

Cascade cooling system

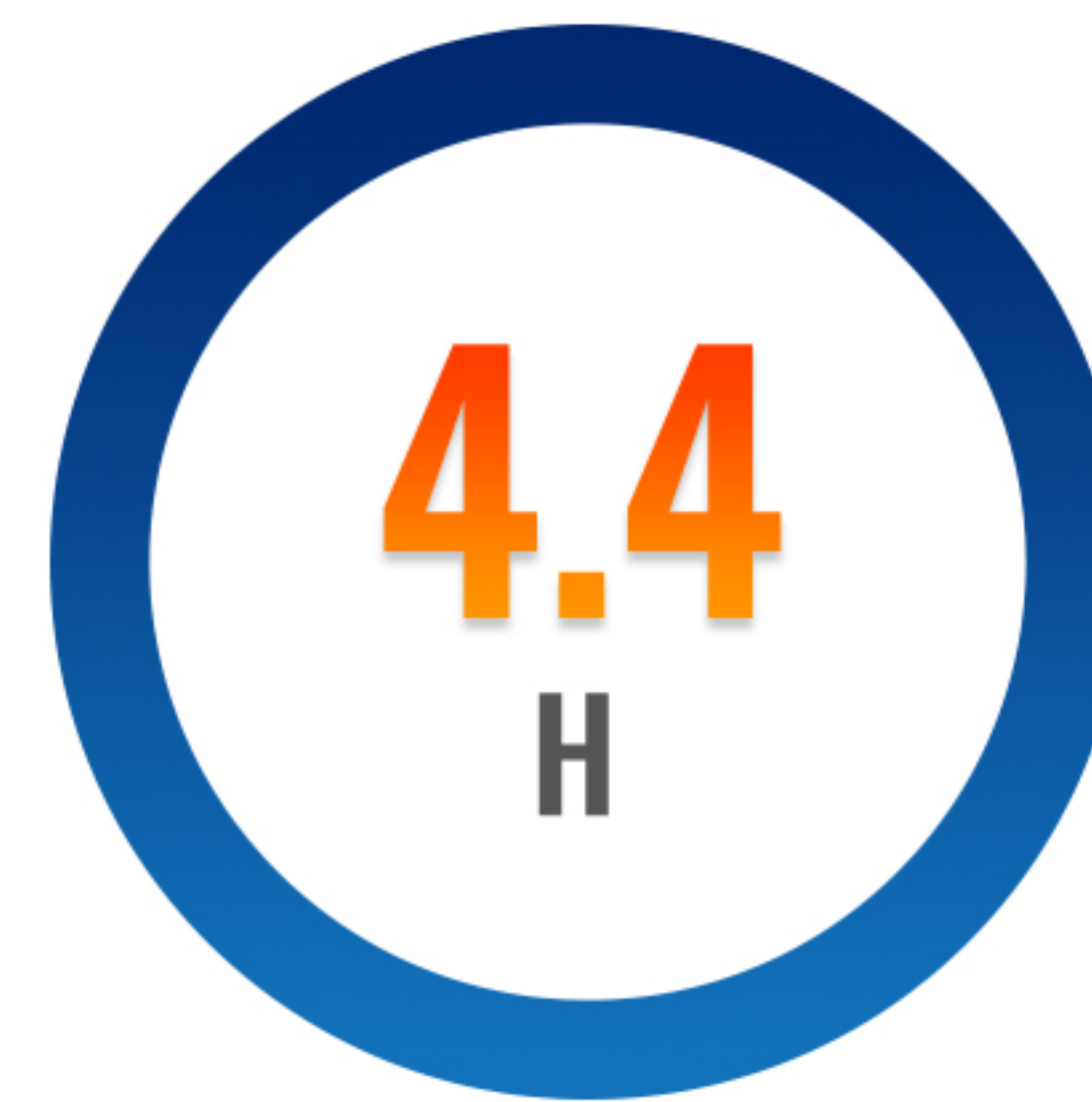
-86°C ULT freezer



M-Cascade system ULT freezer that consists of two stages cascade cooling technology with absolute hydrocarbon refrigerant, which are R290 and R170 as natural gas. The inverter compressors programmed to help energy savings under long period preservation or provide fast temperature recovery while frequently door open to maintain specimens liveness.



