

AlphaClean 1300

Vertical Laminar Flow Clean Benches





The next level of cleanliness

Heal Force biosafety cabinets and laminar flow clean benches set the standard in quality, design, and innovation 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.



Welcome to Heal Force

1999

Our first biological safety cabinet of clean-air product line

2005

One of the leading setters for YY0569 national standard formulation in China

The first in Asia got stringent certificate of TUV-Nord CE/GS/EN12469

2007

The only Chinese manufacturer invited to attend TUV-Nord global seminar for BSCs

2013



Global market vision

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 by TÜV Nord, a leading testing agency in Europe



YY0569

Heal Force, as a leading 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

The only Chinese manufacturer invited to attend TUV-Nord global seminar for BSCs

2015

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

2016

The first DIN 12980 certified BSC in China for cytotoxic drugs is coming soon

2016

What makes AlphaClean superior?

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

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

Energy Efficiency

From the motor controller to lighting, a new patent-pending innovations provide significant annual costsavings while maintaining superior performance

A Blower

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

F Prefilter

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

B Illumination lamp

Illumination provides sufficient brightness to the working chamber.

C UV lamp

Emission of 235.7 nanometers for most efficient decontamination. Automatic UV timer program saves your time during daily work

D Safety grade glass

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

E Work tops

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

G Friendly communication

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

H Long 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

I Real-time airflow monitoring

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

J Universal electrical outlets

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



Certified performance

With an innovative front-access design, on-site validation, customer support packages, Maintenance is quicker and easier than ever before.

Innovation makes cleanliness all possible

Behind every great discovery, there is the technology that made it all possible.



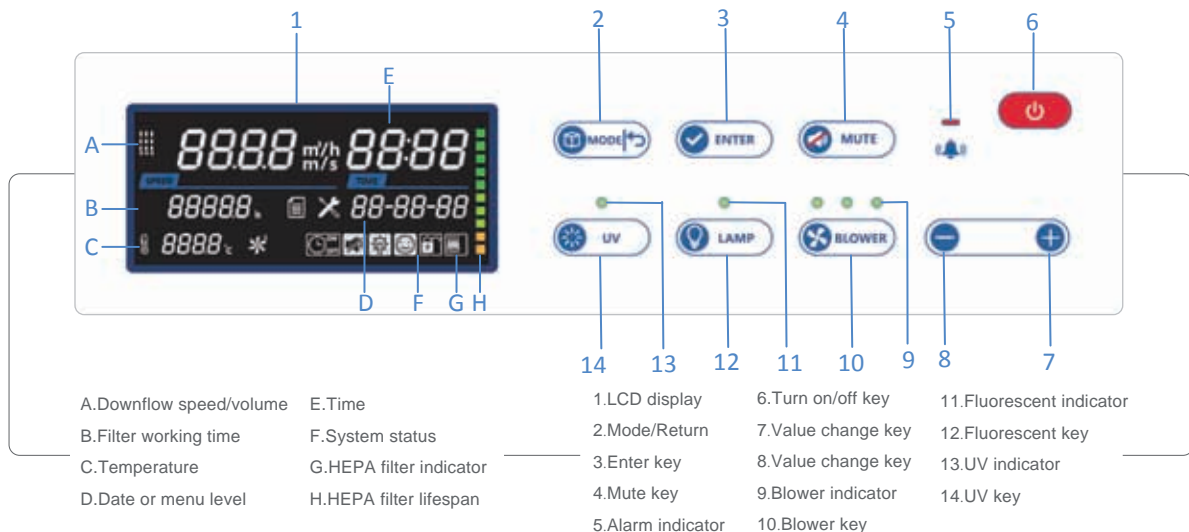
Laminar airflow over the working area takes containment to new levels, ensuring your safety
 Smart and self-induced motor monitors and controls fan speed in real-time to maintain constant airflow during filter loading and temporary obstruction
 Patented Flow-SaFe technology consumes less energy, reduces heat output and operates quietly



