

# Haier Biomedical Intelligent Protection of Life Science

# Biomedical Freezer Solutions

-60°C | -40°C | -30°C | -25°C



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 $right\ of\ final\ interpretation\ of\ this\ brochure,\ please\ contact\ us\ for\ any\ further\ information\ if\ required.$ 





A versatile low-temperature freezer installed in hospitals, blood stations, diseases control & prevention centers, research institutions, bioscience laboratories and medical laboratories. It is suitable for storing a wide variety of biological products including viruses, bacteria, red blood cells, white blood cells, skin, bone and semen as well as ocean-going supplies and electronic devices. It can also provide a low-temperature environment for testing of special materials.

The secondary application is for the storage of fishery products such as tuna, Australian lobster, salmon, South American shrimps, Argentina red shrimp, top-quality beef, kanpachi, octopus, yellowtail, bonito fish, grouper, and fugu rubripes. This is a requirement for fishery products for human consumption and hence these freezers are popular among professional oceanic fisherman, seafood distributors, speciality seafood stores and sushi restaurants and commercial food manufacturers.









Efficient and reliable fan



German made energy efficient compressor



Digital temperature control display



Quickly freeze sea food products to retain their original taste, structure and freshness.



Low noise output, noise cancelling technology yields a smoother operation and a sound level of less than 43dB(A).



Multiple alarm system includes temperature alarm, and sensor error alarm.



HC refrigerant system is optimized to improve refrigeration efficiency by 30 %, and save energy by about 50%.

# -60°C Biomedical Freezer

Single compressor auto cascade refrigeration system provides high efficient cooling power. Insulation thickness is 100 mm for optimal protection of cold temperature and saving energy.



Creative dual seals design retains cold temperature more effectively, and eliminates condensation on gaskets.



Interior material is certified food grade 304 stainless steel, ensuring safe contact between food and interior liner.



Interior lock design ensures product safety. Lockable casters permit ease of installation and maneuvering.



Water proof digital control delivers precise temperature for storage.

Display and control system are easy to

#### **Specifications**

|                 | Model                          |     | DW-60W138      | DW-60W258      | DW-60W388                         |  |
|-----------------|--------------------------------|-----|----------------|----------------|-----------------------------------|--|
|                 | Cabinet Type                   |     | Chest          | Chest          | Chest                             |  |
|                 | Climate Class                  |     | N              | N              | N                                 |  |
| Technical Data  | Cooling Type                   |     | Direct Cooling | Direct Cooling | Direct Cooling                    |  |
|                 | Refrigerant                    |     | HC             | HC             | HC                                |  |
|                 | Sound Level ((dB(A))           |     | 43             | 43             | 43                                |  |
| 200             | Cooling performance (°C)       |     | -60            | -60            | -60                               |  |
| Performance     | Temperature Range (°C)         |     | -30~-60        | -30~-60        | -30~-60                           |  |
| 2               | Controller                     | A3  | Microprocessor | Microprocessor |                                   |  |
| Control         | Display                        |     | LED            | LED            | LED                               |  |
|                 | Power Supply (V/Hz)            |     | 220~240/50     | 220~240/50     | 220~240/50                        |  |
| Electrical Data | Power (W)                      |     | 370            | 410            | 420                               |  |
|                 | Electrical Current (A)         |     | 3              | 3              | 420<br>3.5<br>388/13.7<br>105/130 |  |
|                 | Capacity (L/Cu.Ft)             |     | 138/4.9        | 258/9.1        | 388/13.7                          |  |
|                 | Net/Gross Weight (approx)      | kg  | 62/75          | 88/108         | 105/130                           |  |
|                 | Net/Gross Weight (approx)      | lbs | 137/165        | 194/238        | 232/287                           |  |
|                 | Interior Dimensions (W*D*H)    | mm  | 580*445*620    | 1000*445*620   | 1450*445*620                      |  |
| Dimensions      | Interior Dimensions (W.D.H)    | in  | 22.8*17.5*24.4 | 39.4*17.5*24.4 | 57.1*17.5*24.4                    |  |
|                 | Exterior Dimensions (W*D*H)    | mm  | 790*770*950    | 1210*770*950   | 1655*770*950                      |  |
|                 | Exterior Diffierisions (W-D-H) | in  | 31.1*30.3*37.4 | 47.6*30.3*37.4 | 65.2*30.3*37.4                    |  |
|                 | Packing Dimensions (W*D*H)     | mm  | 815*800*990    | 1255*800*990   | 1695*800*990                      |  |
|                 | racking Dimensions (W*D*H)     | in  | 32.1*31.5*39   | 49.4*31.5*39   | 66.7*31.5*39                      |  |
|                 | Container Load (20'/40'/40'H)  |     | 28/56/56       | 22/46/46       | 14/28/28                          |  |
| Alarms          | High/Low Temp                  |     | Υ              | Υ              | Υ                                 |  |
| nai i i i i 5   | Sensor Error                   |     | Υ              | Υ              | Υ                                 |  |
| Accessories     | Caster                         |     | Υ              | Y              | Y                                 |  |
| 10063301163     | Porthole                       |     | Υ              | Υ              | Υ                                 |  |
| Others          | Certification                  |     | CE             | CE             | CE                                |  |

 $\label{product} \mbox{Product appearance and specifications are subject to change without notice}$ 

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# -40°C Biomedical Freezer (Double Doors Type)

The double door -40°C biomedical freezer models offer a large capacity storage space with rapid cooling. Integrated design of cold shelf and evaporator provides additional refrigeration efficiency. Designed to store vaccines, blood plasma and many other biological materials. Installations can be found in research institutions and clinical sites in the life science, pharma, biotech, medical and electronics sectors.



