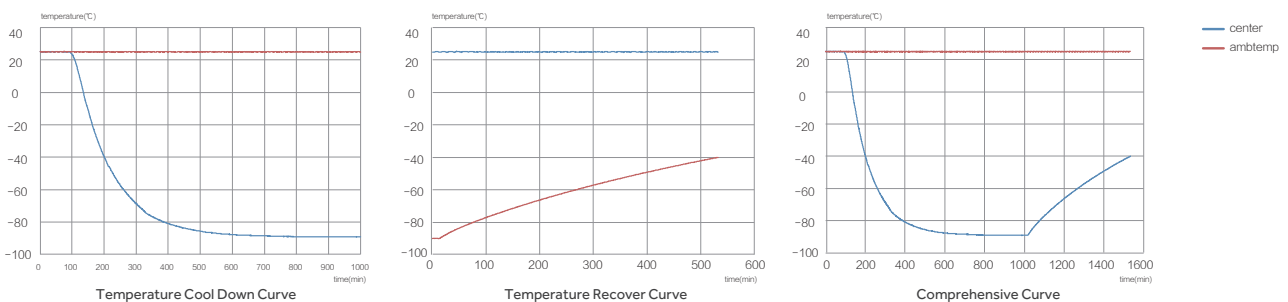
### PERFORMANCE

Temperature Uniformity( °C )	6
Temperature Accuracy( °C )	1
Cool Down Time (25 °C ambient to -80 °C) mins	320
Warm Up Time (25 °C ambient -80 °C to -50 °C) mins	300
1 Min Door Open Recovery Time (ambient 25 °C running temp -75 °C)mins	35

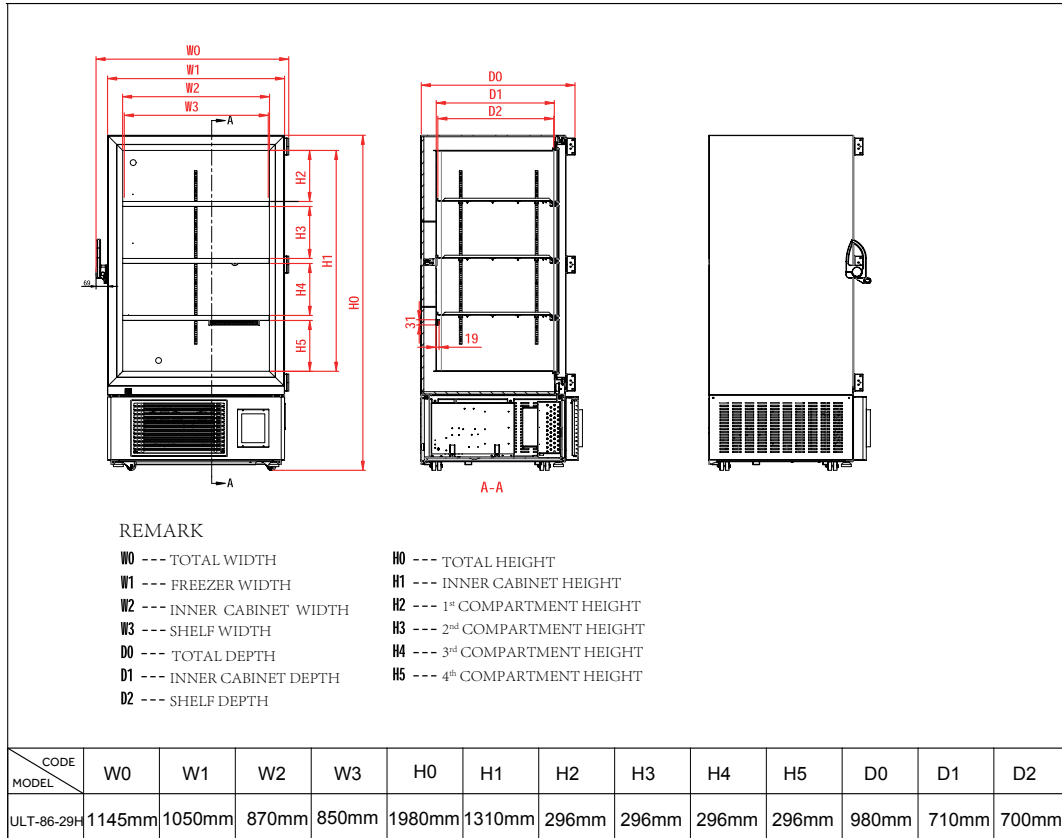
### CERTIFICATE

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### TYPICAL PERFORMANCE CHARACTERISTICS IN 25 °C AMBIENT

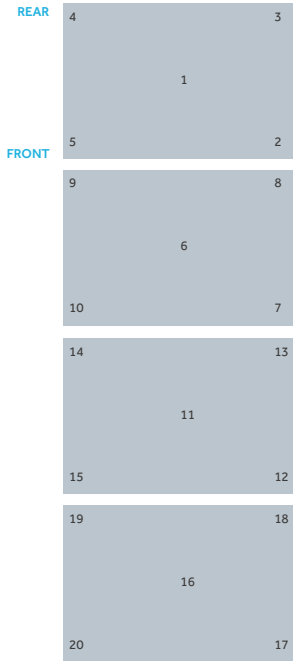


### PRODUCT DIMENSION DRAWINGS

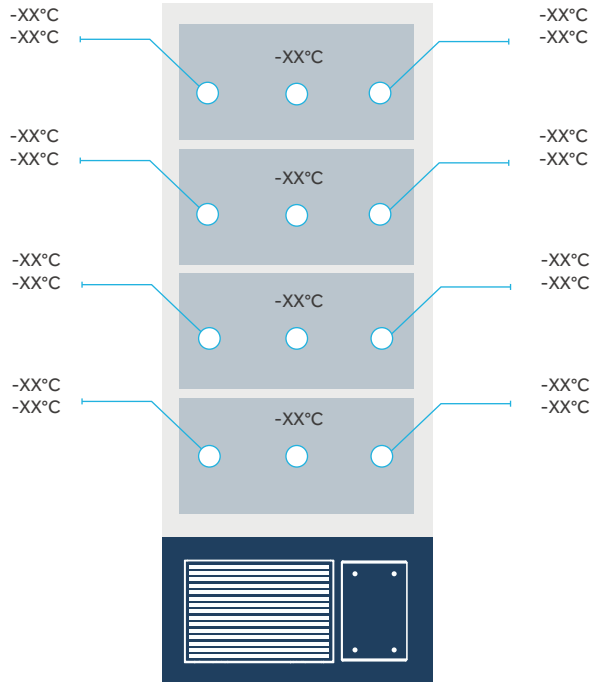


### TYPICAL CABINET TEMPERATURE MAP

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	-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	-82.3	-82.5	-80	-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