



Spark Free  
Refrigerator/Freezer





# Spark Free Refrigerator

## Typical Installation

Spark free refrigerators are installed typically in many different laboratories and research facilities to store chemical or experimental reagents that are flammable, explosive, evaporative or corrosive.



## Product Advantages

### ATEX II C-T6 E.U. Explosion Proof Certification

Explosion proof features include antistatic liner, gasket, explosion proof fan motor, over current and voltage protection. ATEX II C-T6 explosion proof certification for Haier's Laboratory refrigerator ensures safety in your work place.

### 3~16°C Setting Temperature Range

Smart temperature control system limits the temperature variance within  $\pm 3^{\circ}\text{C}$ . Adjustable set point for the range of  $3^{\circ}\text{C} \sim 16^{\circ}\text{C}$ , factory default set temperature is  $5^{\circ}\text{C}$ , controlling the temperature inside the chamber is  $2 \sim 8^{\circ}\text{C}$ .

### One-touch Search for Historic Data

The highest and lowest historic temperature data is saved and can be checked with one keystroke.

### High Efficiency HC Cooling Technology

The hydrocarbon refrigeration system operates at a much higher efficiency and reduces the energy consumption by about 50 percent.

## Ergonomic Design

### High Strength Glass Shelves

Tempered glass shelves hold 40 kg of products per shelf.

### Low Noise

Noise cancelling technology reduces the sound level to less than 40 dB(A) for a much-improved environment.

### Dual Lock Design with Multiple Alarm Systems

A mortise lock is standard on the door. Standard alarms include high and low temperature, door ajar, and sensor errors.