**DW-40L508** 



Control panel



DW-40L348



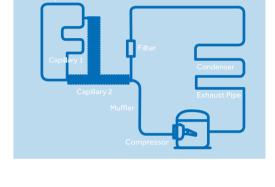
Shelf

# -40°C Biomedical Freezer (Double Doors Type)

The DW-40L348 is based on the original work horse platform of DW-40L508. The new freezer model operates with two capillary tubes and is equipped with dual gaskets to improve the temperature uniformity through the chamber drastically. It can be installed to satisfy tougher application requirements in universities, research institutions and blood banks.

#### Reliability and Key Features

- Rated for -40°C at 32°C ambient
- Rapid cooling with shelf evaporator
- Improved temperature uniformity with dual capillary tube design at the range of -20°C to -40°C
- Improved door seal design with two gaskets maintains cabinet temperature more efficiently
- Reduced frost buildup
- 90mm insulation thickness for additional robustness, less power consumption and better temperature retaining ability
- Drawer design maximizes storage space. One unit can hold 360 bags of 230 ml blood bags
- Optional USB interface



#### Safety

- Multiple malfunction alarms include high/low temperature, power failure, sensor error, low battery, high ambient temperature
- Two types of alarms: buzzer and flashing light,remote alarm

# Ergonomic Design

- LED digital display for clear observation
- Double door design with independent locks reduces air leakage to ensure temperature stability and lower power consumption
- Tracks to label drawers for product identification





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# -40°C Biomedical Freezer (Chest)

# **DW-40L278**

#### **Key Features**

- Microprocessor control, adjustable temperature range:-20°C to -40°C
- LED digital display and increment at 0.1°C
- Permanently lubricated cooling fan for safety and longevity
- Rapid cooling with shelf evaporator
- Removable double outer door seal design, good sealing effect and energy saving

#### **Ergonomic Design**

- USB data logging and temperature recorder
- Padlock with stainless steel cylinder for safe storage
- Drawers are designed with label holders for item identification

#### Safety

- Multiple malfunction alarms include high/low temperature, sensor error, power failure, high ambient temperature, low battery, door ajar
- Alarm Types: buzzer, flashing light, remote alarm



Reliable







Performance

Malfunction

Double Outer





Caster and feet Padlock

Removable double outer door seal





Inner

#### **Reliability and Key Features**

- High efficiency low temperature compressor with known field reliability
- Chemically stable, CFC-free, commercially available and environmentally safe refrigerant
- Permanently lubricated cooling fan for safety and longevity, high density insulation foam for stable and long term storage temperature
- Optimized refrigeration system designed to maximize cooling effect and temperature uniformity
- Microprocessor control, digital display, adjustable temperature range: -20°C~-40°C
- LCD digital display for clear observation
- Wide voltage tolerance design with applicable voltage range of 198~252 V/AC

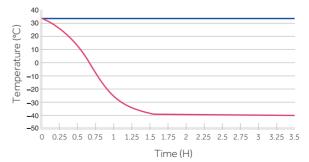
#### Safety

- Multiple malfunction alarms to detect high / low temperature, sensor error and power failure
- Two types of alarm indications: audible buzzing and visual flashing light

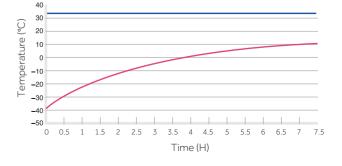
#### **Ergonomic Design**

- Door lock for storage safety
- Standard ø25mm access port for testing
- Corrosion proof cabinet interior design
- Suitable for a variety of storage baskets





