



HF100

CO₂ tri-gas incubators



LABORATORY



HF100

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Cod. HF100H
Tri-gas Incubator (High Oxygen)

Cod. HF100L
Tri-gas Incubator (Low Oxygen)

HF100 tri-gas incubator, providing precise temperature, CO₂, O₂ control as well as high humidity, is widely used in scientific research to grow and maintain cell cultures. Typical fields of application include tissue engineering, in vitro fertilization, neuroscience, cancer research and other mammalian cell research.



- **A** Stainless steel chamber with easy-to-clean covered corners reduces contamination-prone surface.

- **B** The turbulence-free chamber ventilation improves CO₂, O₂, humidity and temperature uniformity.

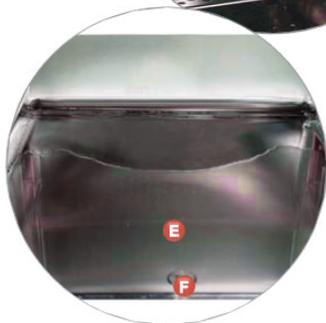


- **C** Easy-removable, replaceable shelves make chamber cleaning a rapid and efficient process.

- **D** Standard three inner glass doors minimize recovery time and the risk of contamination.

- **E** Innovative design of water reservoir replacing water tray, allows rapid recovery of optimal humidity.

- **F** Water level alarm (audible and visible) alerts users when the water reservoir needs to be refilled.



- **G** Integrated electric siphon pump facilitates drainage operation.

Temperature control

- Direct heating enables rapid temperature recovery while air jacket provides isolation against ambient temperature fluctuations
- PT1000 temperature sensor ensures stable temperature control with little gradient and prompt temperature recovery without overheat
- Three temperature control settings (main heater, outer door heater and overheat protection) minimize condensation and yield precise temperature uniformity

CO₂ control

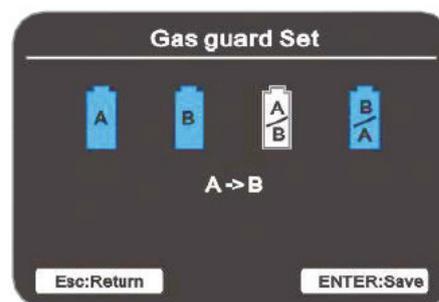
- Drift free IR CO₂ sensor responds extremely fast to gas concentration changes
- Auto-zero runs automatically to recover the indicator to 'zero' every 24 hours
- HEPA filter of CO₂ inlet port can remove impurities and contaminants with efficiency 99.998% @ 0.2um
- Standard CO₂ cylinder auto changer alerts users and ensures continuous CO₂ supply



AUTO START



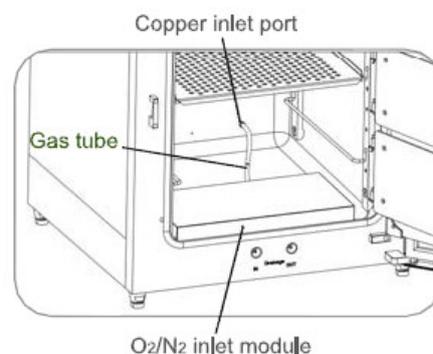
Access port



Gas guard set

O₂ control

- Maintenance-free zirconium oxide sensor: long life, good linearity and high precision
- Oxide sensor is calibrated automatically (auto-cal) and stays in the incubator during the 90°C decontamination routine
- Well designed O₂/N₂ inlet module improves humidity stability in chamber



Constant humidity

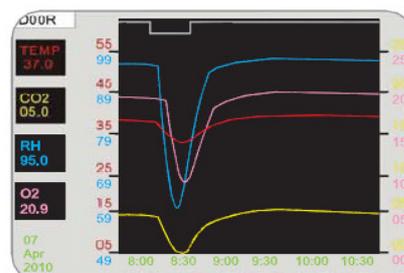
- Larger water surface area provided by water reservoir with inclined and rounded corners
- A new water level alarm (audible and visible) alerts users when the water reservoir needs to be refilled
- Standard humidity sensor ensures a constant high level of humidity to prevent cultures from drying out

User-friendly interface

- Microprocessor with soft-touch control panel for optimum operation
- Large-size TFT-LCD display for temperature, CO₂, O₂ concentration and RH
- Comprehensive visual and audio alarms for all parameters
- Diagnostic interface provide comprehensive solutions to frequently encountered problems
- RS232 port standard for communication and external instrument logging

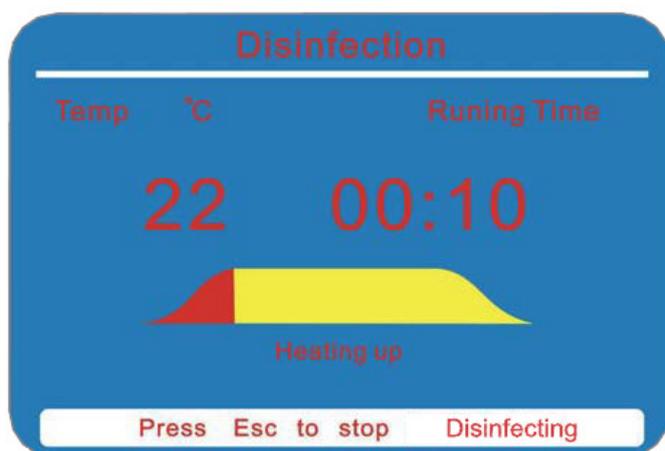


Large-size TFT-LCD



Real-time monitoring system

- 90°C disinfection routine decontaminates the entire interior of the chamber while causes less damage to electronic components
- In independent tests, a routine disinfection cycle is proven to completely eliminate a variety of contaminants including mycoplasma
- A completely smooth inner casing with rounded corner reduces the possibility of hidden contamination
- Easy-removable, replaceable shelves make chamber cleaning a rapid and efficient process



90°C moist heat decontamination



Condensation control

Technical Features

Main features	
Temp. Control Method	Direct Heat & Air Jacket
Temp. Control Sensor	PT1000
Temp. Range (°C)	Amb. +3 to 55°C
Temp. Deviation (°C)	± 0.1
Recovery Time	≤7 mins (After 30 sec. door opening)
CO ₂ Control system	Microprocessor PID
CO ₂ Range(% CO ₂)	0 - 20
Control Accuracy	±0.1%(@37°C)
CO ₂ Sensor	IR standard or TC optional
CO ₂ Range (% CO ₂)	1.0~25.0 3.0~85.0
Control Accuracy	±0.20%(@37°C)
O ₂ Sensor	Zirconium Oxide
Alarm	
CO ₂ steel cylinder auto-switch device	Integrated
Electric siphon pump	Integrated
Auto-zero	Yes
Humidity range (% RH)	≥95% ±3%

Main features	
Interior Volume	151 L
Interior Dimensions (mm)	637x768x869 (WxDxH)
External Dimensions (mm)	470x530x607 (WxDxH)
Net Weight	72 Kg
Standard qty of shelves	3
Max. qty of shelves	10
Shelf dimensions (mm)	423x445 (WxD)
Max. load per shelf (kg)	10
Available electrical config.	220V±10%/50Hz(standard)
Rated Power	≤650VA+10%
Interior Material	Stainless steel, type 304

Optional Accessories

Additional shelf
Shelf support
Small HEPA filter
CO ₂ regulator
O ₂ regulator
N ₂ regulator
Air connector