Cabinet Structure



Glass Shelf



ATEX Certification Label

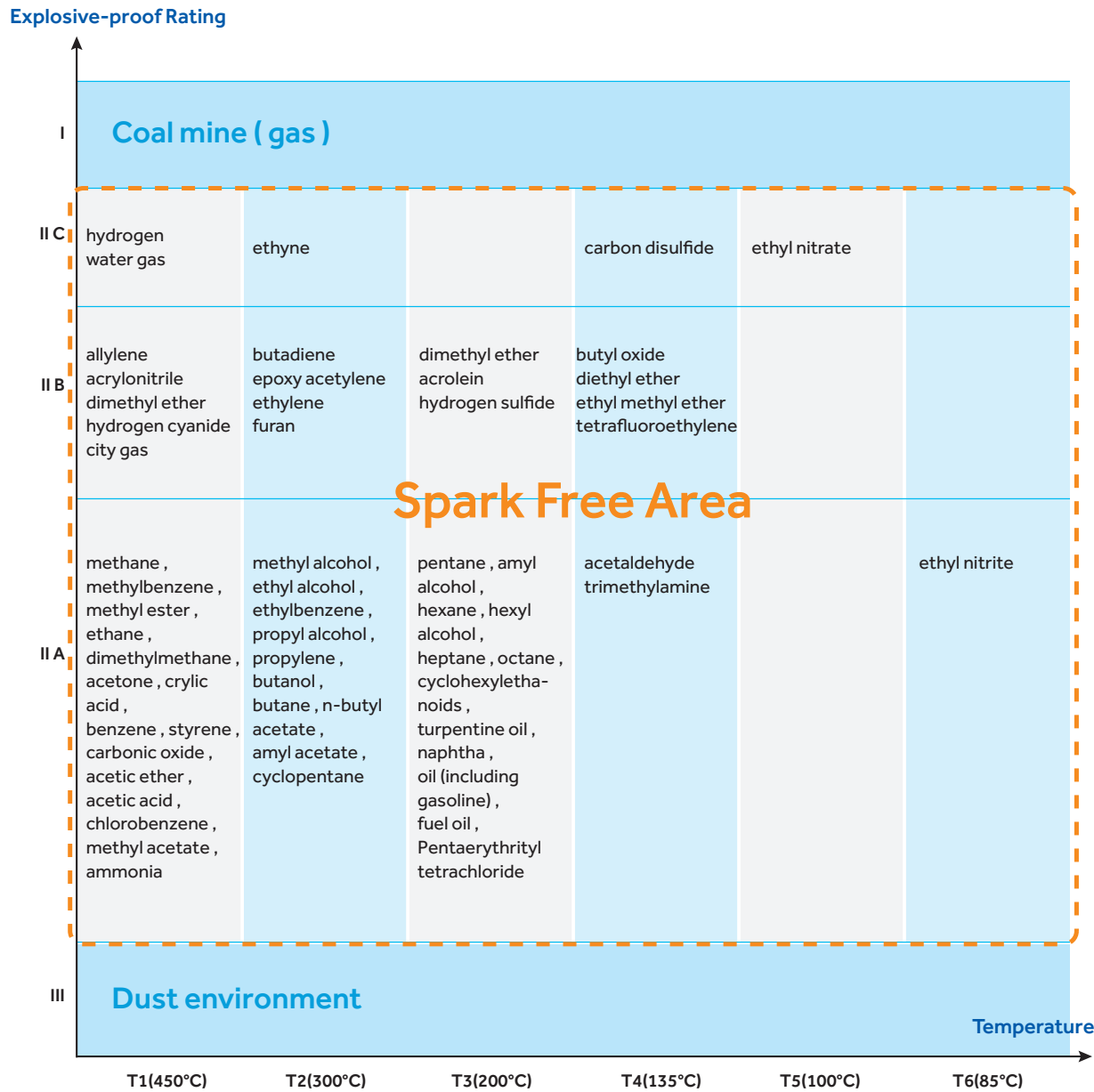


Explosion Proof Cabinet/Fan

Spark Free Refrigerator

Application Range

Haier spark free refrigerators are ATEX certified in the application range II 3G Ex ic nA II T6, which means the appliances can be found in the whole II zone environment (including II A and II B, II C), a typical environment within many biochemistry laboratories.



Warning: Do not store open containers of volatile substances in this refrigerator.

Specifications



Model		HLR-118SF	HLR-310SF	HLR-310FL(115V)	HLR-310FL(220V)
Technical Data	Type	Under-Counter	Upright	Upright	Upright
	Climate Class	N	N	N	N
	Cooling Type	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling
	Defrost Mode	Auto	Auto	Auto	Auto
	Refrigerant	R600a	R600a	R600a	R600a
	Sound Level (dB(A))	40	40	40	40
Performance	Temperature Range (°C)	3~16°C Adjustable	3~16°C Adjustable	3~16°C Adjustable	3~16°C Adjustable
	Ambient Temperature (°C)	16~32	16~32	16~32	16~32
Control	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor
	Display	LED	LED	LED	LED
Electrical Data	Power Supply (V/Hz)	220-240/50	220-240/50	115/60	220-240/50
	Power (W)	55	210	210	210
	Electrical Current (A)	1.2	1.26	1.26	1.26
	Power Consumption (kWh/24h)	0.56	1.05	1.05	1.05
	Capacity (L/Cu.Ft)	118/4.2	310/10.9	310/10.9	310/10.9
Dimensions	Net/Gross Weight (approx)	kg	44/49	72/83	72/83
		lbs	97/108	158.7/183	158.7/183
	Interior Dimensions (W*D*H)	mm	515*415*630	560*500*1290	560*500*1290
		in	20.3*16.3*24.8	22.0*19.7*50.8	22.0*19.7*50.8
	Exterior Dimensions (W*D*H)	mm	597*635*810	605*598*1840	605*598*1840
		in	23.5*25*31.9	23.8*23.6*73.6	23.8*23.6*73.6
	Packing Dimensions (W*D*H)	mm	700*710*930	680*690*1940	680*690*1940
		in	26.8*27.2*35.8	26*26.4*79.5	26*26.4*79.5
Alarms	Container Load (20'/40'/40'H)	48/96/96	24/51/51	24/51/51	24/51/51
	High/Low Temperature	Y	Y	Y	Y
	Sensor Error	Y	Y	Y	Y
	Door Ajar	Y	Y	Y	Y
Accessories	Caster	2	4	4	4
	Foot	2	2	2	2
	Shelves/Baskets	2/1	4/0	4/0	4/0
	Water Tray	1	1	1	1
	Padlock Adapter Kit/Quantity	/	1	1	1
	Built-in Key Door Lock/Quantity	1	1	1	1
Other	Certification	CE, ATEX	CE, ATEX	UL, Energy Star	CE, ATEX

# Combined Refrigerator and Freezer with Spark-free Interior

## Application Range

Used for storage of volatile, unstable, low boiling point (flammable and explosive) compounds/dangerous other items that require a low temperature in pharmaceutical factories and laboratories etc.