DW-40W380 Warm up test at 32°C ambient



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# **Specifications**

|                 | Model                                |                     | DW-40L92       | DW-40          | DL262          | DW-40           | )L278         |                | DW-40L348            | DW-40                | 0L508          | DW-40      | W100           | DW-40W255      | DW-40W380      |
|-----------------|--------------------------------------|---------------------|----------------|----------------|----------------|-----------------|---------------|----------------|----------------------|----------------------|----------------|------------|----------------|----------------|----------------|
|                 | Cabinet Type                         |                     | Upright        | Uprig          | ght            | Upright         |               |                | Upright, Double Door | Upright, Double Door |                | Chest      |                | Chest          | Chest          |
|                 | Climate Class                        |                     | SN N           | SN             | N              | SN I            | SN N          |                | SN N                 | SN N                 |                | SN N       |                | SN N           | SN N           |
| Tachnical Data  | Cooling Type                         |                     | Direct cooling | Direct cooling |                | Direct Cooling  |               | Direct Cooling | Direct Cooling       |                      | Direct Cooling |            | Direct Cooling | Direct Cooling |                |
| Technical Data  | Defrost Mode                         |                     | Manual         | Manu           | ual            | Manu            | ual           |                | Manual               | Mar                  | nual           | Manual     |                | Manual         | Manual         |
|                 | Refrigerant                          |                     | HC             | HC             | CFC-Free       | HC              | CFC-Free      |                | HC                   | HC                   | CFC-Free       | CFC-F      | Free           | CFC-Free       | CFC-Free       |
|                 | Sound Level (dB(A))                  |                     | 29             | 41             | 44             | 40              | 44            |                | 41                   | 41                   | 45             | 35         | 5              | 41             | 45             |
| Performance     | Cooling Performance                  | ce (°C)             | -40            | -4(            | )              | -40             |               | -40            | -40                  |                      | -40            |            | -40            | -40            |                |
|                 | Temperature Range                    | e (°C)              | -20~-40        | -20~-          | -40            | -20~-40 -20~-40 |               | -20~-40        | -20~-40              |                      | -20~-          | -40        | -20~-40        | -20~-40        |                |
| Control         | Controller                           |                     | Microprocessor |                | Microprocessor |                 | ocessor       |                | Microprocessor       | Micropro             |                | Micropro   |                | Microprocessor | Microprocessor |
|                 | Display                              |                     | LCD            | LCI            |                | LEC             | D             |                | LED                  | LE                   | D              | LCI        |                | LCD            | LCD            |
|                 | Power Supply (V/Hz                   | :)                  | 220~240/50/60  | 220~240/50/60  |                | 220~240/50      | 220~240/50/60 |                | 220~240/50           | 220~240/50           |                | 220~240/50 | 115/60         | 220~240/50/60  | 220~240/50/60  |
| Electrical Data | Power (W)                            |                     | 340            | 310            | 600            | 275             | 370           |                | 280                  | 285                  | 510            | 260        | 255            | 410            | 550            |
|                 | Electrical Current (A                | .)                  | 2.2            | 2              | 7.5            | 2.9             | 5.1           |                | 2.9                  | 2.9                  | 5.6            | 2.5        | 5.0            | 2.5            | 3.4            |
|                 | Capacity (L/Cu.Ft)                   |                     | 92/3.2         | 262/           |                | 278/9           |               |                | 348/12.3             | 490/17.3             |                | 100/3.5    |                | 255/9.0        | 380/13.4       |
|                 | Net/Gross Weight                     | kg                  | 46/51          | 88/            |                | 115/1           |               |                | 137/145              | 164/                 |                | 43/4       |                | 70/82          | 82/89          |
| Dimensions      | (approx)                             | lbs                 | 101.4/112.4    | 194.0/         |                | 253.5/2         | 297.6         |                | 302.0/320.0          | 361.6/440.9          |                | 94.8/101.4 |                | 154.3/180.8    | 180.8/196.2    |
|                 | Interior Dimensions                  | mm                  | 435*410*635    | 480*465        |                | 520*435         |               |                | 535*610*1228         | 685*61               |                | 500*38     |                | 1036*426*625   | 1375*453*640   |
|                 | (W*D*H)                              |                     | 17.1*16.1*25.0 |                | 18.9*18.3*56.3 |                 | .1*48.4       |                | 21.1*24.0*48.3       | 27.0*24.0*48.3       |                | 19.7*15.   |                | 40.8*16.8*24.6 | 54.1*17.8*25.2 |
|                 | Exterior Dimensions                  |                     | 640*610*810    | 700*705        |                | 770*710         |               |                | 790*845*1860         | 940*84               |                | 685*65     |                | 1243*724*838   | 1554*724*838   |
|                 | (W*D*H)                              | in                  | 25.2*24.0*31.9 | 27.6*27.       |                | 30.3*28.0       |               |                | 31.1*33.3*73.2       | 37.0*33              |                | 27.0*25.   |                | 48.9*28.5*33.0 | 61.2*28.5*33.0 |
|                 | Packing Dimensions (W*D*H)           |                     | 660*700*900    | 775*760        |                | 832*757         |               |                | 852*927*2044         | 997*92               |                | 740*65     |                | 1320*755*905   | 1635*760*900   |
|                 |                                      | in                  | 26.0*27.6*35.4 | 30.5*29.       | 9*74.0         | 32.8*29.8       | .8*78.4       |                | 33.5*36.5*80.5       | 39.3*36              |                | 29.1*25.   | 6*34.6         | 52.0*29.7*35.6 | 64.4*29.9*35.4 |
|                 | Container Load<br>(20'/40'/40'H)     |                     | 48/108/108     | 21/45          |                | 14/28           |               |                | 14/28/28             | 12/2                 |                | 54/108     |                | 24/54/81       | 18/42/63       |
|                 | High/Low Temperature<br>Remote Alarm |                     | Y              | Y              |                | Y               |               |                | Y                    | Y                    |                | Y          |                | Y              | Y              |
|                 | Remote Alarm                         |                     | Y              | Y              |                | Y               |               |                | Υ                    | Y                    | (              | N/A        | A              | N/A            | N/A            |
|                 | Power Failure                        |                     | Υ              | Y              |                | Y               |               |                | Υ                    | Y                    | <i></i>        | Y          |                | Υ              | Υ              |
| Alarms          | Sensor Error                         | Sensor Error Y Y    |                |                | Y              |                 |               | Y              | Y                    | /                    | Y              |            | Υ              | Y              |                |
|                 | Low Battery                          |                     | N              | N              |                | Y               |               |                | Υ                    | Y                    |                | N/A        |                | N/A            | N/A            |
|                 | High Ambient Temp                    | High Ambient Temp Y |                | Y              |                | Υ               |               | Υ              | Y                    |                      | N/A            |            | N/A            | N/A            |                |
|                 | Door Ajar                            |                     | Υ              | Y              |                | Y               |               |                | /                    |                      | /              |            |                | /              | /              |
|                 | Caster                               |                     | Υ              | Y              |                | Y               | ·             |                | Υ                    | Y                    |                | N/A        |                | N/A            | N/A            |
|                 | Foot                                 | Foot                |                | Y              | Y              |                 | Y             |                | Υ                    | Y                    |                | N/A        |                | N/A            | N/A            |
|                 | Porthole Y                           |                     | Υ              | Y              |                | Y               |               |                | Υ                    | Y                    |                | Y          |                | Υ              | N/A            |
| Accessories     | Drawers/Inner Door                   | ·s                  | 3/-            | 7/             | -              | 6/-             | ·-            |                | 12/-                 | 10                   | )/-            | /          |                | /              | /              |
|                 | USB Interface                        |                     | Optional       | Optio          | onal           | Optio           | onal          |                | Optional             |                      | Optional N/A   |            | N/A            | N/A            |                |
|                 | Temperature Recor                    | der                 | N              | N              |                | Optio           | onal          |                | Optional             | Opti                 |                | N/A        | A              | N/A            | N/A            |
| Others          | Certification                        |                     | CE             | CE             | /              | CE              |               |                | CE                   |                      | Œ              | CE         |                | CE             | CE             |
| 0 0 10 10       | Certification                        |                     | <u></u>        |                |                | CL              |               |                | <u> </u>             |                      | -              | CL         | =              |                |                |

Product appearance and specifications are subject to change without notice

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#### **Typical Installation and Application**

Haier Biomedical -30°C biomedical freezer: safe and reliable dual-system, intelligent hot gas defrosting, hydrocarbon energy saving



DW-30L1280F

#### **Key Features**



# Hydrocarbon energy saving: green and environmental protection

Using green and eco-friendly hydrocarbon refrigeration system, based on the principle of zero damage to ozone sphere and zero boost to greenhouse effect, we effectively reduce the energy consumption to 8kW/24H.



