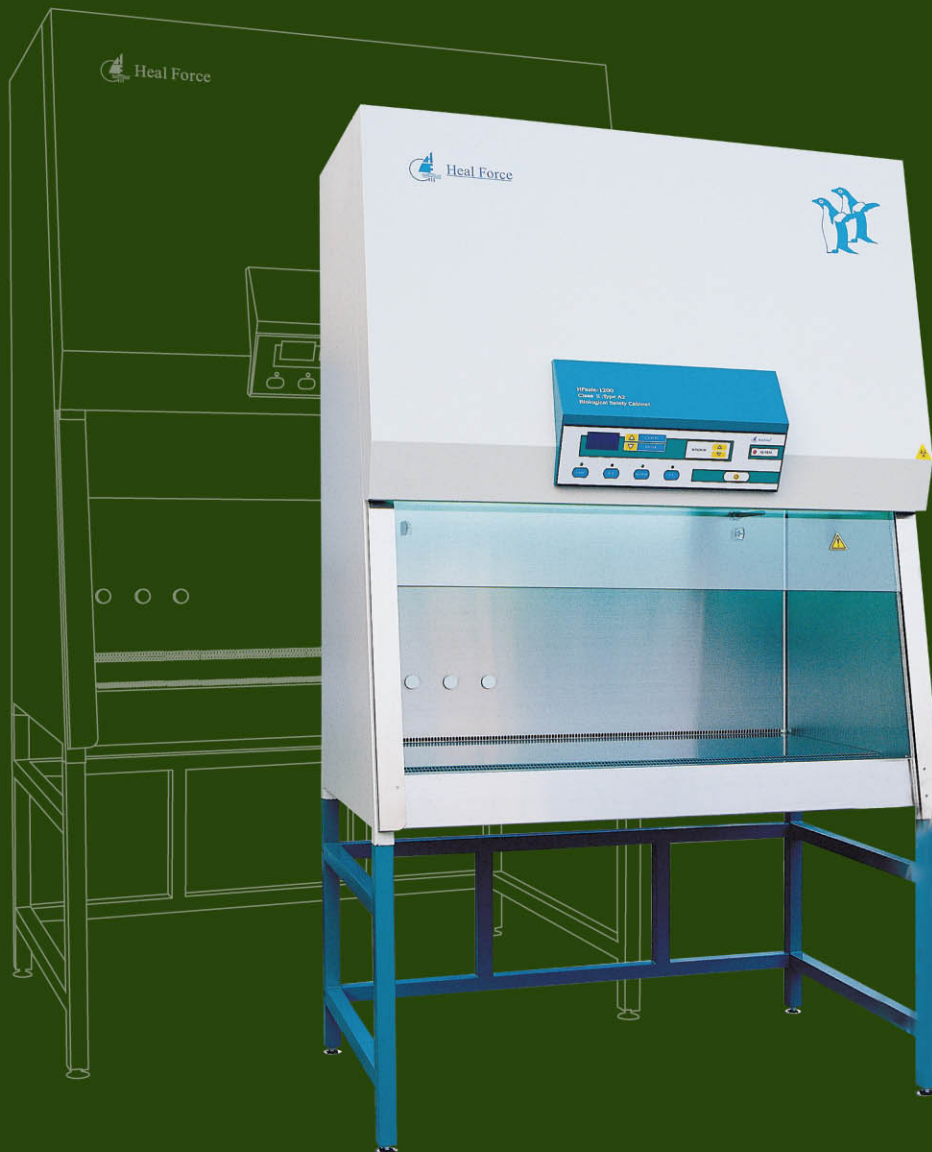


Biological Safety Cabinet (Class II Type A2 & B2)



Heal Force leads you to healthier life

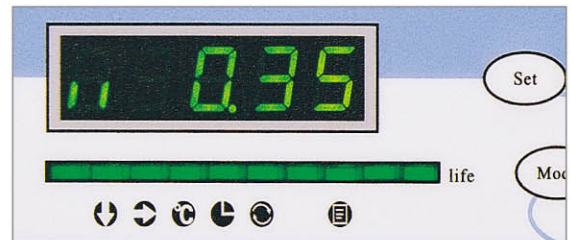
Biological Safety Cabinet

Introduction

- For superior safety and unrivaled comfort, the Heal Force Class II biological safety cabinet is trusted worldwide while offering a premium level of personnel, product and environmental protection with advanced technology at an economical price.



