EuroClone®

Lab Equipment Products

EuroClone®

serving science through innovation

SUMMARY

Laminar Flow Cabinets

MicroBiological Safety Cabinets - BioHazard

Fume Hoods

CO_2 Incubator

Horizontal Laminar Flow Cabinets
AURA HZ T

AURA HZT is a horizontal laminar air flow cabinet for product protection from external contamination and cross-contamination inside the working chamber.

Air is taken in by from the top of the cabinet, through a prefilter, and then blown on the work surface after passing the H14 HEPA filter. The air flow, leaving the HEPA filter at a constant speed, produces an extremely clean – ISO5 according to EN14644-1 (equivalent to Fed. STD. 209E Class 100) - environment in the work area, preventing any contamination to enter from the ambient outside. Air speed is constantly monitored by a microprocessor and kept at a constant speed during the whole life of the HEPA filter.

MAIN SPECIFICATIONS

- Lateral Flow Concept side walls: special tempered-glass side walls are installed inside the airflow, to prevent any leakage from the outside, thanks to the Venturi-effect.
- High efficiency washable polyurethane prefilters remove coarse particles before the air reaches the H14 filter
- H14 class High Efficiency Particulate Air filters guaranteed with >99.995% efficiency @ MPPS, equivalent to >99.999% on 0.3 micron particles. (EN1822-1)
- Electrical equipment according to International Standards and EMC directives
- Lighting › 800 lux
- Electronic control air speed. The average volumetric air flow is monitored via a integral vane anemometer and controlled by a microprocessor. Average speed is maintained in the range of 0.5m/sec ± 20; (Federal Standard209E)
- A bar graph displays the air speed value. High or low airflows are shown in red.
- Soft touch keys on the control panel provide control of the lighting, motor blower, UV light.
- Visible and acoustic alarms are provided for air speed alarm and filter clogging. Operation hours counter to monitor usage.
- Cabinet outer surfaces made of cold rolled steel with paint finish
- Working surface made of grade 3 stainless steel (304). Pre-punched holes for the easy
- installation of retrofit options.
- Side panels in tempered glass
- Micromesh membrane on HEPA filter downstream surface for perfect airspeed distribution
- Silent and quite operation <57dB(A) due to the highly vibration-free suspensions of the fan(s).
- Up to four plugs installable near the light on the ceiling of the cabinet to leave working surface free
- DOP test port on the right side for fast & easy check of the filter integrity

ACCESSORIES AURA HZT

Part No.	Description
AS22000	Support stand for AURA HZ 48 T
AS23000	Support stand for AURA HZ 72 T
AZ32001	Dual vacuum tap
AZ31001	Single vacuum tap
AZ32000	Dual gas tap
AZ31000	Single gas tap
AZ46000	Electric socket Schuko/Europlug
AZ46090	Dual Electric socket Schuko/Europlug
AK20002	Mobile UV Kit
AC10000	Drawers

TECHNICAL SPECIFICATIONS

	AURA HZ48 T	AURA HZ72 T
Part No.	LH20500	LH30500
Power Supply:	230 V~ 50/60 Hz	
Max Power (W): (Aux socket included, 700 W)	1400/1500	1800/1900
Power (W): (fan & lights only)	650/700	1150/1200
Reference standards:	EN 61010-1	
Electrical insulation class	I	
Lighting (lux):	>800	
Vibrations (mm RMS):	<0,005	
Max temperature increase (°C):	<5	
Noise level (dB(A):	<63	
Weight (kg):	130	195
External Size L x D x H (mm):	1270x1050x1360	1920x1050x1360
Work area Size L x D x H (mm):	1130x620x740	1790x620x740
HEPA Filter Size L x D x H (mm):	1219x70x762	1829x70x762
HEPA Filter efficiency class (EN1822-1):	H14	
HEPA Filter efficiency @ MPPS (EN1822-1):	99.995%	
MPPS Size (EN1822-1):	0,1 ÷ 0,3 µm	
Clean Air Classification (EN14644-1):	ISO 5	
Laminar Flow Average Speed (m/s):	0,40 ± 10% (0,25 in modo Energy Saving)	
Air Volume (m3/h):	1250 ± 10%	1900 ± 10%

Vertical Laminar Flow Cabinets
AURA SDV.