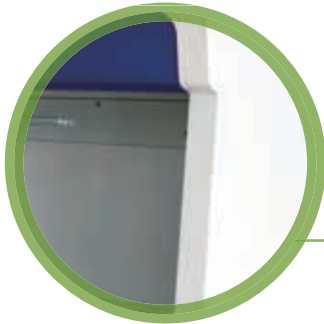
Filter life indicator is designed to measure filter life span according to actual condition of membrane
 Visual and acoustic alarm for indication of unsafe airflow conditions and window position
 Interlocking safety mechanism is set between UV lamp and fluorescent light/front sash status.



The colored LCD display offers an unprecedented level of viewing and operation experience
 The intuitive interface delivers a constant read-out of working area temperature, air 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

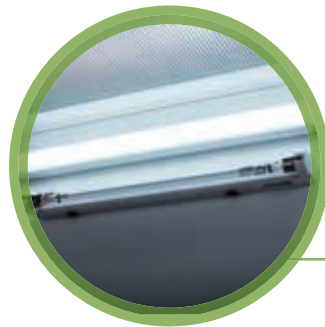


Enhanced comfort and convenience



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



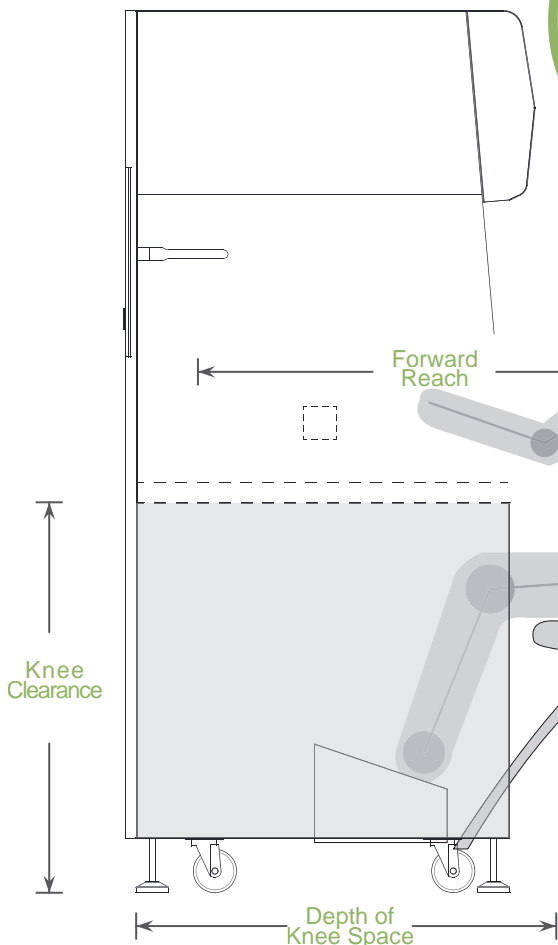
The position of the light tubes ensure excellent illumination over the whole working zone and reduces operator fatigue.



The radiused edge prevents the potentially dangerous practice of placing materials in this area



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



UV Decontamination

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.



Service Access & Validation

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

Service Access

Help for certifiers, the unique 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 on-site 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.

Unique 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



Standards & Test

Standards Compliance

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
Manufacturer Qualification	ISO 13485:2003, ISO 9001:2008