Scan Test For Filters



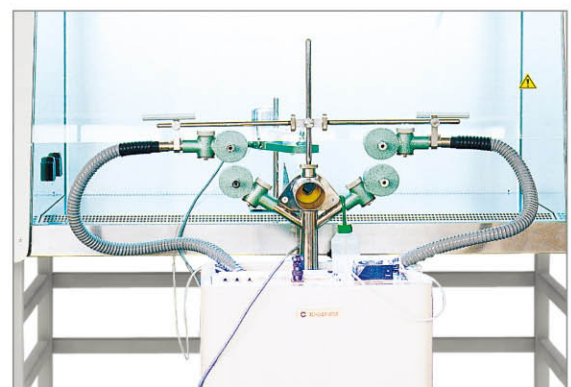
Filter Life Indicator (For Type A2 Manual-control Models)



Filter Life Indicator (For Type A2 Motorized-control & Type B2 Models)



KI-Discus Containment Test (1)



KI-Discus Containment Test (2)

Enhance Your Comfort

- Large front-panel display and user-friendly control panel
- UV lamp runs on a timer to conserve energy
- Quiet operation enables a comfortable environment
- Fluorescent lamps save energy, improve visibility
- 3 independent openings for water, vacuum and gas tap, and 2 water-proof power sockets
- Adjustable stands available with manual adjustment for convenient working positions
- 10° slanted viewscreen provides highly visible and easily accessible work area
- With optional PVC armrest, lab technicians can continuously work comfortably
- Corrosion-resistant, stainless steel with smooth radius corners for easy cleaning

(Class II Type A2 & B2)

Everything for Your Safety

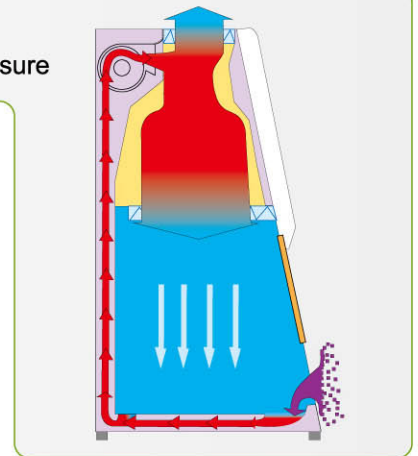
- Work area surrounded by negative pressure, double wall plenums for protection
- Long life supply and exhaust 99.999% efficient ULPA filters(0.1-0.2µm)
- Microprocessor-based control system supervises operation of all cabinet functions
- Self-adjusting motor technology precisely controls airflow volumes and velocities
- Visual and audible alarm warns of deviations from normal velocities
- Aerodynamic designed airflow grille maintains safety by preventing blockage
- UV interlock ensures the UV illumination occurs only when the sash is closed
- Laminated safety glass provides protection from explosion, breakage and UV
- Integrated alarm audibly and visually warns of improper viewscreen position
- Robust construction of cabinet prevent any potential air leakage from operation zone



Airflow Pattern of Class II Type A2

- Unfiltered Air
- Filtered Air
- Inflow Air
- Negative Pressure

- 30% air exhaust
- 70% air recirculation
- Average inflow velocity at 0.53 m/s
- Negative pressure air surrounding all biological contaminated parts