## Product Advantages

### High Performance

Refrigerator: Forced-air cooling system with cycle defrost, temperature uniformity  $\pm 3^{\circ}\text{C}$   
Freezer: Cold wall cooling system, manual defrost, temperature uniformity  $\pm 5^{\circ}\text{C}$   
Optional USB interface, RS485 & printer, easy to get temperature record

### Microprocessor Controller with Digital Display

Refrigerator temperature  $2\sim 8^{\circ}\text{C}$  with resolution of  $0.1^{\circ}\text{C}$   
Freezer temperature  $-30\sim -10^{\circ}\text{C}$  with resolution of  $1^{\circ}\text{C}$   
Multiple alarm functions with remote alarm contact to ensure safe monitoring

### Multipurpose and Space Efficient

One cabinet with two independent chambers, both are self-contained and independently controlled with individual doors

### Stainless Steel Interior

The interior of refrigerator and freezer are both made of stainless steel, which is easy to clean and corrosion-proof

### Environment Friendly

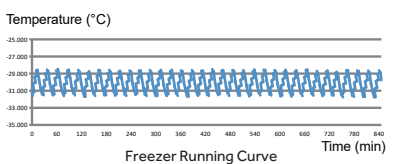
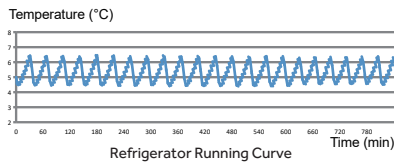
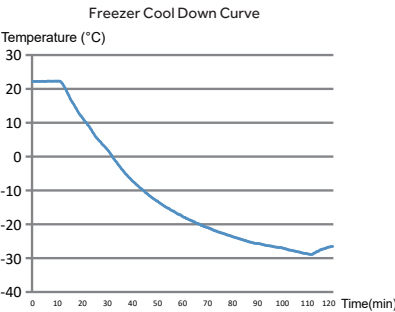
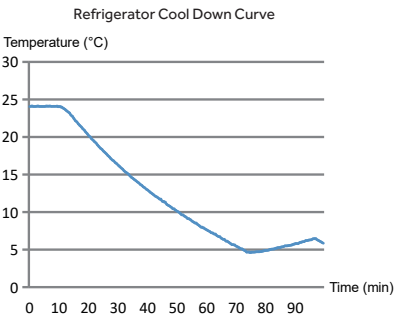
Hydrocarbon refrigerant (R600a for refrigerator/R290 for freezer) and CFC-free polyurethane insulation for reduced global warming potential

### ATEX Certified

### Low Energy Consumption: 1.5 kWh/24h



25°C Ambient Temperature Curve



Combined Refrigerator and Freezer with Spark-free Interior



Specifications



Model		HLRF-319SF
Technical Data	Cabinet Type	Upright
	Climate Class	N, 16~32℃
	Cooling Type	Refrigorator: Forced Air Cooling/Freezer: Direct Cooling
	Defrost Mode	Refrigerator: Auto/Freezer: Manual
	Refrigerant	Refrigerator: R600a/Freezer: R290
	Sound Level (dB(A))	43
Performance	Temperature Range (℃)	Refrigerator: 3~16/Freezer: -10~-30
Control	Controller	Microprocessor
	Display	LED
Electrical Data	Power Supply (V/Hz)	220-240~/50
	Power (W)	230
	Electrical Current (A)	1.5
	Power Consumption (kWh/day)	1.5
Dimensions	Capacity (L/Cu.Ft)	Refrigerator: 219/7.7; Freezer: 100/3.5
	Net/Gross Weight (approx)	kg 130/140
		lbs 319.7/352.7
	Interior Dimensions (W*D*H)	mm Refrigerator: 605*510*720/Freezer: 515*465*440
		in Refrigerator: 23.8*20*28.3/Freezer: 20.2*18.3*17.3
	Exterior Dimensions (W*D*H)	mm 735*660*1810
		in 28.9*26.0*71.3
	Packing Dimensions (W*D*H)	mm 775*720*1930
		in 30.5*28.3*76
Alarms	Container Load (20'/40'/40'H)	21/43/43
	High/Low Temperature	Y
	Sensor Error	Y
	Power Failure	Y
	Door Ajar	Y
	Low Battery	Y
	Remote Alarm	Y
Accessories	Caster	Y/4
	Foot	Y/2
	Porthole	N
	Shelves	Refrigerator: 3; Freezer: 2
	Stylus Printer	Optional (printer or RS485, either-or)
	RS485	Optional (printer or RS485, either-or)
	USB Interface	Optional
Other	Certification	CE, ATEX



-30°C Spark Free Freezer

Typical Installation

It can be used for safe storage of potentially flammable items and other temperature sensitive samples at low temperatures. Applications found within life science, medical, electronics and chemical industries.



