***Heal Force Laboratory Equipment***

*Heal Force specialises in the design, development, manufacture and sales of labora­tory equipments in the fields of Biosafety protection, Centrifugation, Cell culture, Water purification & Gene amplification.*

Life Science ，Heal Force



**AlphaClean 1300**

Vertical Laminar Flow Clean Benches

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***Biosafety Cabinet***

Heal Force brand stands for safety, ergonomics and performance. Taking advantage of a heritage from over 25 years experience, Heal Force offers safety features, options and accessories beyond the standard requirements, to fulfill different needs. Thousands of units installed in laboratories in more than 100 Countries.

***Centrifuge***

Neofuge, the name that defines quality centrifuges from Heal Force. Offering bench-top high speed models with or without refrigeration for today\* s discerning laboratory technicians. Neofuge series provide excellent centrifugal effect and maximum application versatility.

***CO2/Tri-GasJncubator***

Heal Force Smart Cell incubator provides you with natural simulation to ensure optimum growth conditions for you culture at all time. Thafs why it is widely used in fields of application including tissue engineering, in vitro fertilization, neuroscience, cancer research and other mammalian cell researches.

***Watei^PurrHcation***

Wei I-proved Heal Force water purification system offers ideal and comprehensive solution for a choice of water qualities that range from primary for simple routine washing and rinsing, through to ultra-high grade for different critical science and analytical applications.

***Thermal Cycler***

Since PCR is central for molecular biology research, you need flexible solutions that can help you achieve PCR success for virtually any application. Heal Force has been developing new cycling platforms from economical option to advanced series to empower your search. These instruments are renowned for their reliability, accu­racy, and user-friendly interfaces.

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Heal Force leads you to healither life

The next level of cleanliness

Global market vision

Heal Force biosafety cabinets and laminar flow clean benches focus on quality and design that comes from a heritage of over 25 years\* experience. At Heal Force we know how important it is to offer high level of protection to operator, sample and environment with advanced technology. With an extensive trace record of safety , reliability and performance, Heal Force cabinets and benches make an idea investment for a wide range of applications.

**"We know clean .-air".**

Welcome to Heal Force

We know how important to design a product in compliance with current worldwide safety standards. There are three widely recognized global standards for BSC performance; EN12469:2000(European standard), NSF/ANSI 49 (American standard) and YY0569 (Chinese standard).

**NSF/ANSI 49**

HFsafeLC series are independently tested and certified to NSF/ANSI 49, By NSF International, a leading testing agency in the USA.

**EN12469**

Our Class II type A2 biological safety cabinets are independently tested and certified to EN12469 standard

**YY0569**

Heal Force, as a dafter for Chinese BSC standard, has HFsafeLC series independently tested and certified to YY0569

HFsafe LC series are tested and certified to the North America standard NSF/ANSI 49

2014

2015

The only Chinese manufacturer invited to attend global seminar for BSCs

2016

Launch of vertical laminar flow clean benches for clean-air product line extension

2016

BSC for cytotoxic drugs is certified by DIN12980.



Proven reliability

Outstanding safety is assured through a variety of core components and features to improve cleanliness

Outstanding comfort

With several thoughtful features, from the view screen to the work environment and ergonomic design

What makes AlphaClean superior?

AlphaClean clean benches are ideal for a wide range of applications where sample protection is required.

Energy Efficiency

From the motor controller to lighting , the new design can provide significant annual costsavings while maintaining superior performance

Innovation makes cleanliness all possible Behind every great discovery there is the technology that made it all possible.

e

Laminar airflow over the working area takes containment to new levels, ensuring your safety

Smart and self-induced motor monitors and controls fan speed in real-time to maintain constant

airflow during filter loading and temporary obstruction

Flow-SaFe technology consumes less energy, reduces heat output and operates quietly

**O Blower**

Automatically compensates for normal power line variation, air diruptiona and filter loading. Motor consumes less energy, reduce heat output and operates more quietly.