AURA VERTICAL SDV™ Cabinets are supplied in one dimension (1.2mt).
These state of the art down-flow cabinets, provide an ultimate cleanliness Class 100 work area where the highest safety for the products is achieved.

The internal design, the air flow aerodynamics and monitoring, the special H14 filter with Micromesh downstream equalising plenum, guarantees the highest performances at the most stringent safety levels and operator comfort.
This units generates a laminar unidirectional air flow on the working area. The air is filtered through an HEPA H14 filter (efficiency >99.995%@MPPS according to EN1822-1) to provide a clean and sterile environment.
The special sloped front design and the electronic sliding sash ensure comfortable working position and, when needed, a very easy opening and closing of the front window.

MAIN SPECIFICATIONS

- Ergonomically designed sloped front design for the highest operational comfort. with electrically operated sliding sash.
- Stainless Steel work surfaces with 2B finishing. Perforated work surface (2 sections) and special designed front grill.
- Internal working chamber in white painted steel to provide optimal luminosity
- Comfortable 200mm front opening
- Easy to install retrofit options through lateral sides.
- H14 class High Efficiency Particulate Air filters guaranteed with 99.995% efficiency on 0.2-0.3 micron particles (most penetrating particle diameter) (EN1822-1)
- Electrical equipment according to International Standards and EMC directives
- Elapsed time meter for filter life monitoring
- Lighting › 1000 lux
- Soft touch keys on the control panel provide control of the lighting, motor blower, UV light, gas valve.
- Visible and acoustic alarms are provided for air speed alarm and filter clogging.
- Cabinet outer surfaces made of cold rolled steel with paint finish.
- Micromesh membrane on HEPA filter downstream surface for perfect airspeed distribution

STANDARD FEATURES

Electric Socket Schuko/Europlug;
Special socket for mobile UV Kit.

OPTIONAL FEATURES

Description	Part No.
Mobile UV Kit	AK1H000
Support stand	AS1L410
Drawers	AC10000
Additional Gas Tap with solenoid valve	AZ5K401
Additional Vacuum/Inert Gas tap	AZ5K412
Additional Electric Socket Schuko/Europlug;	AP6H100

TECHNICAL SPECIFICATIONS

Part. No.	LV5401N
Work surface	AZ95041
Internal Size (lxdxh)	1240 x 610 x 650 mm
External Size (lxdxh)	1355 x 785 x 1457 mm
Height with support	2290 mm
Front Aperture	190 mm
Weight	175 kg
Power Supply	230 Volt, 50 Hz
Power	390 W
Front Barrier speed	> 0.4 mt/sec
Lighting	1000 lux
Noise Level	≤57dBA

Vertical Laminar Flow Cabinets
AURA MINI

AURA MINI Cabinets are supplied in one compact size only (895mm).
These state of the art compact down-flow cabinets, provide an ultimate cleanliness Class 100
work area where the highest safety for the products is achieved.
The internal design, the air flow aerodynamics, the special H14 filter and the Filtrete® exhaust filter (or prefilters) guarantees the highest performances at the most stringent safety levels
and operator comfort.

Two operating modes are available: inward air barrier and outward air barrier.

INWARD air barrier. In this configuration an air barrier flows through the front opening and is recirculated with the downflow air by a motor blower. 70% of the air is returned to the work area through the main HEPA filter and 30% is exhausted into the environment through a Filtrete® exhaust filter with gravimetric efficiency of 99% on 3µm particles. In this configuration an excellent product protection is ensured, as well as an outstanding containment.