# Intelligent defrosting: prolong the defrosting cycle, safeguard the stability of storage temperature

The intelligent defrosting is two times less than the traditional defrosting, effectively draws down the temperature fluctuation caused by defrosting during sample storage cycle via intelligently identifying the amount of frost on evaporator.



#### Dual independent refrigeration systems: higher safety

Auto defrosting system plus constant refrigeration system, successfully solve the industry problem that inside temperature rise sharply when fan cooling refrigerator defrosts; Once one system failed, the other one would reach to -25 °C soon; which double the safety of the sample. With air cooling technology, the inside uniformity can reach ±3°C (±5°C during defrosting period).



# Hot gas defrosting technology: eradicate the hidden danger of electric leakage

We apply full-automatic hot gas defrosting technology on the whole machine. Compared with heater wire defrosting technology, it gets rid of the risk of electric leakage due to wire aging, offers you higher efficiency and safety.



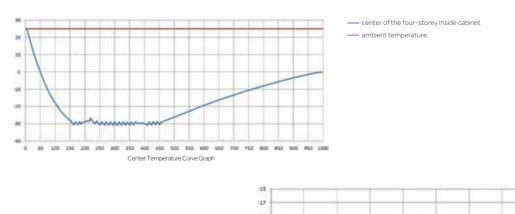
#### Low nois

Optimize system and engine room noise reduction design, noise: 45.4db (220V/50Hz test data)

#### -30°C Biomedical Freezer

#### **Product Advantages**

#### Microcomputer control LED digital temperature display with inside temperature accuracy of 0.1 °C, while at the same time displaying the voltage and ambient Heat preservation design Intelligent hot gas defrosting temperature, alarm, AB operating system and of refrigeration unit Prolongs the defrosting cycle, Subtle temperature rise defrost level settings. eradicates the hidden danger of during defrosting. electric leakage. Supersized double outer doors 70mm insulation layer. Shelves Equipped with 12 stainless steel shelves of 6 layers, which are adjustable to meet different Standard USB port requirements of Capable of storing more users. than 15 years of data. 2222 Safe lock Electronic mortise lock Foam beam design design, with NFC clocking-in function(fineffect. gerprint optional). Optional: Blood baskets (48 units), and the Casters and foots capacity is 900 x 200ml blood bags. 4 omnidirectional casters and 2 level legs, Optimal system and engine noise easy to move, lock and reduction design, the temperature can level. cool down to -30°C within 3 hours. Bottom strainer drawable design



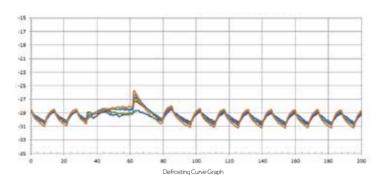
- 1th storey center

- 2th storev center

- 4th storev center

- 5th storev center

— 6th storey center



Easy to clean.

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#### **Specifications**

|                 | Model                        |          | DW-30L1280F        |  |  |
|-----------------|------------------------------|----------|--------------------|--|--|
|                 | Cabinet Type                 |          | Upright            |  |  |
|                 | Climate Class                |          | N                  |  |  |
| Technical Data  | Cooling Type                 |          | Forced air cooling |  |  |
| i echnicai Data | Defrost Mode                 |          | Automatic defrost  |  |  |
|                 | Refrigerant                  |          | HC                 |  |  |
|                 | Sound Level (dB(A))          |          | 46                 |  |  |
|                 | Cooling Performance (        | °C)      | -30                |  |  |
| Performance     | Temp Range (°C)              |          | -10~-30            |  |  |
| 0 1             | Controller                   |          | Microprocessor     |  |  |
| Control         | Display                      |          | LCD                |  |  |
|                 | Power Supply (V/Hz)          |          | 220~240/50         |  |  |
| Flactwical Data | Power (W)                    |          | 800                |  |  |
| Electrical Data | Electrical Current (A)       |          | 4.5                |  |  |
|                 | Capacity (L/Cu.Ft)           |          | 1280/45.2          |  |  |
|                 | Net/Gross<br>Weight(approx)  | kg       | 420/480            |  |  |
|                 |                              | lbs      | 925/1057           |  |  |
|                 | Interior<br>Dimension(W*D*H) | mm       | 1320*752*1260      |  |  |
|                 |                              | in       | 52/29.6/49.6       |  |  |
| Dimensions      | Exterior<br>Dimension(W*D*H) | mm       | 1520*1065*1980     |  |  |
|                 |                              | in       | 59.8/41.9/77.9     |  |  |
|                 | Packing<br>Dimension(W*D*H)  | mm       | 1570*1080*2130     |  |  |
|                 |                              | in       | 61.8/42.5/83.8     |  |  |
|                 | Container Load (20'/40       | D'/40'H) | 6/14/14            |  |  |
|                 | High/Low Temperatur          |          | Υ                  |  |  |
|                 | Remote Alarm                 |          | Υ                  |  |  |
|                 | Power Failure                |          | Υ                  |  |  |
| Alarms          | Sensor Error                 |          | Υ                  |  |  |
|                 | Low Battery                  |          | Υ                  |  |  |
|                 | High Ambient Temper          | ature    | Υ                  |  |  |
|                 | Door Ajar                    |          | Υ                  |  |  |
|                 | Castor                       |          | Υ                  |  |  |
|                 | Sensor Error                 |          | Υ                  |  |  |
|                 | Porthole                     |          | Y                  |  |  |
| Accessories     | Drawers/Inner Doors          |          | 12/-               |  |  |
|                 | Temperature Recorde          | r        | /                  |  |  |
|                 | USB Interface                |          | Y                  |  |  |
|                 | RS485                        |          | Y                  |  |  |
| Other           | Certification                |          | CE                 |  |  |