**Q Prefilter**

Chemically and thermally enhanced technology increase filtration capacity and efficiency,together with ergonomical filter change design for easy maintenence

**©Illumination lamp**

Illumination provides sufficient brightness to the working chamber.

**®UV lamp**

Emission of 235.7 nanometers for efficient decontamination.

Automatic UV timer program saves your time during daily work

**© Safety grade glass**

The front glass window provides protection from explosion and UV with more comfortable viewing

Heal Force

**©Friendly communication**

Centered and angled down color-display for better at-a-glance viewing of safety and performance data.

**<9Long life HEPA filter**

Long life HEPA filter provides high separability for particles.

Self-compensation for the clogging of filters and life span indicator optimize working condition and minimizes services

**O Real-time airflow monitoring**

Velocity of airflow and temperature are inspected and indicated on control panel.Alert the user if airflow is insufficient

**©Work tops**

Standard constructed of seamless, non-porous type 304 stainless steel

**O Universal electrical outlets**

Two standard electrical duplex receptacles, with ground fault interruption and splash covers.

design, on-site validation,  
customer support packages,  
Maintenance is quicker and  
easier than ever before.

Filter life indicator is designed to measure filter life span according to actual condition of membrane

Visual and acoustic alarm for indication of unsafe airflow conditions and window position

Interlocking safety mechanism is set between UV lamp and fluorescent light/front sash status.

The colored LCD display offers a high level of viewing and operation experience

*i* The intuitive interface delivers a constant read-out of working area temperature, air

*J* velocity/volume, filter life span, total running time

Easy-to-clean touchpad controls allow manual activation of blower, lamp, UV, electrical receptacles

and menu selection

AT

bT

*c—\*

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1. Downflow speed/volume
2. Filter working time
3. Temperature
4. Date or menu level

E.Time

1. System status
2. HEPA filter indicator

**MUTE**

**ENTER**

**BLOWER**

8

11.Fluorescent indicator

14.UV key

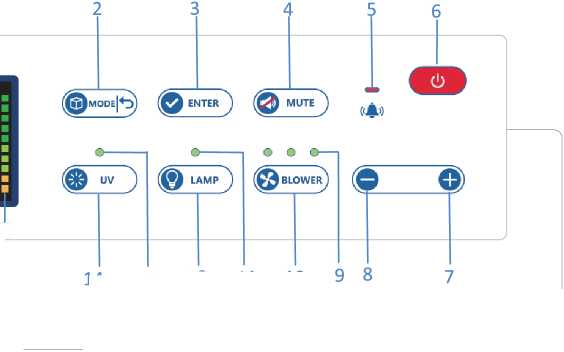
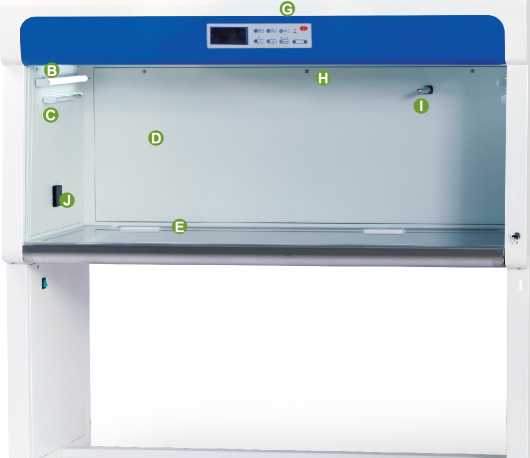
10.Blower key

1. LCD display
2. Mode/Return
3. Turn on/off key
4. Value change key
5. Value change key
6. Blower indicator
7. Fluorescent key
8. UV indicator
9. Enter key
10. Mute key
11. Alarm indicator

11 10

14 13 12

H.HEPA filter lifespan



Enhanced comfort

and convenience

UV Decontamination

Knee

Clearance

5 ° backward-slanted safety grade glass provides protection from explosion and UV with more comfortable viewing than vertical sashes.