OUTWARD air barrier. In this case the air is sucked through the Filtrete® prefilter, mixed with the incoming recirculating air and then filtered through the main HEPA filter into the work area: here 30% of the air is exhausted through the front opening and 70% is recirculated. This configuration ensures the highest product protection.
In the OUTWARD configuration this unit can easily be used as an "active PCR" cabinet for DNA carry over blocking.

MAIN SPECIFICATIONS

- Centrifugal Motorblower with digital inverter for optimal performance.
- Elapsed time-meter
- Exhaust filter
- Removable perforated work surface and back wall of the work chamber made of AISI 304 stainless steel
- Cabinet outer surfaces made of cold rolled steel with paint finish
- Front and side panels in 5mm thick tempered glass
- H14 class High Efficiency Particulate Air filters guaranteed with 99.999% efficiency on 0.3 micron particles (most penetrating particle diameter) (EN1822-1 and EN13091:1999 tested and certified)
- Exhaust filter (or pre-filter) type Filtrete® with a gravimetric efficiency higher than 99% on 3µm particles
- Standard features includes: Fluorescent lamp, elapsed Time meter, UV and fluorescent lamps interconnected
- Optional cover with UV light (includes safety switch to turn off UV if cover is removed from the cabinet)
- Electrical equipment according to International Standards and EMC directives
- Soft touch keys on the control panel provide control of the lighting, motor blower, UV light
- Lighting › 800 lux
- Silent and quite operation <60dB(A) due to the highly vibration-free suspensions of the fan.

OPTIONAL FEATURES

Description	Part No.
Closing Panel with UV Lamp and timer	AK30500
Closing Panel	AZ40000
Support stand with castors	AS60000
Electric socket (installed)	AP60400

TECHNICAL SPECIFICATIONS

Part No.	LV30500
External Size:	820x790x580 mm (l x h x p)
Working area size:	750x480x430 mm (l x h x p)
Height including stand:	1620 mm
Weight:	55 Kg
Power supply:	230 V ~ 50Hz
Power requirements:	200 W
Sound pressure:	< 65 db(A)
Light intensity:	>700 lux
Work surface vibrations:	<0,006 mm
LAF average speed:	0,25 ÷ 0,50 m/s
Average inflow speed:	0,20 m/s (calculated value) (only for INWARD barrier configuration, with front sash in lowered position)

DNA Cross-contamination Control Enclosure, AURA PCR

These state of the art PCR cabinets are specially designed for pre-amplification sample preparation in controlled environment in order to prevent DNA carry-over.

Any aerosol generated during the handling of the post amplification samples can not enter the cupboard; any molecule of DNA herein contained is subsequently neutralised with the help of UV radiations.

Operating mode: AURA PCR is a very easy-to-operate cabinet. When the normal working procedures have been completed, the tempered glass front panel is closed and a timer is activated in order to expose all internal surfaces and tools to UV radiation for a preset period of time.

The outer tempered glass body of AURA PCR, acting as a filter to UV radiations is safely protecting the external environment from dangerous exposure of personnel to those radiations.

The PCR cabinet complies with the electromagnetic compatibility "EMC" according to 89/336EC.

The cabinet also complies with safety requirements for electrical equipment for laboratory use as per EN 61010-1.

MAIN SPECIFICATIONS

- Passive PCR enclosure (non ventilated)
- Fluorescent light turn on automatically when opening the front glass or when UV lights turn off (user selectable)
- Digital timer for UV lights with memory of the last setpoint
- Working area walls in tempered glass 6mm thick
- 100% UV-safe
- Front glass divided in three hinged sectors
- Internal foldable shelf in glass
- Working surface in chemical resistant polyethylene

TECHNICAL SPECIFICATIONS

Part No.:	PC10100
External Size (LxDxH):	650 x 545 x 730 mm
Weight:	41 kg
Power supply:	230 V - 50Hz
Power:	60 W
UV Lamps:	3x15W
Lighting:	> 600 lux

Class II MicroBiological Safety Cabinet, SAFEMATE EZ

S@femate EZ Cabinets are supplied in two different sizes (1.2mt and 1.8mt).