F suffix - Forced air cooling

Product appearance and specifications are subject to change without notice

#### **Typical Installation and Application**

Suitable for sample storage within blood banks, hospitals, disease control centres, research institutes, electronic, chemical and other industries, cryopreservation of plasma, biologics and other products, also suitable for cold tests for components and materials.



#### **Key Features**



# Energy saving with variable frequency inverter technology

Optimized refrigeration system with a high efficiency inverter compressor to reduce energy consumption.



# Excellent temperature uniformity in a large storage space

Features built-in evaporator, large storage space and adjustable shelf, providing faster temperature pulldown and a better temperature uniformity of set point ±3°C.



#### Low noise

Sound reduction design lowers the sound level to 37dB(A) at 220V/50Hz.



#### **Environment Friendly**

1)HC refrigeration system contains zero chlorine and fluorine,which is better for the environment. 2)Urethane foam insulation complies with European ROHS regulation.

DW-30L818BP

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#### **Product Advantages**



#### -30°C Biomedical Freezer

#### **Microprocessor Control System**

·Microprocessor-based temperature control.

·Large LED displays cabinet temperature with 0.1  $^{\circ}$ C resolution with adjustable temperature setting from -10  $^{\circ}$ C to -30  $^{\circ}$ C.

·Cabinet temperature, ambient temperature and voltage are shown on the panel.

 $\cdot$ Alarm conditions include high and low temperature, sensor error, power failure, low battery, door ajar and high ambient.

·Alarm modes are audible and flashing lights. Remote alarm terminals are available.

·Battery supports display and alarm system for forty eight hours after power outage.

·Optional features are IoT module, USB port, temperature recorder and NFC swipe card functions.

#### Insulation

·70 mm thick insulation.

Inner doors for better thermal efficiency.

#### **Porthole**

·Two standard portholes allow ease of temperature testing.

# **Security Lock**

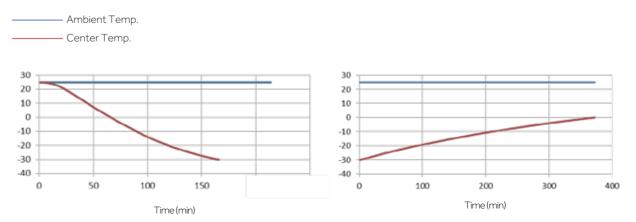
 $\cdot Lock$  is standard. Magnetic lock is optional for added protection and security

# **Temperature Recorder**

·Optional temperature recorder for temperature recording and compliance.



# Typical Performance Characteristics at 25°C ambient



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# **Product Advantages**

#### Easy to clean and corrosion resistant

Electric zinc plate powder sprayed internal liner and large round corner design and coated steel plate exterior design ensure reliable corrosion prevention which is easy to clean.



ture, with 0.1 °C display

accuracy.

Equipped with 5 plastic coated steel wire shelves with optional stainless steel shelves, which are adjustable to meet the different requirements of users.