Counterbalanced sliding sash can be raised to a maximum height for easy introduction of large items

The position of the light tubes ensure excellent illumination over the whole working zone and reduces operator fatigue.

in this area

Silent working conditions save your brain, you can concentrate on work and even hear yourself thinking.

The radiused edge prevents the potentially dangerous practice of placing materials

Programmable automatic UV light timer simplifies operation while extending UV lamp life and saving energy.

Powerful UV irradiation illuminates entire work area, design to ensure thorough disinfection of the complete chamber

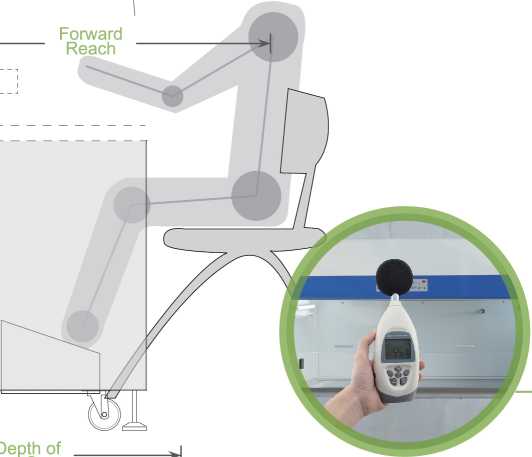
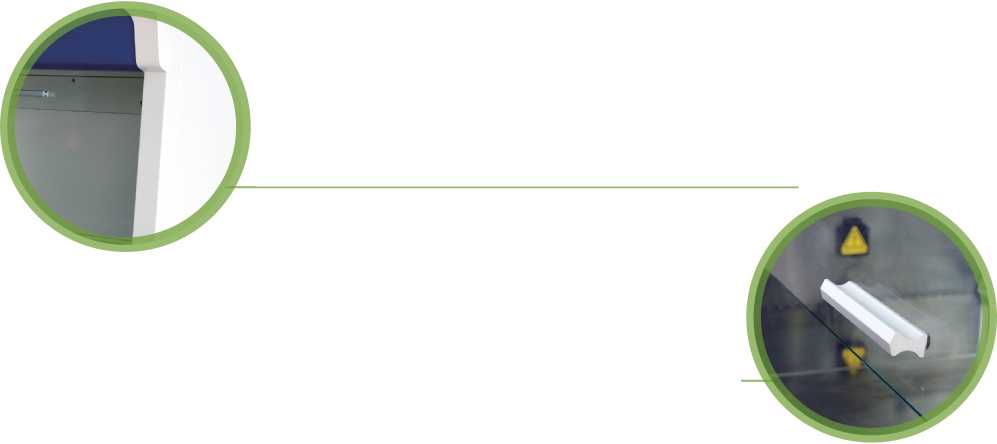
UV lamp with interlocking safety switch allowing operation only when blower and fluorescent light are off and sash is fully closed

Easy to Clean

The clean bench work zone has no welded joints to collect contaminants or rust.

Details of cabinet developed further to ensure easier cleaning with normal cleaning solvents

Airflow laminator protects the filter surface during wipe cleaning.



vice Access

& Validation

Standards & Test

|  |  |
| --- | --- |
| ***Biosafety Cabinets*** | IEST-RP-CC002.2, Worldwide |
| ***Air Quality*** | ISO 14644.1, Class 5, worldwide |
| ***Filtration*** | EN-1822, Europe/ IEST-RP-CC001.3, Worldwide/ IEST-RP-007, Worldwide/ IEST-RP-CC034.1, Worldwide |
| ***Electrical Safety*** | EN61010-1, Europe/ IEC61010-1, Europe |