These last generation Microbiological Safety Cabinets Class II type A2, have been designed according to the most stringent safety standards (EN12469-2000).

The internal design, the air flow aerodynamics and monitoring, the built-in safety devices and the very accurate manufacturing, guarantees the highest performances at the most stringent safety levels, as specified by EN12469 standard.

High intrinsic biological safety, combined with impressively competitive prices, gives the end user a state of the art cabinet accessible to every budget, that only experienced European design and accurate quality manufacturing, can provide.

The EZ series sets a new standard for entry level cabinets combining a very attractive price with a full range of comfort options that were only available in more expensive cabinets.

MAIN SPECIFICATIONS

- Sloped front sash (5°)
- Sliding sash with electrical operation and auto recognition of the correct work position
- Swinging front window for optimal clearing access
- Front window presses on the gasket when in closed position to ensure no leakages.
- Maximum height of front aperture: mm 440.
- Front grid with "V" shape to avoid obstructing it with the arms. No need to use armrests.
- Filter replacement and electric/electronic components maintenance from front side.
- External surface in epoxy-painted steel.
- Working chamber and work surface fully realized in stainless steel AISI304 with SB finishing. Easy to clean as required by EN12469:2000.
- Work surface divided in sectors, available both solid or perforated.
- Front sash in stratified safety glass, 6mm.
- Air decontamination provided by HEPA H14 filters, with efficiency > 99.995% (test MPPS according to EN1822.1)
- DOP test port for easy check of HEPA filters integrity.
- Internal sockets with IP55 protection level.
- Constant monitoring of the following parameters:
    - Laminar flow speed;
    - Inflow speed;
    - Optical/acoustic alarm for insufficient inflow barrier;
    - Optical/acoustic alarm for insufficient laminar flow;
    - Operating hours visualization for: cabinet, HEPA filters, UV.
  - Volt-free contact for remote blower control or connection to a remote alarm system.

STANDARD UTILITIES

Utilities are located on the back wall of the working area. Connectors for the utilities are located on the top of the cabinet towards the back.

Electrical sockets. On the back wall.
DOP sampling port. Below the work surface, left side.
UV lamp installed on the back wall.

OPTIONALS ACCESSORIES

Description	Part No.
Stand for S@femate EZ 1.2	AS1L410
Stand for S@femate EZ 1.8	AS1L610
Castor kit	AZ1L010
2 Drawers file cabinet	AC10000

OPTIONAL UTILITIES

Vacuum tap. On right side.
Gas tap with safety solenoid valve. On right side.
Additional sockets
RS232 data transmission kit (Software not included)
Passive transition adapter for external ducting.
Active extraction kit for ducting with remote motorblower.

TECHNICAL SPECIFICATIONS

MODEL	S@FEMATE EZ 1.2	S@FEMATE EZ 1.8
Cabinet Part No.	LDK400N	LDK600N
Perforated work surface	AZ9K040	AZ9K060
Solid work surface	AZ9K041	AZ9K061
External size(lxpxh) mm	1380x780x1450	1990x780x1450
Work area size (lxpxh) mm	1230x600x700	1840x600x700
Height including stand (mm)	2175	2175
Front Aperture (mm)	195	195
Weight (Kg)	240	340
HEPA filters efficiency	> 99,995% MPPS (test MPPS according to EN1822.1)	
Exhaust air volume	$\approx$400 m^3/h	$\approx$600 m^3/h
Motorblower(s)	Centrifugal with speed autoregulation based on filter clogging status. IP55 protection level (2 blowers in 1.8 model)	
Power supply	230V 50/60Hz	
Power (W)	375	650
Internal Sockets	2	2
Fluorescent lamps	2x30W	2x58W
Lighting	1200 lux	
Sound pressure level	<58 dB(A)	<58 dB(A)

Class II MicroBiological Safety Cabinet, S@FEMATE ECO.