↑
Class II Type A2

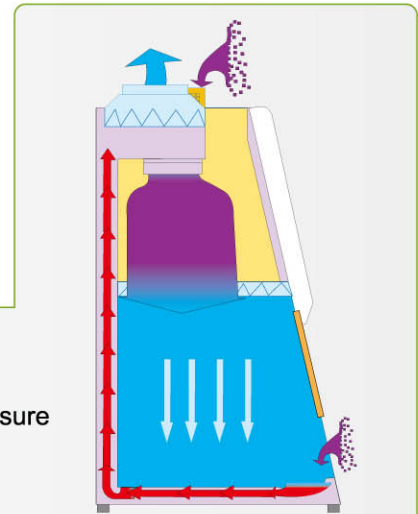
↓
Class II Type B2

- 100% air exhaust
- Average inflow velocity at 0.53 m/s
- Negative pressure air surrounding all biological contaminated parts



Airflow Pattern of Class II Type B2

- Unfiltered Air
- Filtered Air
- Inflow Air
- Negative Pressure



Features

Filtration System

- Because filters remove microorganisms and airborne particulates from the air, the quality, performance and useful life of supply and exhaust filters are critical biosafety considerations.
- Heal Force Class II type A2 biosafety cabinets are equipped with 2 long-life ULPA filters
- Supply and exhaust filters provide 99.999% typical efficiency for particle size of 0.1 to 0.2 microns
- Leak-free performance is guaranteed through structural stability and scan test conducted prior to shipping

Self-induced Blower

- Synchronously communicates with the microprocessor, there is no need for manual speed control
- Automatically compensates for normal power line variations, air disruption and filter loading.
- Precise airflow and constant air volume prevent performance degradation
- Motor consumes less energy, reduces heat output and operates more quietly.

Filter Life Indication

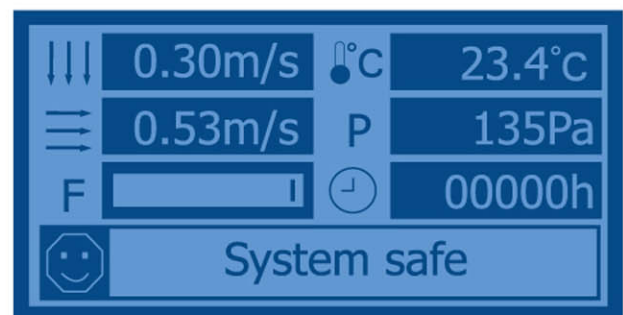
- Filter has estimated service life, which is uncertain subject to different local air quality, research subjects and operation frequency
- There is potential pollution hazard if operator is unconscious to filter expiration.
- Automatic filter life display is designed to measure filter life in according to actual condition of membrane.
- Filter life indicator is designed to help user make a confident plan for future filter replacement

Air Flow Velocity Monitoring

- Velocities of downflow and inflow are inspected at real-time, and indicated on the control panel.
- Alarm is activated in case velocity fluctuating over 20%

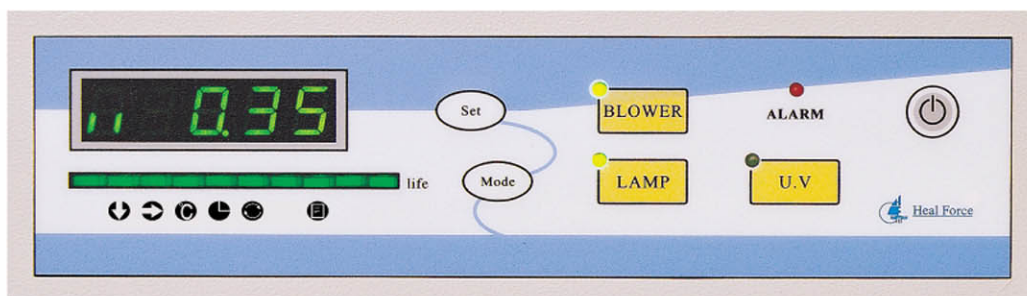
Ergonomical Structure

- Fully-closing, tempered safety glass sash with counter-balanced mechanism for effortless operation
- 10° sloped front window for more comfortable head and elbow position, reducing fatigue
- Standard 200mm± 5mm sash opening for easier access into the work zone and safety
- Unobstructed, usable work area is the larger than other major competitors
- Adjustable stands available for convenient working height