Temp. fluctuation



Pulling down to -80°C



Temp. recovery after door opened for 1 min

**Typical freezer data based on internal testing with freezer set point at -80°C and ambient temperature at 22°C.*

DW-HL678S

Features



Cascade system
Two stages cascade system



Touch screen
10" LCD touch screen



Hydrocarbon refrigerant
Environment-friendly natural gas



Inverter technology
Two inverter compressors

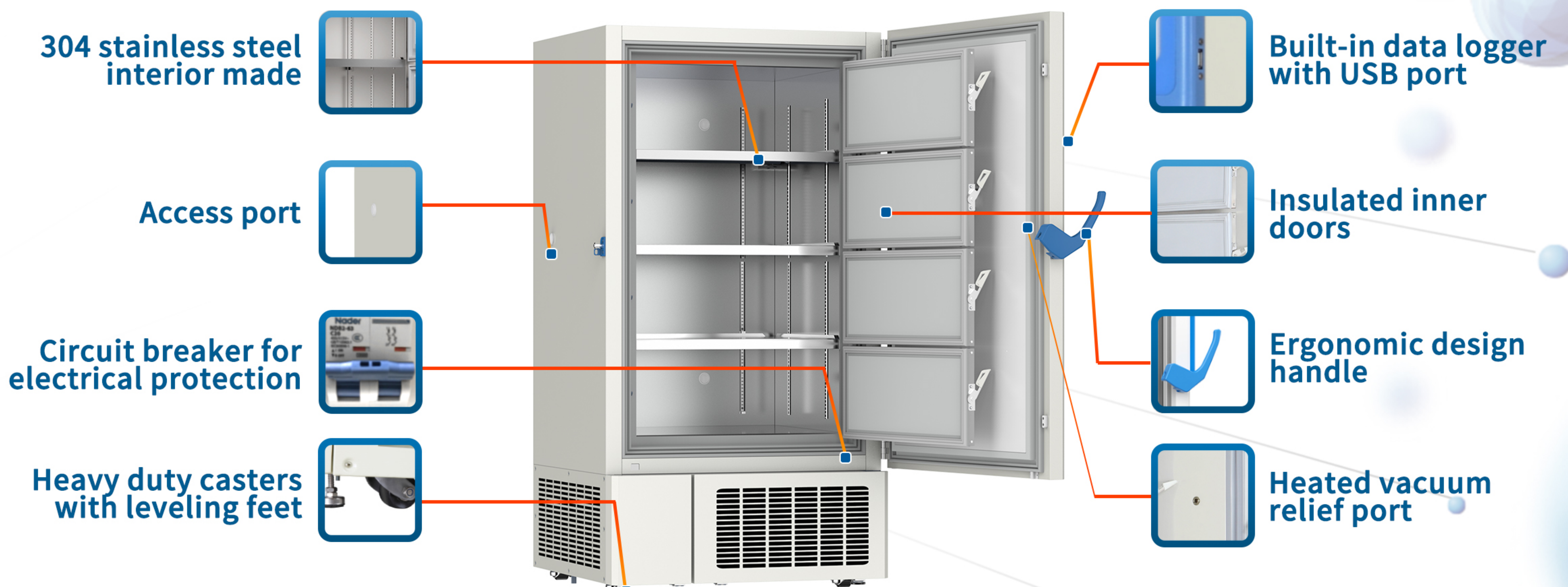


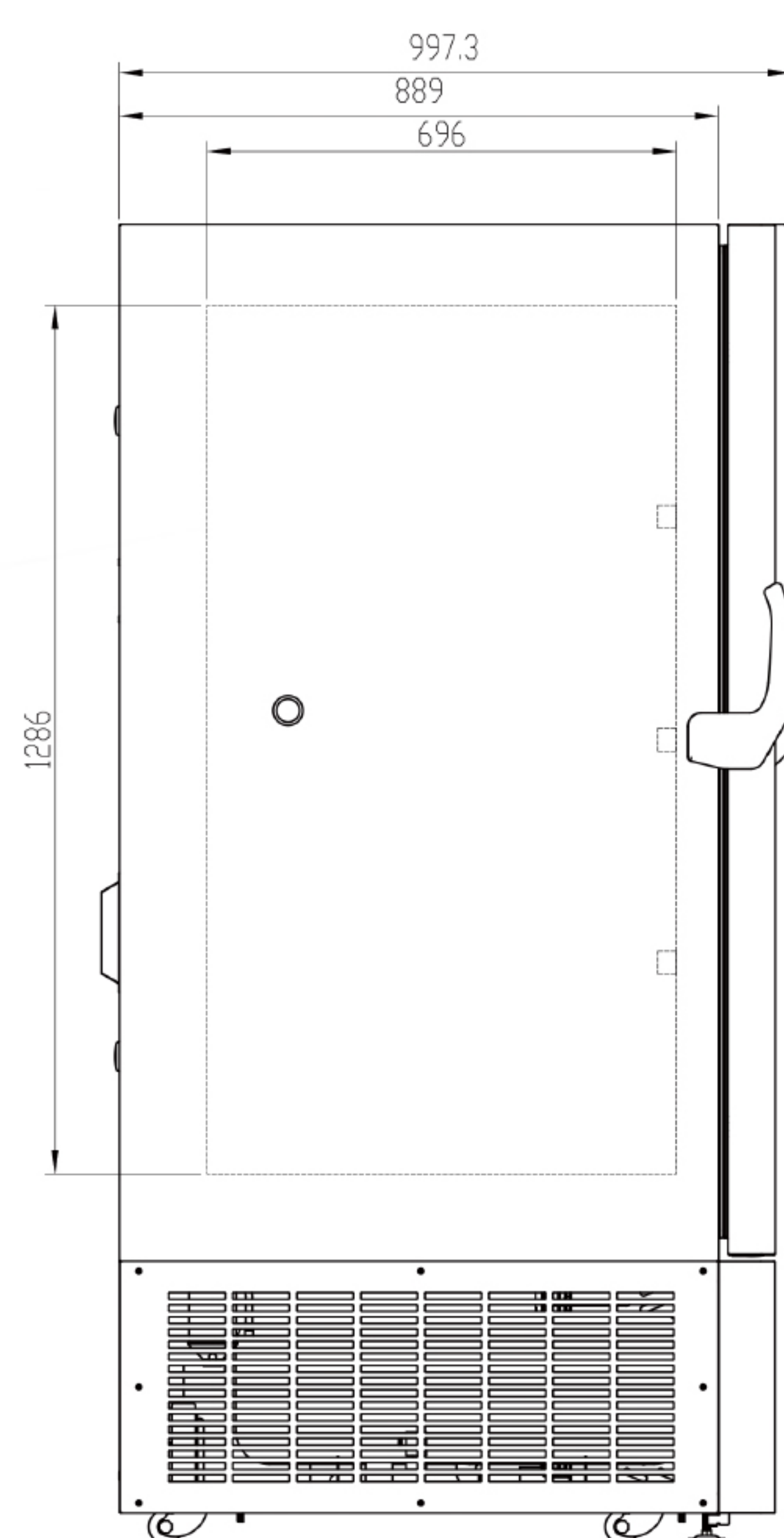
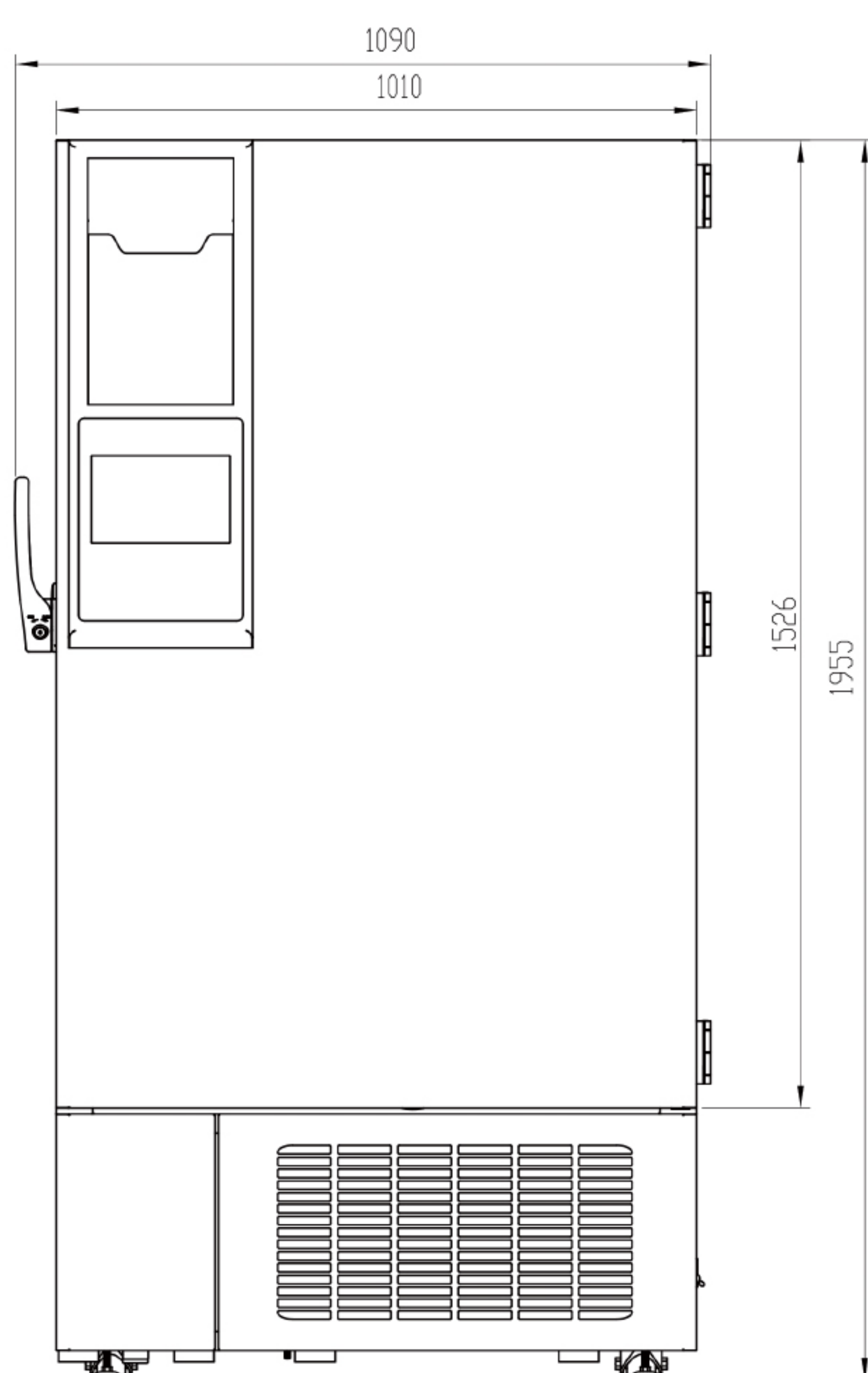
Vacuum insulation
VIP insulation foaming