Comprehensive performance testing

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

Air velocity profile



Non-viable particle counting



UV radiation test



Integrity testing of HEPA filters



Vibration test



Illumination test

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

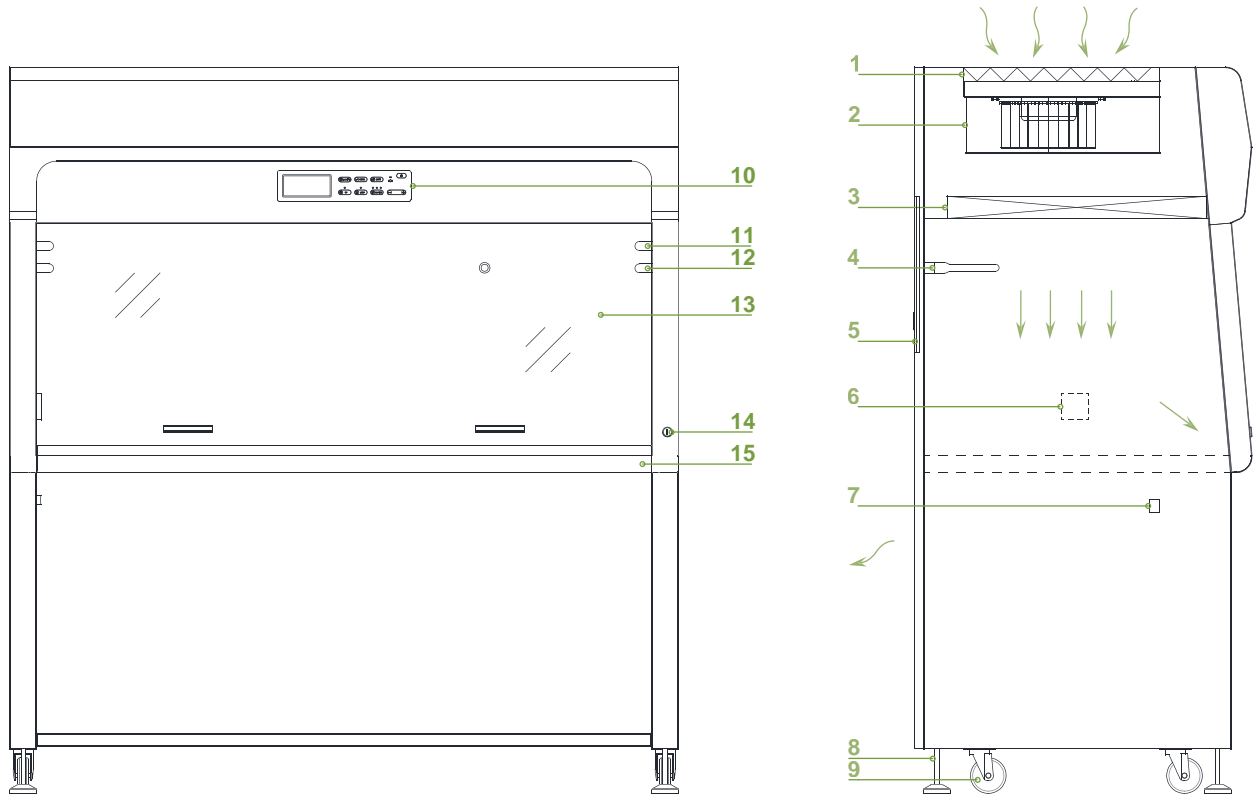
Sound Level Measurement

Verifies the sound level is not exceeding the clean bench design or worker comfort level