***Standards Compliance***

***Manufacturer Qualification*** ISO 13485:2003, ISO 9001:2008

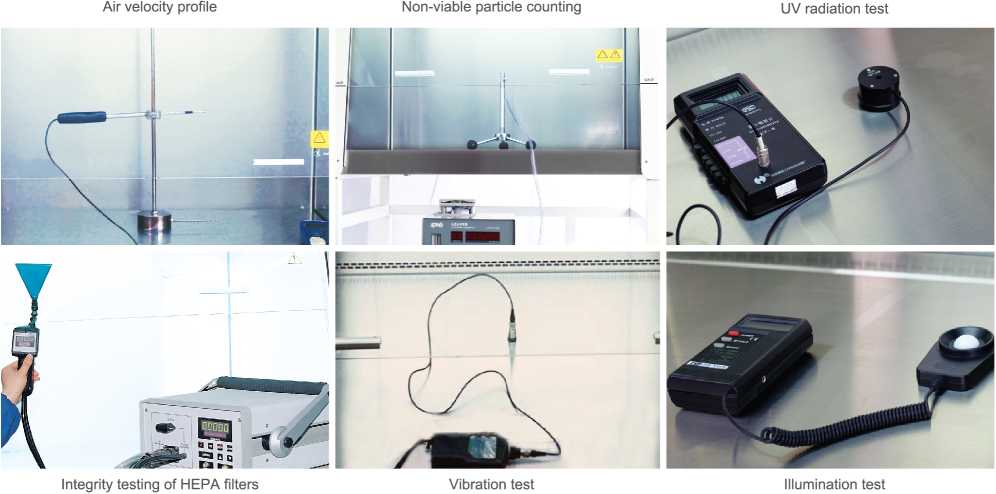
Allservices, adjustments and filter change is carried out from the front of the cabinet.



***Comprehensive performance testing***

Every AlphaClean unit manufactured by Heal Force is individually tested, documented by serial number and validated with the following test methods.

***Service Access***



| ***Air Velocity Profile*** | Verifies the hood is providing the proper air balance to protect the product from contamination |
| --- | --- |
| ***Integrity Testing of HEPA filters*** | Assures the existing HEPA filters are free of leaks and are properly sealed to prevent leakage or possible contamination to the work area |
| ***Non-Viable Particle Counting*** | Testing provided to verify clean bench is meeting designed air cleanliness classification level per ISO 14644 specifications |
| ***Viable / Microbial Air Testing*** | Assures Bioburden levels for bacteria and/or fungi are within acceptable parameters per the cabinet design or client specifications |
| ***Viable / Microbial Surface Testing*** | Assures Bioburden levels for bacteria and/or fungi are within acceptable parameters per cabinet design or client specifications |
| ***Airflow Visualization Profile*** | Verifies the hood is providing non-turbulent airflow to work area |
| ***Lighting Measurement*** | Verifies the lighting level is meeting the clean bench design level or worker comfort level |
| ***Sound Level Measurement*** | Verifies the sound level is not exceeding the clean bench design or worker comfort level |

***Temperature, Relative Humidity Measurements***

Verifies the clean bench is operating within its design specifications

Help for certifiers, the maintenance assembly opens to a fixed position, providing front service access. Consequently, the cabinet can remain in situ without making any positional changes in your laboratory or having to disconnect any ducting.

All service is performed from the front of the cabinet, including:

Change of HEPA filters:

Fluorescent lamps

UV lamps

Adjustment or change of circuit boards and sensors

All adjustments to alarms, fan speeds, are made via the microprocessor control panel Service code protected

***Validation***

Heal Force offers a wide range of high quality services for all our equipment. These services include on­site validation, customer support packages, factory acceptance testing.

Choose Heal Force as an equipment supplier and validation consultant can greatly reduce the time and cost involved with getting new equipment compliant and ready for use.