Display Panel for Class II Type B2

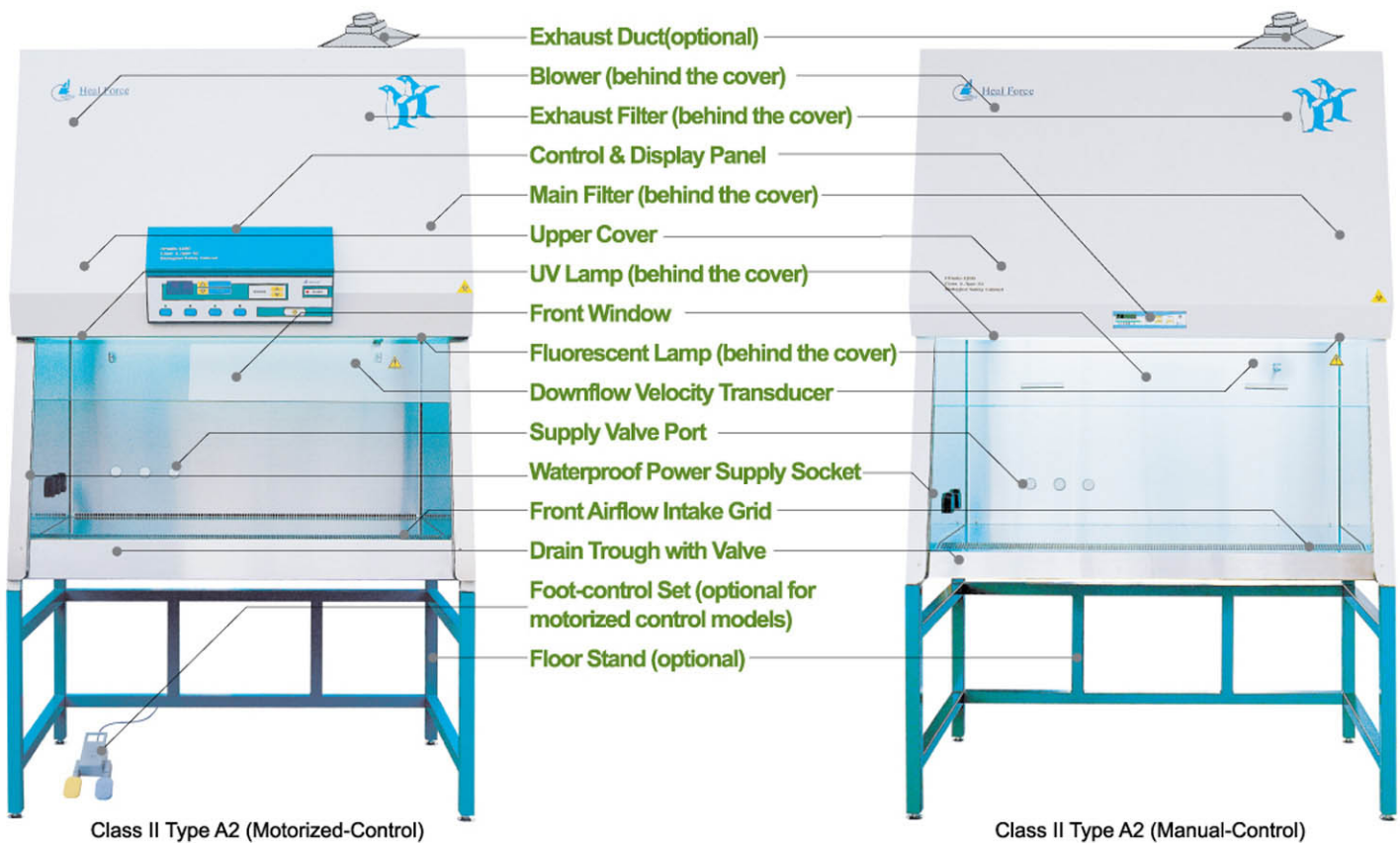
- ||| Downflow Velocity / Volume
- ≡ Inflow Velocity / Volume
- F Filter Life Indicator
- °C Temperature
- P Pressure of Main Filter
- ⌚ Cumulative Working Time
- 😊 System Status