S@femate are Class II (Type A2) microbiological safety cabinets designed to allow sterile manipulation while providing protection for operator, environment and product from biological contamination. **S@femate ECO** cabinets are certified according to EN12469:2000 by TUV Nord (Germany).

MAIN FEATURES

- Sloped front sash (5°)
- Sliding sash with electrical operation and auto recognition of the correct work position
- Active Safety System to avoid front glass drop
- Swinging front window for optimal clearing access
- Front window presses on the gasket when in closed position to ensure no leakages.
- Maximum height of front aperture: mm 440.
- Front grid with "V" shape to avoid obstructing it with the arms. No need to use armrests.
- Filter replacement and electric/electronic components maintenance from front side.
- External surface in epoxy-painted steel.
- Working chamber and work surface fully realized in stainless steel AISI304 with SB finishing. Easy to clean as required by EN12469:2000.
- Work surface divided in sectors, available both solid or perforated.
- Front sash and lateral windows in stratified safety glass, 6mm.
- Air decontamination provided by HEPA H14 filters, with efficiency > 99.995% (test MPPS according to EN1822.1).
- DOP test port for easy check of HEPA filters integrity.
- Combustible gas tap with safety solenoid valve.
- Internal sockets with IP55 protection level.
- Constant monitoring of the following parameters:
  - Laminar flow speed;
  - Inflow speed;
  - Optical/acoustic alarm for insufficient inflow barrier;
  - Optical/acoustic alarm for insufficient laminar flow;
  - Operating hours visualization for: cabinet, HEPA filters, UV.
- Volt-free contact for remote blower control or connection to a remote alarm system.

STANDARD UTILITIES

Utilities are located on the back wall of the working area. Connectors for the utilities are located on the top of the cabinet towards the back.

Vacuum tap. On the back wall, right side.
Gas tap with safety solenoid valve. On the back wall, right side.
Electrical sockets. On the back wall.
DOP sampling port. Below the work surface, left side.
UV lamp installed on the back wall.

OPTIONALS ACCESSORIES

Description	Part No.
Stand for S@femate ECO 0.9	AS1L310
Stand for S@femate ECO 1.2	AS1L410
Stand for S@femate ECO 1.5	AS1L510
Stand for S@femate ECO 1.8	AS1L610
Castor kit	AZ1L010
2 Drawers file cabinet	AC10000

OPTIONAL UTILITIES

Addtional gas taps.
Additional sockets
RS232 data transmission kit (Software not included)
Passive transition adapter for external ducting.
Active extraction kit for ducting with remote motorblower.

TECHNICAL SPECIFICATIONS

MODEL	S@FEMATE ECO 0.9	S@FEMATE ECO 1.2	S@FEMATE ECO 1.5	S@FEMATE ECO 1.8
Part No. with perforated work surface	LDD2201	LDE2201	LDF2201	LDG2201
Part No. with solid work surface	LDD2200	LDE2200	LDF2200	LDG2200
External size(lxpxh) mm	1074x840x1450	1380x840x1450	1685x840x1450	1990x840x1450
Work area size (lxpxh) mm	924x600x700	1230x600x700	1530x600x700	1840x600x700
Height including stand (mm)	2175	2175	2175	2175
Front Aperture (mm)	195	195	195	195
Weight (Kg)	206	240	272	340
HEPA filters efficiency	> 99,995% MPPS (test MPPS according to EN1822.1)			
Exhaust air volume	≈300 m^3/h	≈400 m^3/h	≈500 m^3/h	≈600 m^3/h
Motorblower(s)	Centrifugal with speed autoregulation based on filter clogging status. IP55 protection level (2 blowers in 1.8 model)			
Power supply	230V 50Hz			
Power (W)	260	300	415	560
Internal Sockets	2	2	2	2
Fluorescent lamps	2x25W	2x30W	2x36W	2x58W
Lighting	1200 lux			
Sound pressure level	<58 dB(A)	<58 dB(A)	<58 dB(A)	<58 dB(A)

Class II MicroBiological Safety Cabinet, S@FEMATE EVO.