DW-30L298SF

Product Advantages

- Explosion Proof Interior**  
SF series freezers feature standard interior design. FL series freezers feature antistatic interior design. All metal parts are grounded reliably and interior design is explosion proof. Certificates include China anti-explosion proof and EU explosion proof ATEX II C-T6
- Superior Temperature Uniformity**  
The temperature uniformity is  $\pm 3^{\circ}\text{C}$  with the setting temperature of  $-30^{\circ}\text{C}$
- Low Noise Design**  
Noise-reduction features and structure noise reduction design
- High-efficiency and Energy-saving Compressor and System**  
High-efficiency hydrocarbon compressor, optimized refrigeration system and low power consumption
- Green and Environmental Friendly**  
Hydrocarbon refrigerant, energy saving and environmental protection, built with LBA foam insulation, complies with European RoHS Directive
- Multiple Alarm Functions**  
High, Low temperature, door ajar, power failure, sensor error, high ambient temperature alarm and also equipped with remote alarm interface, alarm mode is sound and flash



DW-30L298SF

DW-30L298FL

Laboratory Deep Freezer with explosion-proof interior  
Interior Temp. Range :  $-10^{\circ}\text{C}$  ~  $-30^{\circ}\text{C}$  (DW-30L298FL/SF)  
Internal  $\text{Ex}$  II 3/- G Ex ic IIC T6 Gc  
Certification No.: CML 18ATEX4058X  
Serial No.: In the Barcode  
Qingdao Haier Biomedical Co., Ltd.

**Anti-static operating instruction**  
1. Clean plastic parts with a damp cloth only.  
2. Do not use a dry cloth to clean plastic parts.  
3. Danger of sparks due to electrostatic discharge.  
4. Warning - potential electrostatic charging hazard - see instructions.

Ergonomic Design

- Microprocessor-controlled System**  
Microprocessor control with LCD temperature display precision at  $0.1^{\circ}\text{C}$ . Internal temperature is adjustable from  $-10^{\circ}\text{C}$  to  $-30^{\circ}\text{C}$
- Adjustable Shelves**  
The adjustable shelves ensure the maximum usage efficiency of the internal space, and users can store items of different sizes as needed
- Rich Configuration**  
Standard: DW-30L298SF interior material is PCM with 3 plastic coated wire shelves, DW-30L298FL interior material is SUS with 3 chrome-plated wire shelves  
Optional: stainless steel shelves, drawer, temperature recorder, RS485 or USB (one out of two)
- Improved Handle Design**  
The ergonomic chamfer design of the handle ensures smooth operation and maximum durability
- Feet and Casters**  
4 back-and-forth casters and 2 adjustable feet (out of two) for easy moving and leveling

Application Range

Explosive Proof Rating	Temperature					
	T1 (450°C)	T2 (300°C)	T3 (200°C)	T4 (135°C)	T5 (100°C)	T6 (85°C)
I	Coal mine (gas)					
II C	hydrogen water gas	ethyne		carbon disulfide	ethyl nitrate	
II B	Allylene acrylonitrile dimethyl ether hydrogen cyanide city gas	butadiene epoxy acetyleneethylene furan	dimethyl ether ac rolein hydrogen sulfide	butyl oxide diethyl etherethyl methyl ether tetr oethylene		
II A	methane, methylbenzene, methyl ester, ethane, dimethylmethane, acetone, crylic acid, benzene, styrene, carbonic oxide, acetic ether, acetic acid, chlorobenzene, methyl acetate, ammonia	methyl alcohol, ethyl alcohol, ethylbenzene, propyl alcohol, propylene, butanol, butane, n-butyl acetate, amyl acetate, cyclopentan	Pentane, amyl alcohol, hexane, hexyl alcohol, heptane, octane, cyclohexylethanoids, turpentine oil, naphtha, oil (including gasoline), fuel oil, Pentaerythrityl tetrachloride	acetalde hyde trimeth ylamine		ethyl nitrite
III	Dust environment					