Control Panel for Class II Type A2 (Manual-Control)

- ↕ Downflow Velocity / Volume
- ≡ Inflow Velocity / Volume
- ⊙ Temperature
- ⌚ Cumulative Working Time
- ⊙ Circulation
- ☰ Menu

Class II Type A2 Biological Safety Cabinet (Manual & Motorized Control)



Exhaust Duct

Through exhaust duct, Class II Type A2 biological safety cabinet is compatible with exhaust system (optional & customizable), whose function is to exhaust potentially contaminated air outside the cabinet and room.

Upper Cover

Removable upper cover simplifies filter replacement and blower maintenance.

Front Window

Front window consists of frameless laminated glass or toughened glass and UV-resistant glass, automatically sliding (Motorized-control) or handle adjustment (Manual-control).

Control & Display Panel

Panel indicates information on downflow and inflow velocity, filter life, pressure, temperature and system status, with precise alarm system. Password protection is for front window control (Motorized-control models only).

Drain Trough with Valve

Volume of trough is over 4 litres, equipped with drainage valve and easy to clean.

UV Lamp

Interlocked and activated to work when fluorescent lamp and blower are turned off and front window is closed.

Waterproof Socket

2 waterproof sockets are located in the side panel, for optimum convenience of using small devices inside the cabinet.

Downflow Velocity Transducer

Transducer monitors real-time downflow velocity and displays result on the panel.

Front Airflow Intake Grid

Aerodynamically designed front airflow intake grid eliminates potential turbulence and contamination.