Alarms system
10 kinds of alarm functions

Structure





-86°C Ultra-low Temperature Freezer	
Model	DW-HL678S
Power supply(V/HZ)	220-240V/60Hz
Capacity	678
Internal size (W*D*H) mm/inch	750*696*1286
External size (W*D*H) mm/inch	1090*1025*1955
Package size (W*D*H) mm/inch	1203*1155*2171
NW/GW (kgs)	330/420 (wood packing)
Performance	
Temperature range	-40~-86°C
Ambient temperature	16~32°C
Cooling performance	-86°C
Climate class	N
Controller	Microprocessor
Display	7" HD Intelligent Touch Screen
Refrigeration	
Compressor	2pcs
Cooling method	Direct Cooling
Defrost mode	Manual
Refrigerants	Mixed
Insulation thickness(mm)	130
Construction	
External material	Cold rolled steel sheet
Inner material	Stainless steel
Shelves	3(Stainless steel)
Access test port	3pcs. Ø 25 mm
Casters	4+(2 Leveling feet)
Data Logging/ Interval /Recording time	USB/Record every 5 minutes/10 years
Interface	Remote alarm contact, RS485
Backup battery	Yes
Alarms	
Temperature	High/Low temperature, High ambient temperature
Electrical	Power failure, Low battery, Battery power detection failure
System	Sensor failure, Main board communication error, Condenser overheating alarm, Door ajar
Accessories	
Freezer Rack Model	ZKL304-552B-CT
Freezer Rack/Box (Quantity)	20/500

Options

M-Cascade models support following optional features:

- Modbus protocol for data transfer
- Inkless temperature chart recorder
- Card access or finger print access
- Racks & Boxes & Tubes
- Comform to 21 CFR 11 regulation
- CO2 back up system