The new **Safemate EVO** Series is the culmination of Euroclone's more than 30 years of experience in designing and manufacturing microbiological safety cabinets.

Inheriting its predecessors' safety features and longstanding reliability and expanding them with new and improved functionalities, the Safemate EVO Series cabinets embodies once more our company motto. **S@femate EVO** cabinets are certified according to EN12469:2000 by TUV Nord (Germany).

MAIN FEATURES

- Power efficient EC Motorblower with digital inverter
- TUV Nord Certification & GS Quality Mark
- Double skin side walls to improve front barrier
- One-Knob control system
- Textile *PlenumPlus* technology to improve airflow uniformity and reduce noise
- Advanced front glass cleaning system
- 4 capped passthrough holes in the side glasses to let cables/tubing in the working area
- Electrically operated front glass
- Tight seal closure system
- Front window presses on the gasket when in closed position to ensure no leakages.
- Maximum height of front aperture: mm 440.
- Front grid with "V" shape to avoid obstructing it with the arms. No need to use armrests.
- Filter replacement and electric/electronic components maintenance from front side.
- External surface in epoxy-painted steel.
- Working chamber and work surface fully realized in stainless steel AISI304 with SB finishing. Easy to clean as required by EN12469:2000.
- Work surface divided in sectors, available both solid or perforated.
- Front sash and lateral windows in stratified safety glass, 6mm.
- Air decontamination provided by HEPA H14 filters, with efficiency > 99.995% (test MPPS according to EN1822.1).
- DOP test port for easy check of HEPA filters integrity.
- Combustible gas tap with safety solenoid valve.
- Internal sockets with IP55 protection level.
- Constant monitoring of the following parameters:
  - Laminar flow speed;
  - Inflow speed;
  - Optical/acoustic alarm for insufficient inflow barrier;
  - Optical/acoustic alarm for insufficient laminar flow;
  - Operating hours visualization for: cabinet, HEPA filters, UV.
- Volt-free contact for remote blower control or connection to a remote alarm system.

STANDARD UTILITIES

Utilities are located on the back wall of the working area. Connectors for the utilities are located on the top of the cabinet towards the back.

Removable Vacuum tap. On the back wall, right side.
Removable Gas tap with safety solenoid valve. On the back wall, right side.
Electrical sockets. On the back wall.
Mobile UV Kit socket. On the back wall, right side.
DOP sampling port. Below the work surface, left side.

OPTIONALS ACCESSORIES

Description	Part No.
Stand for S@femate EVO 1.2	AS1L410
Combustible gas tap	AZ5L421
Vacuum/Inert gas tap	AZ5L432
LED Illumination kit	AP2L004
Castor kit	AZ1L010
2 Drawers file cabinet	AC10000

TECHNICAL SPECIFICATIONS

MODEL	S@FEMATE EVO 1.2	S@FEMATE EVO 1.2d
Part No. without work surface	LDL420N	LDL422N
Solid work surface	AZ9L040	
Perforated work surface	AZ9L041	
External size(lxpxh) mm	1380x780x1450	
Work area size (lxpxh) mm	1230x580x700	
Front Aperture (mm)	210	
Weight (Kg)	260	
HEPA filters efficiency	> 99,995% MPPS (test MPPS according to EN1822.1)	
Exhaust air volume	≈480 m^3/h	
Motorblower(s)	Centrifugal with speed autoregulation based on filter clogging status. IP55 protection level (2 blowers in 1.2d model)	
Power supply	230V 50Hz	
Power (W)	375	
Internal Sockets	2	
Lighting	>850 lux	
Sound pressure level	<50 dB(A)	
Main structure:	cold rolled steel, stove enamel coated RAL 7035	
Working space surface:	stainless steel AISI 304 - SB finishing	
Front and side walls windows:	laminated safety glass	

Class II MicroBiological Safety Cabinet, S@FEFLOW TWO.