# -30°C Biomedical Freezer

# **Specifications**

|                | Model   |                | DW-30L818  | DW-30L818BP    |  |
|----------------|---|----------------|--|----------------|--|
|                | Cabinet Type  |                | Upright  | Upright        |  |
|                | Climate Class   |                | SN N   | SN N           |  |
| echnical Data  | Cooling Type  |                | Direct Cooling   | Direct Cooling |  |
| echinical Data | Defrost Mode  |                | Manual   | Manual         |  |
|                | Refrigerant   |                | HC   | HC             |  |
|                | Sound Level (dB(A))   |                | 44   | 37 (220V/50Hz) |  |
|                | Cooling Performance (   | °C)            | -30  | -30            |  |
| Performance    | Temp Range (°C)   |                | -10~-30  | -10~-30        |  |
| <b>S</b> 1 1   | Controller  |                | Microprocessor   | Microprocessor |  |
| Control        | Display   |                | LCD  | LED            |  |
|                | Power Supply (V/Hz)   |                | 220~240/50   | 100~230/50/60  |  |
| lectrical Data | Power (W)   |                | 380  | 680            |  |
|                | Electrical Current (A)  |                | 2.8  | 7.7            |  |
|                | Capacity (L/Cu.Ft)  |                | 818/28.8   | 818/28.8       |  |
|                |   | kg             | 205/235  | 210/240        |  |
|                | Weight (approx)   | lbs            | 451.9/518.1  | 463.0/529.1    |  |
|                | Interior<br>Dimension (W*D*H)   | mm             | 750*755*1460   | 750*755*1460   |  |
|                |   | in             | 29.5*29.7*57.5   | 29.5/29.7/57.5 |  |
| Dimensions     | Exterior<br>Dimension (W*D*H)   | mm             | 988*951*1980   | 988*951*1980   |  |
|                |   | in             | 38.9/37.4/78.0   | 38.9/37.4/78.0 |  |
|                | Capacity (L/Cu.Ft)   kg   Weight (approx)   lbs   Interior   Dimension (W*D*H)   in   Exterior   Dimension (W*D*H)  | mm             | 1040*1060*2150   | 1040*1060*2150 |  |
|                |   | 40.9/41.7/84.6 | 40.9/41.7/84.6   |                |  |
|                | Container Load (20'/40  | )'/40'H)       | 10/22/22   | 10/22/22       |  |
|                |   |                | Υ  | Y              |  |
|                |   |                | Direct Cooling   Manual   HC   44   -30   -10~-30   Microprocessor   LCD   220~240/50   380   2.8   818/28.8   kg   205/235   lbs   451.9/518.1   mm   750*755*1460   in   29.5*29.7*57.5   mm   988*951*1980   in   38.9/37.4/78.0   mm   1040*1060*2150   in   40.9/41.7/84.6   O'H)   10/22/22   Y   Y   Y   Y   Y   Y   Y   Y   Y  | Y              |  |
|                | Power Failure   |                | Υ  | Y              |  |
| Alarms         | Sensor Error  |                | Υ  | Y              |  |
|                |   |                | N  | Y              |  |
|                | Cooling Type  Defrost Mode  Refrigerant  Sound Level (dB(A))  Cooling Performance (°C)  Temp Range (°C)  Controller  Display  Power Supply (V/Hz)  Power (W)  Electrical Current (A)  Capacity (L/Cu.Ft)  Net/Gross kg Weight (approx) lbs  Interior mm Dimension (W*D*H) in  Exterior Dimension (W*D*H) in  Packing mm Dimension (W*D*H) in  Container Load (20'/40'/40'H)  High/Low Temperature  Remote Alarm Power Failure | Υ              | Y  |                |  |
|                |   |                | Υ  | Υ              |  |
|                |   |                | Υ  | Y              |  |
|                | Sensor Error  |                | Υ  | Y              |  |
|                |   |                | Manual         Manual           HC         HC           44         37 (220V/50Hz           -30         -30           -10~-30         Microprocessor           LCD         LED           220~240/50         100~230/50/60           380         680           2.8         7.7           818/28.8         818/28.8           205/235         210/240           451.9/518.1         463.0/529.1           750*755*1460         750*755*1460           29.5*29.7*57.5         29.5/29.7/57.5           988*951*1980         988*951*1980           38.9/37.4/78.0         38.9/37.4/78.0           1040*1060*2150         1040*1060*215           40.9/41.7/84.6         40.9/41.7/84.6           10/22/22         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y           Y         Y </td <td>Y</td> | Y              |  |
| ccessories     |   |                | -/3  | -/3            |  |
|                |   | r              | Optional   | Optional       |  |
|                |   | •              | · · · · · · · · · · · · · · · · · · ·  | ·              |  |
|                |   |                | · · · · · · · · · · · · · · · · · · ·  | Y              |  |
| )ther          | Certification   |                | CE   | CE             |  |

BP suffix - Variable frequency invertor compressor

 $\label{product} \mbox{Product appearance and specifications are subject to change without notice}$ 

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# -30°C Biomedical Freezer (Upright)

This freezer is designed for storage of critical and temperature sensitive biological samples, laboratory products and medical products in institutions such as blood banks, hospitals and research laboratories.



#### **Key Features**

- Forced air and auto defrost design: -30°C storage temperature with automatic defrost cycles guided by time and temperature, ensure maximum temperature stability and minimize energy use
- High-performance refrigeration system: achieves excellent temperature uniformity with intelligent operation control at -30°C
- Microprocessor control with digital display: 0.1°C control increments, adjustable range of -10°C to -30°C







USB



Door lock Backup battery and padlock protection

Malfunction Alarms

DW-30L420F







Microprocessor control panel

Air distribution

# -30°C Biomedical Freezer (Upright)

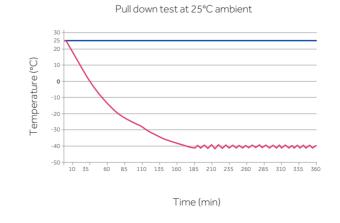


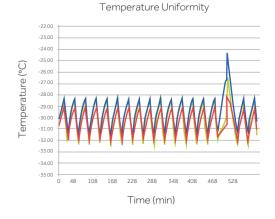
#### Safety

- Alarm system includes audible and visual alerts. Alarms include high and low temperature, sensor error, power failure, door ajar, low battery and high ambient temperature. Remote contacts are standard
- Backup battery provides continuous monitoring and displays the interior temperature for up to 48hrs in the event of a mains power failure
- Standard USB port on DW-30L420F allows users to download temperature data
- Lockable door with padlock for added sample security

# **Ergonomic Design**

- Self-closing door with 90° stay-open feature conserves energy and helps maintain temperature uniformity to protect your valuable samples
- · Corrosion-free interior brushed stainless steel liner and exterior coated steel plate
- 5 adjustable stainless steel shelves and optional drawer
- Casters and levelling legs, easy to move and lock





\*Freezer set-point -30 °C, ambient temperature 25 °C

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Haier Biomedical -30°C biomedical freezer with smart control and energy-saving hydrocarbon refrigeration system for safe and reliable product storage.





**DW-30L278** 

DW-30L508

# **Application**

Biomedical and life science laboratories within blood banks, hospitals, disease control centres and research institutes as well as electronics and chemical industries. Used for cryopreservation of plasma, biological samples and other products and cold tests for components and materials.

# -30°C Biomedical Freezer

#### **Advantages**

 High-efficiency and energy-saving compressor and refrigeration system

Industrial grade energy-saving compressor and optimized cooling system reduces power consumption by more than 55% compared with older models.

· Green and environmentally friendly

Hydrocarbon refrigerant compressor system and use of hydrocarbon refrigerants makes the refrigeration system completely green and environmental friendly. Built with isopentane foam polyurethane insulation, which complies with European RoHS Directive.

#### · Superior temperature uniformity

Evaporator-shelf design speeds up the cooling process and provides a more uniform temperature distribution. The temperature uniformity at specific points throughout the unit is  $\pm 4^{\circ}$ C.