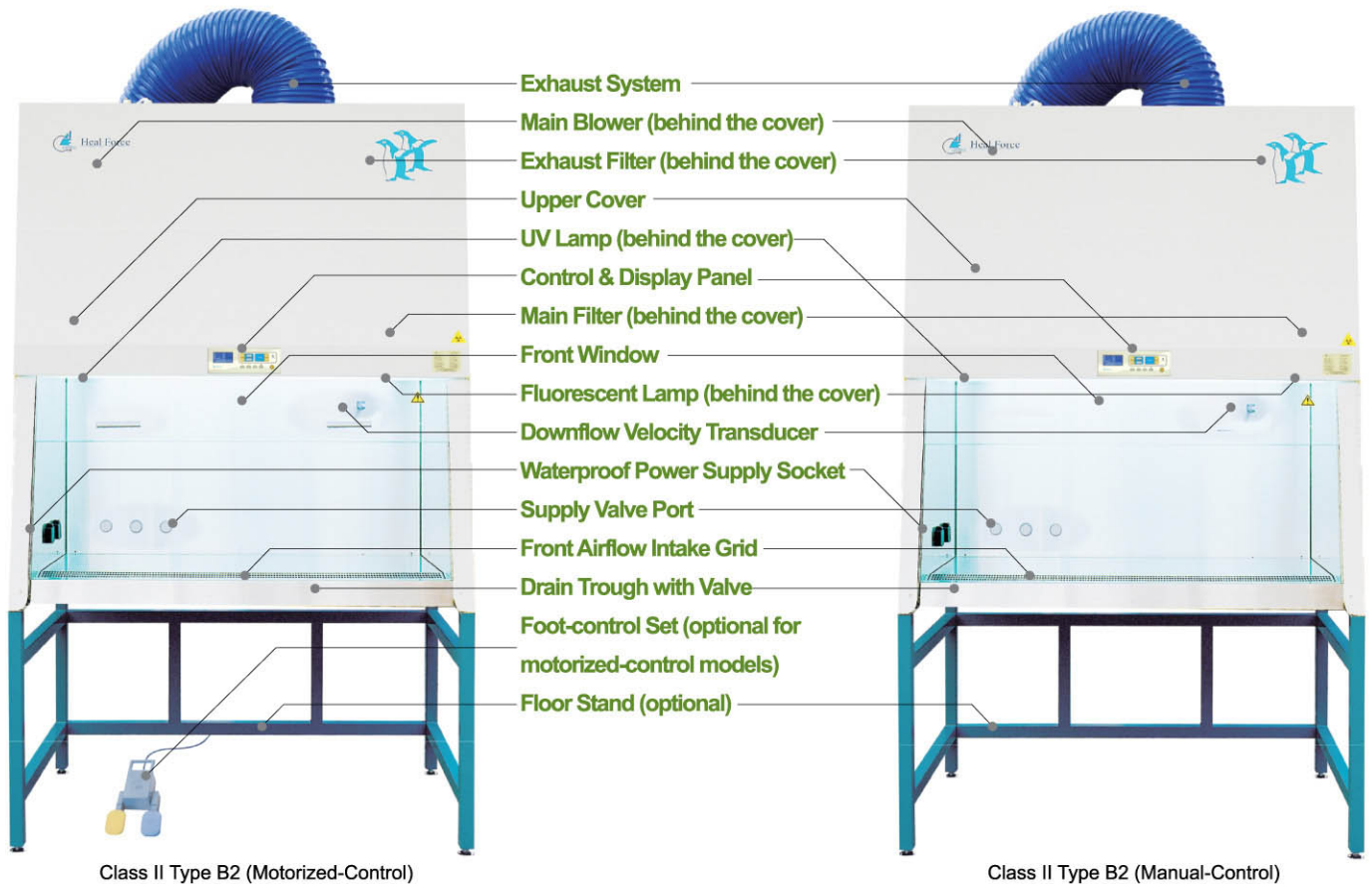
Extensible Valve Port

3 supply valve ports are available for extensive functions, compatible with liquid, gas and vacuum cartridge.

Floor Stand (Optional)

2 styles optional floor stand, stationary (without casters) and moveable (with casters and/or brake).

Class II Type B2 Biological Safety Cabinet (Manual & Motorized Control)



Class II Type B2 (Motorized-Control)

Class II Type B2 (Manual-Control)

Exhaust System

With the exhaust system, Class II Type B2 biological safety cabinet is able to exhaust potentially contaminated air outside the cabinet and room.

Upper Cover

Removable upper cover simplifies filter replacement and blower maintenance.

Front Window

Front window consists of frameless laminated glass or toughened glass and UV-resistant glass, automatically sliding (Motorized-control) or handle adjustment (Manual-control).

Control & Display Panel

Panel indicates information on downflow and inflow velocity, filter life, pressure, temperature and system status, with precise alarm system.

Floor Stand (optional)

2 styles of floor stand are optional, stationary (without casters) and moveable (with casters and/or brake).

Drain Trough with Valve

Volume of trough is over 4 litres, equipped with drainage valve and easy to clean.

UV Lamp

Interlocked UV lamp is controlled to work when fluorescent lamp and blower are turned off and front window is closed.

Waterproof Socket

2 waterproof sockets are located in the side panel, for optimum convenience of using small accessorial devices inside or by the cabinet.

Downflow Velocity Transducer

Transducer monitors real-time downflow velocity and displays result on the panel.

Front Airflow Intake Grid

Aerodynamically designed front airflow intake grid eliminates potential turbulence and contamination.

Supply Valve Port

3 supply valve ports are available for extensive functions, compatible with liquid, gas and vacuum valves.

Exhaust Blower

Besides the routine blower, a blower is equipped in exhaust system for more powerful exhaust.