S@feflow Two are the newest Euroclone Class II (Type A2) microbiological safety cabinets designed to allow sterile manipulation while providing protection for operator, environment and product from biological contamination. **S@feflow Two** cabinets are certified according to EN12469:2000 by TUV Nord (Germany).

- **New style**: Being safe has never looked so appealing! The new look of the S@feflow Two is not just for show! This mix of plastic & steel elements allowed us to create a very soft looking cabinet: the curved design helps reducing the bulkiness of standard cabinet design, easing the strain on the eyes! And it's not just an optical effect: the cabinet is about 10cm lower than our other models, and by easily removing the plastic elements can reach an overall depth of 79cm: a boon for logistics!

- **New glass cleaning system**: The S@feflow Two has been designed to keep you always safe, even during routine maintenance operations like cleaning the front glass! Enters the new Lower Edge Tilting System: the front glass **tilts forward** allowing the access for cleaning purposes from above, **eliminating the risk of exposure to detergent or contaminants!** Moreover during the procedure the motorblower stays on providing high level of containment and avoiding unnecessary exposure!

- **New partial double skin with lateral windows**: **Added security** thanks to lateral double skin, **more comfort** thanks to lateral side windows: why choosing one if you can have both?

- **New illumination system**: the cabinet will sport two available light sources: fluorescent lamps (default) or LEDs (optional). Both sources will be dimmerable, letting the user decide which intensity is better suited for him/her. The lights are now placed above a diffusing membrane: this gives the lighting a very soft and uniform appearance to reduce eye fatigue when working!

- **New full touch control panel**: the cabinet is fully controlled by a full-touch color screen, which allows us to use high definition graphics for icons and status monitoring! The inclined position of the screen allows an optimal view of the situation while working, allowing the users to always have the cabinet status under control! The new system is also highly expandable, allowing for easy update and implementation of new features/apps in the future!

- **New "ECO Mode"**: by selecting this mode the new S@feflow will partially lower the front glass in order to reduce the inward air speed at the front, while keeping both the work area and the operator perfectly safe, and saving energy! This is perfect when leaving the cabinet on during incubations or when switching between different users!

MAIN FEATURES

- Microprocessor controlled EC motorblower enhances energy efficiency, reducing operating costs.
- Fully compliant with the EN12469 safety standard as independently tested and certified by TUV Nord – the leading testing agency in Europe.
- Air and aerosol tight electrical sliding sash with unique "yzy" movement.
- Dual use uv kit: back wall installable or functioning as a mobile kit.
- 10° sloping front aperture to maximise comfort.
- Innovative lower edge tilting system for safe cleaning of the front glass
- Double skin with windows for increased protection and comfort.
- Eco mode to reduce power consumption
- Dual lighting system: choose between fluorescent or led.
- Full color touch screen control panel

STANDARD UTILITIES

Utilities are located on the back wall of the working area. Connectors for the utilities are located on the top of the cabinet towards the back.

Removable Vacuum tap. On the back wall, right side.
Removable Gas tap with safety solenoid valve. On the back wall, right side.
Electrical sockets. On the back wall
Mobile UV Kit socket. On the back wall, right side.
DOP sampling port. Below the work surface, left side.