#### Low sound level

Sound-reducing design with optimized system reduces the sound level, smoother operation eliminates high-pitched noise.

#### **Key Features**



#### Microprocessor control system:

- Microprocessor temperature controller, LCD temperature display, display accuracy at 0.1°C.
- Adjustable temperature setting from -10 °C to -30 °C
- Multiple alarm functions including high temperature alarm, low temperature alarm, sensor failure alarm and power failure alarm
- Sound and flash alarm
- Alarm lasts for more than 24 hours after power failure



#### Excellent temperature-retaining ability

High efficient insulation and double-sealing design improves temperature performance, energy efficiency and system reliability



#### Lock

Lock latch and key lock double-lock design provides an extra level of security



#### Porthole

Porthole design is standard



#### Recorder

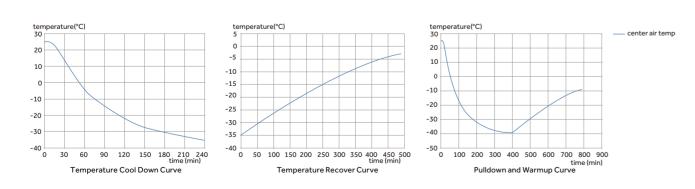
Optional chart temperature recorder available



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#### DW-30L508 TYPICAL PERFORMANCE CHARACTERISTICS AT 25°C AMBIENT



# -30°C Biomedical Freezer

# **Specifications**

|                 | Model                         |           | DW-30          | L420F      | DW-30L278      | DW-30L508            |                |  |
|-----------------|-------------------------------|-----------|----------------|------------|----------------|----------------------|----------------|--|
|                 | Cabinet Type                  |           | Upri           | ight       | Upright        | Upright, Double Door |                |  |
|                 | Climate Class                 |           | SN             | IN         | SN N           | SN                   | N              |  |
| Technical Data  | Cooling Type                  |           | Forced ai      | r Cooling  | Direct Cooling | Direct C             | ooling         |  |
|                 | Defrost Mode                  |           | Automatio      | : Defrost  | Manual         | Manual               |                |  |
|                 | Refrigerant                   |           | H              | С          | HC             | HC HC                |                |  |
|                 | Sound Level (dB(A))           |           | 4              | 6          | 40             | 41                   | 43             |  |
| Performance     | Cooling Performanc            | e (°C)    | -3             | 30         | -30            | -30                  | )              |  |
|                 | Temperature Range             | (°C)      | -10~           | 30         | -10~-30        | -10~-30              |                |  |
| Control         | Controller                    |           | Micropro       | ocessor    | Microprocessor | Micropro             | Microprocessor |  |
| CONTROL         | Display                       |           | LED            |            | LCD            | LCD                  | LED            |  |
|                 | Power Supply (V/Hz)           | )         | 220~240/50     | 208~230/60 | 220~240/50     | 220~240/50           | 115/60         |  |
| Electrical Data | Power (W)                     |           | 460/1000       | (Defrost)  | 330            | 530                  | 600            |  |
|                 | Electrical Current (A)        |           | 4.0/5.8([      | Defrost)   | 2              | 3                    | 5.4            |  |
|                 | Capacity (L/Cu.Ft)            |           | 420/           | 14.8       | 278/9.8        | 490/1                | 7.3            |  |
|                 | Net/Gross Weight              | kg        | 195/           | /225       | 115/135        | 164/2                | 200            |  |
|                 | (approx)                      | lbs       | 429.9/496.0    |            | 253.7/297.7    | 361.6/4              | 140.9          |  |
|                 | Interior Dimension<br>(W*D*H) | mm        | 685*61         | 0*1028     | 520*435*1230   | 685*610              | *1228          |  |
| Diagonalism     |                               | in        | 27.0*24.0*40.5 |            | 20.5*17.1*48.4 | 27.0*24.0*48.3       |                |  |
| Dimensions      | Exterior Dimension            | mm        | 950*92         | 0*1900     | 745*675*1810   | 915*810*1860         |                |  |
|                 | (W*D*H)                       | in        | 37.4*36.2*74.8 |            | 29.3*26.6*71.3 | 36.0*31.9*73.2       |                |  |
|                 | Packing Dimension             | mm        | 980*935*2040   |            | 805*725*1970   | 980*905*2040         |                |  |
|                 | (W*D*H)                       | in        | 38.6*36.8*80.3 |            | 31.7*28.5*77.6 | 38.6*35.6*80.3       |                |  |
|                 | Container Load (20'/          | 40'/40'H) | 12/2           | 4/24       | 14/28/28       | 12/24                | /24            |  |
|                 | High/Low Temperat             | ure       | Y              | (          | Υ              | Y                    | Υ              |  |
|                 | Remote Alarm                  |           | Y              | (          | /              | /                    | Υ              |  |
|                 | Power Failure                 |           | Y              | /          | Υ              | Υ                    | /              |  |
| Alarms          | Sensor Error                  |           | Y              | (          | Υ              | Y                    | Υ              |  |
|                 | Low Battery                   |           | Y              | /          | /              | /                    | /              |  |
|                 | High Ambient Temp             | erature   | Υ              | /          | /              | /                    | /              |  |
|                 | Door Ajar                     |           | Y              | (          | /              | /                    | /              |  |
|                 | Caster                        |           | Y              | /          | Υ              | Y                    |                |  |
|                 | Foot                          |           | Y              | /          | Υ              | Y                    |                |  |
|                 | Porthole                      |           | Y              | /          | Υ              | Y                    |                |  |
| Accessories     | Drawers/Inner Doors           | 5         | -/3 6/-        |            | 6/-            | 10/-                 |                |  |
|                 | Temperature Record            | der       | Optio          | onal       | Optional       | Optional             |                |  |
|                 | USB Interface                 |           | Y              |            | /              | /                    |                |  |
| Others          | Certification                 |           | CE             | /          | CE             | CE                   | UL             |  |

 $\label{product} \mbox{Product appearance and specifications are subject to change without notice}$ 

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The Haier Biomedical -25°C biomedical freezer maximises storage space. Integrated cold shelf and evaporator design provides maximum refrigeration efficiency.