-25°C Spark Free Freezer

Product Advantages

- Explosion Proof Interior**

The SF series is composed of a non-anti-static liner, door lining and drawers. Equipped with an overcurrent and overvoltage protection system with all components earthed to ensure static is discharged safely. Certified to ATEX IIC-T6 EU and can be used in zone 2 environments.
- Hydrocarbon Energy-saving**

Adopting high-efficiency HC compressor and optimized refrigeration system, for safe and reliable cold storage of your samples.
- Environmentally Friendly**

The HC system is a completely green refrigeration solution. With LBA foamed polyurethane insulation in line with European ROHS directive for environmentally friendly materials.
- Low Noise**

Cabinet structure and refrigeration system noise reduction design lowers noise level to less than 27dB (A) and eliminating any harsh high-frequency noises.

Ergonomic Design

- Microprocessor**

  - Microprocessor electronic temperature controller, LCD digital temperature display, display precision is 0.1°C, temperature set point -10~-25°C. Temperature uniformity is ±3°C.
  - Multiple alarms including high and low temperature, sensor error, power failure, door ajar, high ambient and remote alarm.
  - Alarm mode: sound and light alarm.
  - It can be connected to remote alarm.

- Undercounter Biomedical Freezer**

The DW-25L92 cabinet is designed with a height of 810mm, which can be easily placed under the bench to save storage space.



Specifications

Model		DW-25L92SF	DW-30L298SF	DW-30L298FL	
Technical Data	Cabinet Type	Upright	Upright	Upright	
	Climate Class	SN N	SN N	SN N	
	Cooling Type	Direct Cooling	Direct Cooling	Direct Cooling	
	Defrost Mode	Manual	Manual	Manual	
	Refrigerant	HC	HC	HC	
	Sound Level (dB(A))	27	41	41	
Performance	Cooling Performance (°C)	-25	-30	-30	
	Temperature Range (°C)	-10~-25	-10~-30	-10~-30	
Control	Controller	Microprocessor	Microprocessor	Microprocessor	
	Display	LED	LCD	LCD	
	Power Supply (V/Hz)	220~240/50	220~240/50	220~240/50	
Electrical Data	Power (W)	150	330	330	
	Capacity (L/Cu.Ft)	92/3.2	298/10.5	298/10.5	
Dimensions	Net/Gross Weight (approx)	kg	46/51	115/130	115/130
		lbs	101.4/112.4	253.5/286.6	253.5/286.6
	Interior Dimension (W×D×H)	mm	435*410*635	541*443*1218	541*443*1218
		in	17.1*16.1*25.0	21.3*17.4*48.0	21.3*17.4*48.0
	Exterior Dimension (W×D×H)	mm	597*635*810	770*710*1828	770*710*1828
		in	23.5*25*31.9	30.3*28.0*72.0	30.3*28.0*72.0
	Packing Dimension (W×D×H)	mm	680*690*940	840*770*2000	840*770*2000
		in	26.8*27.1*37.0	33.1*30.3*78.7	33.1*30.3*78.7
Alarms	Container Load (20'/40'/40'H)	48/102/102	21/42/42	21/42/42	
	High/Low Temperature	Y	Y	Y	
	Remote Alarm	Y	Y	Y	
	Power Failure	N	Y	Y	
	Sensor Error	Y	Y	Y	
	Low Battery	N	N	N	
	High Ambient Temperature	N	Y	Y	
	Dirty Condenser	N	N	N	
	Door Ajar	Y	Y	Y	
	Casters	Y(4)	Y(4)	Y(4)	
Accessories	Leveling Feet	Y(2)	Y(2)	Y(2)	
	Porthole	N	N	N	
	Inner Doors	N	N	N	
	Drawers	3- Plastic Drawers	6- Plastic Drawers, Optional	6- Permanent Anti-Static Plastic Drawers, Optional	
	Shelves	N	3- Adjustable Wire Shelves	3- Adjustable Wire Shelves	
	Shelf Dimensions (W×D)(mm)	N	518*373	518*373	
	Max. Load per Shelf (kg)	N	20	20	
	USB Interface	N	Optional	Optional	
	RS485	N	Optional	Optional	
	NFC	N	N	N	
Others	Temperature Recorder	N	N	N	
	Certificate	ATEX Explosion Proof Certificate,CE	ATEX Explosion Proof Certificate,CE	ATEX Explosion Proof Certificate,CE	