Temperature, Relative Humidity Measurements

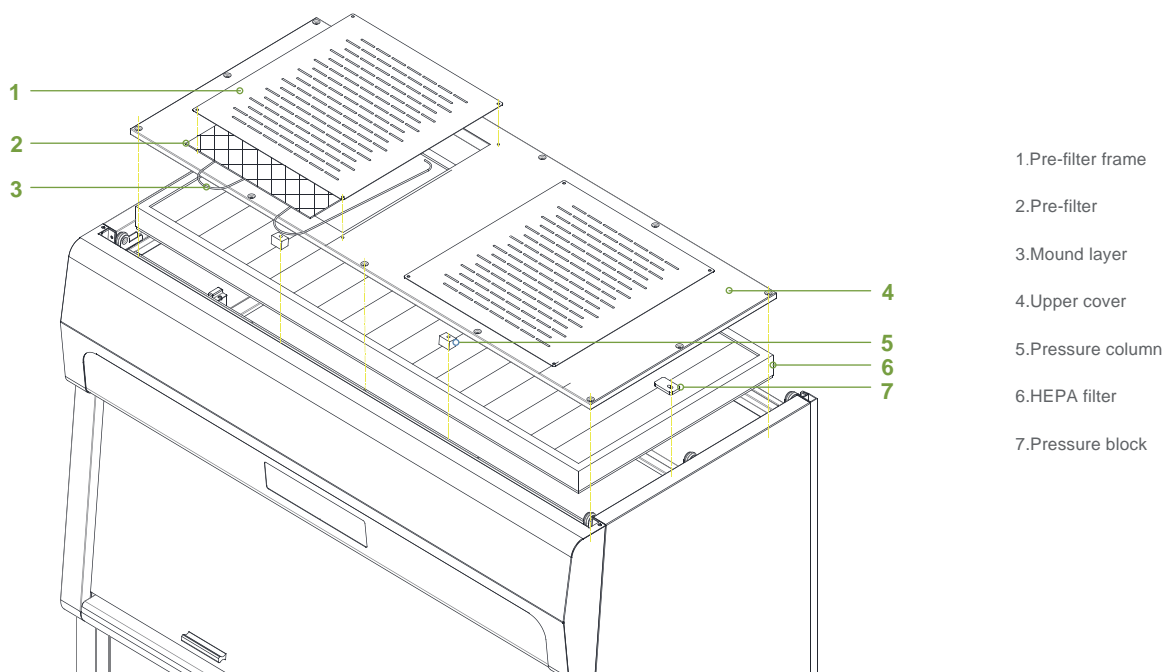
Verifies the clean bench is operating within its design specifications

AlphaClean Vertical Laminar Flow Clean Bench Engineering Drawing – Front, Side



- | | | |
|-------------------------|----------------------------------|---|
| 1.Pre-filter | 6.Water-proof electrical outlet | 11.Fluorescent light |
| 2.Blower | 7.Main power switch | 12.UV light |
| 3.Supply HEPA filter | 8.Adjustable Lever | 13.Toughened glass sliding door |
| 4.Downflow sensor | 9.Universal Wheel | 14.Sash lock |
| 5.Counterbalanced block | 10.Microprocessor control system | 15.Stainless steel single-piece work tray |

AlphaClean Vertical Laminar Flow Clean Bench Engineering Drawing – Top



- | |
|--------------------|
| 1.Pre-filter frame |
| 2.Pre-filter |
| 3.Mound layer |
| 4.Upper cover |
| 5.Pressure column |
| 6.HEPA filter |
| 7.Pressure block |

General Specifications, AlphaClean Vertical Laminar Flow Clean Bench

Model	AlphaClean 1300
Nominal Size	1.3 meters
External Dimensions with Base Stand (WxDxH)	1500×760×1630mm
Internal Work Area, Dimensions (WxDxH)	1380×650×510mm
Internal WorkSpace (Area)	0.90M ² (9.69 sq.ft)
HEPA filter size (WxDxH)	1320×580×50mm
Pre-filter size (WxDxH)	400*380*3mm (2PCs)
Airflow	
Vertical Velocity *	0.2~0.5m/s
Vertical Volume	551~1378 m ³ /h
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)*	≤62 dB
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	
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(WxDxH)	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

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.



Biosafety Cabinet

Heal Force brand stands for the highest standards of 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 virtually all 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-Gas Incubator

Heal Force Smart Cell incubator provides you with unsurpassed natural simulation to ensure optimum growth conditions for you culture at all time. That's why it becomes the first choice of researchers in fields of application including tissue engineering, in vitro fertilization, neuroscience, cancer research and other mammalian cell researches.

Water Purification

Well-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 the most 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.