Specifications

Class II Type A2 Biological Safety Cabinet

Model	HFsafe-900	HFsafe-1200	HFsafe-1500	HFsafe-1800
External Dimensions (W×D×H)(mm)*	1023 × 800 × 2260	1323 × 800 × 2260	1623 × 800 × 2260	1923 × 800 × 2260
Internal Dimensions (W×D×H)(mm)	900 × 600 × 678	1200 × 600 × 678	1500 × 600 × 678	1800 × 600 × 678
Downflow Velocity (m/s)	0.35±0.025	0.35±0.025	0.35±0.025	0.35±0.025
Inflow Velocity (m/s)	0.53±0.025	0.53±0.025	0.53±0.025	0.53±0.025
Noise (dB)	<65	<65	<65	<65
Lighting (Lux)	800~1100	800~1100	800~1100	800~1100
Control System	Microprocessor			
Main Filter	ULPA			
Exhaust Filter	ULPA			
Filter Performance	ULPA filter: for particulate >0.1~0.2µm at 99.999%, output air quality class 10			
Filter Life Indicator	Manual-control: LED strip display			
	Motorized-control: LCD display			
Power Supply**	220V/50Hz (standard)			
	220V/60Hz or 110V/60Hz (optional)		220V/60Hz (optional)	
Maximum power(W)	1850	1850	2200	2200
Net Weight (kg)	220	260	300	355

* External dimensions include floor stand (optional accessory)

** Please contact us for more optional power supply information

Class II Type B2 Biological Safety Cabinet

Model	HFsafe-900TE	HFsafe-1200TE	HFsafe-1500TE	HFsafe-1800TE
External Dimensions (W×D×H)(mm)*	1023 × 800 × 2260	1323 × 800 × 2260	1623 × 800 × 2260	1923 × 800 × 2260
Internal Dimensions (W×D×H)(mm)	900 × 600 × 678	1200 × 600 × 678	1500 × 600 × 678	1800 × 600 × 678
Downflow Velocity (m/s)	0.30±0.025	0.30±0.025	0.30±0.025	0.30±0.025
Inflow Velocity (m/s)	0.53±0.025	0.53±0.025	0.53±0.025	0.53±0.025
Exhaust Volume (m³/h)	936	1315	1645	1972
Downflow Volume (m³/h)	626	835	1045	1253
Noise (dB)	<60	<60	<60	<60
Lighting (Lux)	800~1100	800~1100	800~1100	800~1100
Control System	Microprocessor			
Main Filter	ULPA			
Exhaust Filter	HEPA			
Filter Performance	ULPA filter: for particulate >0.1~0.2µm at 99.999%, output air quality class 10			
	HEPA filter: for particulate >0.3µm at 99.999%, output air quality class 100			
Filter Life Indicator	LCD display			
Power Supply**	220V/50Hz & 220V/60Hz available			
Maximum power(W)	2200			
Net Weight (kg)	220	260	300	355

* External dimensions include floor stand (optional accessory)

** Please contact us for more optional power supply information

Certificates Biological Safety Cabinet (Class II Type A2 & B2)

European Standard EN12469:2000
Chinese Standard YY0569-2005



TÜV CE



TÜV ISO13485



TÜV NORD EN12469
(For HFsafe-900/1200, Standard Manual-control Model)



TÜV NORD GS
(For HFsafe-900/1200, Standard Manual-control Model)



Heal Force Laboratory Equipment



Laboratory Centrifuge



Biological Safety Cabinet



Tri-gas Incubator



Water Purification System



CO₂ Incubator



Heal Force Bio-Meditech Holdings Limited
Nison Instrument (Shanghai) Limited

International Sales Office: Floor 15, No.2 Hua Shan Road, Shanghai 200040, P.R. China

Tel: +86 21 62728646

E-mail: export@healforce.com

Fax: +86 21 62710529

Website: www.healforce.com

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