**DW-25L262** 

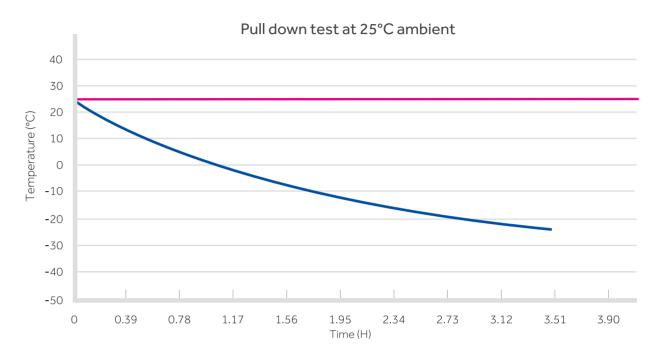
# Reliability and Key Features

- Chemically stable,HC commercially available and environmently safe refrigerant
- High density foam insulation for rigidity and stable storage temperature
- Microprocessor control, digital display, adjustable temperature range: -10°C~-25°C
- LED digital display for clear observation
- Wide voltage tolerance design with applicable voltage range of 187~242 V/AC

# Safety

- Multiple malfunction alarms including high low temperature, sensor error
- Two types of alarm indications: audible buzzing and visible flashing light
- Door lock for storage safety
- Storage drawer

# -25°C Biomedical Freezer



# **Specifications**

|                 | Model                         |           | DW-                        | 25L92                      | DW-2  | 25L262         |  |  |
|-----------------|-------------------------------|-----------|----------------------------|----------------------------|---|----------------|--|--|
|                 | Cabinet Type                  |           | Upi                        | right                      | Up  | right          |  |  |
|                 | Climate Class                 |           | SN                         | 1 N                        | SI  | SN N           |  |  |
| T 1             | Cooling Type                  |           | Direct                     | Cooling                    | Direct Cooling  |                |  |  |
| Technical Data  | Defrost Mode                  |           | Ма                         | nual                       | Manual  |                |  |  |
|                 | Refrigerant                   |           | F                          | IC .                       | HC  |                |  |  |
|                 | Sound level ((dB(A))          |           | 27                         | 28                         | 34  | 34             |  |  |
| Performance     | Cooling Performance (°C)      |           | -1                         | 25                         | -   | 25             |  |  |
| Performance     | Temperature Range (°C)        |           | -10                        | ~-25                       | Upr SN Direct ( Mat H 34 -2 -10- Micropr L( 220~240/50 270 1.4 262 88. 194.0/ 480*46 18.9*18 700*705*1665 27.6*27.8*65.6 775*760*1880 30.5*29.9*74.0 21/4 | ~-25           |  |  |
| Control         | Controller                    |           | Micropr                    | ocessor                    | Upr SN Direct ( Mai H 34 -2 -10 Micropr L( 220~240/50 270 1.4 262 88 194.0, 480*46 18.9*18 700*705*1665   27.6*27.8*65.6 775*760*1880 30.5*29.9*74.0      | rocessor       |  |  |
| Control         | Display                       |           | L                          | CD                         | L   | CD             |  |  |
|                 | Power Supply (V/Hz)           |           | 220~240/50                 | 115/60                     | 220~240/50  | 115/60         |  |  |
| Electrical Data | Power (W)                     | 255       | 125                        | 270                        | 135   |                |  |  |
|                 | Electrical Current (A)        |           | 1.2                        | 1.8                        | 1.4   | 2.6            |  |  |
|                 | Capacity (L/Cu.Ft)            |           | 92                         | /3.2                       | 262/9.3   |                |  |  |
|                 | Net/Gross Weight (appox)      | kg        |                            | /51                        | 88/93   |                |  |  |
|                 |                               | lbs<br>mm | 101.4/112.4<br>435*410*635 | 101.4/112.4<br>435*410*635 |   |                |  |  |
|                 | Interior Dimensions (W*D*H)   | in        | 17.1*16.1*25.0             | 17.1*16.1*25.0             |   |                |  |  |
| Dimensions      | F D: /\/\                     | mm        | 640*610*810                | 640*610*810                |   |                |  |  |
| 21111011010110  | Exterior Dimensions (W*D*H)   | in        | 25.2*24.0*31.9             | 25.2*24.0*31.9             |   |                |  |  |
|                 | Packing Dimensions (W*D*H)    | mm        | 660*700*900                | 660*700*900                |   |                |  |  |
|                 | Tacking Dimensions (W D Ti)   | in        | 26.0*27.6*35.4             | 26.0*27.6*35.4             | 30.5*29.9*74.0  | 30.5*29.9*74.4 |  |  |
|                 | Container Load (20'/40'/40'H) |           | 48/10                      | 08/108                     | 21/4  | 45/45          |  |  |
|                 | High/Low Temp                 |           | Υ                          | Y                          | Y   |                |  |  |
| A.I.            | Sensor Error                  |           | Υ                          | Y                          | Y   |                |  |  |
| Alarms          | Door Ajar                     |           | Υ                          | Y                          | Y   |                |  |  |
|                 | Remote Alarm                  |           | Υ                          | Y                          |   | Υ              |  |  |
| Accessories     | Drawers                       |           |                            | 3                          |   | 7              |  |  |
| Others          | Certification                 |           | CE                         | UL                         | CE  | UL             |  |  |

Product appearance and specifications are subject to change with out notice

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