Services Heal Force Offers:

On-site consultation

Unit specific authorized protocol documents

Customizable testing procedures to meet customer specific requirements

Unbiased testing of competitive equipment

Pre-delivery Services:

Validation support

Consultation

Factory acceptance testing

On-site Services:

Installation qualification Operational qualification

Calibration

**AlphaClean Vertical Laminar Flow Clean Bench Engineering Drawing - Front, Side**

**General Specifications, AlphaClean Vertical Laminar Flow Clean Bench**

1. Pre-filter
2. Blower

3.Supply HEPA filter

1. Downflow sensor
2. Counterbalanced block
3. Water-proof electrical outlet
4. Main power switch
5. Adjustable Lever
6. Universal Wheel
7. Microprocessor control system

11 Fluorescent light

1. UV light
2. Toughened glass sliding door

14.Sash lock

15.Stainless steel single-piece work tray

|  |  |
| --- | --- |
| **I *Model*** | ***AlphaClean 1300* I** |
| ***Nominal Size*** | 1.3 meters |
| ***External Dimensions with Base Stand (WxDxH)*** | 1500x760x1630mm |
| ***Internal Work Area, Dimensions (WW^H)*** | 1380x650x510mm |
| ***Internal Workspace (Area)*** | 0.90M2(9.69 sq.ft) |
| ***HEPA filter size (WW^H)*** | 1320x580x50mm |
| ***Prefilter size (WW^H)*** | 400\*380\*3mm (2PCs) |
| ***Airflow*** | |
| Vertical Velocity \* | >0.3m/s(Adjustable) |
| Vertical Volume | m3/h (cfm) |
| ***Supply Filter*** | |
| Type | HEPA |
| Material | Glass fibre fleece |
| Separability in MPPS | 99.995% |
| Separability at 0.3um particle size | 99.999% |
| ***Cleanliness in Work Area*** | ISO Class 5, Class 100 (Fed 209E) |
| ***No. of Sedimentated Bacteria Colony*** | <0.5CFU\*0.5h |
| ***Sound Emission (Typical)\**** | <65dB |
| ***Fluorescent Light Intensity*** | 450Lux |
| ***Excellent light distribution*** | Yes |
| ***Fluorescent Light Power and Number*** | 11W,2PCs |
| ***UV Lamp Power and Number*** | 8W,2PCs |
| ***RMS*** | <5um |
| ***Cabinet Construction*** | |

**AlphaClean Vertical Laminar Flow Clean Bench Engineering Drawing** 一 **Top**

**4**

**5**

**6**

**7**

1.Pre-filter frame

2. Pre-filter

3.Mound layer

4.Upper cover

5.Pressure column

6.HEPA filter

/.Pressure block

|  |  |
| --- | --- |
| Main Body | 1.2mm(0.05") steel with white oven-baked epoxy-polyester power-coated |
| Side Walls | 1.2mm(0.05") steel with white oven-baked epoxy-polyester power-coated |
| Work Zone | 1.5mm (0.06") stainless steel, grade 304 |
| ***Window Material*** | Hardened/laminated safety glass |
| ***Working Temperature*** | 10 〜30 C |
| ***Working Humidity*** | 30 〜75%RH |
| ***Electrical (220-240V, 50/60Hz, 1 phase)*** | |
| Cabinet Full Load Amp(FLA) | 2.5A |
| Optional Outlets FLA | 3A |
| Cabinet Maximum Power | 550VA |
| Cabinet Nominal Power | 300VA |
| ***Power Supply\*\**** | |
| 220V±10%/50Hz | Yes |
| 220V±10%/60Hz | Yes |
| 110V±10%/60Hz | Yes |
| ***Protection*** | |
| Protection class I | |
| Protection type | IP20 |
| Overvoltage category | II |
| Contamination degree | 2 |
| ***Net Weight*** | 185kg(408lbs) |
| ***Shipping Weight*** | 250KG |
| ***Shipping Dimensions Maximum(W^D^H)*** | 1600\*840\*1800mm |
| ***Shipping Volume, Maximum*** | |

Specification are subject to change without notice \* at initial setpoint with uniformity of better than +/-20% \*\* Please contact us for more optional power supply information