OPTIONALS ACCESSORIES

Description	Part No.
Stand for S@feflow Two 1.2	AS1H400
UV Smart: dual use UV kit	AK1H000
LED Illumination kit	AZ1H000
Internal UPS kit	AZ1H050
2 Drawers file cabinet	AC10000

TECHNICAL SPECIFICATIONS

MODEL	S@FEFLOW TWO 1.2
Part No. with solid work surface	LDH4200
External size(lxpxh) mm	1490 x 850 (790 with opened plastics) x 1365
Work area size (lxpxh) mm	1280 x 595 x 700
Front Aperture (mm)	210
Weight (Kg)	260
HEPA filters efficiency	> 99,995% MPPS (test MPPS according to EN1822.1)
Exhaust air volume	≈480 m^3/h
Motorblower(s)	Centrifugal with speed autoregulation based on filter clogging status. IP55 protection level (2 blowers in 1.8 model)
Power supply	230V 50Hz
Power (W)	375
Internal Sockets	2
Lighting	>850 lux
Sound pressure level	<50 dB(A)
Main structure:	cold rolled steel, stove enamel coated RAL 7035 + ABS plastics
Working space surface:	stainless steel AISI 304 - 2B finishing
Front and side walls windows:	laminated safety glass

Class II MicroBiological Safety Cabinet for Cytotoxics Manipulation, S@FEMATE CYTO.

S@femate Cyto Cytotoxic drug handling Cabinets have been designed according with the most stringent safety standards for this category of Safety Cabinets (DIN12980, EN12469).

Other than the two classic H14 filters needed for the filtration of exhausted air and downflow recirculating unidirectional airflow, a tertiary filtration stage (with bag-in bag-out filter changing protocol according to KTA 3601 Lüftungstechnische Anlagen in Kernkraftwerken) is located underneath the work surface in order to provide, by filtering 100% of the recirculated airflow, the required safety for the maintenance personnel when removing this stage of filtration for substitution

MAIN SPECIFICATIONS

- Microprocessor controlled motor blower, with volumetric sensor for exhausted air flow monitoring
- Volt-free contact for remote monitoring of exhaust fan.
- Automatic reset of initial conditions in case of power failure
- Sloped front design for the highest operational comfort. Sloped back side of the working chamber for the best down flow distribution.
- Utilities inlets from the top of the cabinet.
- Stainless Steel internal surfaces with 2B finishing (including spillage tray). Solid work surface (2 sections) and special designed front grill.
- Electrically operated sliding multilayer safety glass window (max opening at 120°)
- Comfortable 195mm front opening
- Exposed exhaust Hepa filter for easy visual integrity check.
- Three stages of H14 class High Efficiency Particulate Air filters with > 99.995% efficiency on 0.1 – 0.2 micron particles (MPPS) (EN1822-1)
- Filter change and maintenance from the front of the cabinet for all stage of filters.
- Bag-in bag-out tertiary filter stage changing technology (avoiding rupture of isolation continuity of the work area during filter changing)
- Exhaust transitions easily installable.

STANDARD UTILITIES

Connectors for the utilities are located on the top of the cabinet towards the back.

Vacuum tap. On the right side.
Electrical socket. On the right side.
Mobile UV Kit socket. On the back wall, left side.

OPTIONAL ACCESSORIES

Description	Part No.
Mobile UV Kit for S@femate Cyto 1.2-1.8	AKC0001

TECHNICAL SPECIFICATIONS

Model	S@FEMATE Cyto 1.2	S@FEMATE Cyto1.8
Part No.	LY74000	LY40000
External Size (lxdxh) mm	1380x780x2220	1990x840x2220
Working area size (lxdxh) mm	1230x600x700	1840x600x700
Front aperture – working position (mm)	195	195
Maximum front aperture (mm)	440	
Work surface	Solid work surface, divided in sectors. Stainless steel AISI 304 with 2B finishing	
Weight (Kg)	340	450
HEPA filters efficiency	> 99,995% MPPS (according to EN1822.1)	
Exhausted air volume	≈440 m^3/h	≈650 m^3/h
Motorblower(s)	Centrifugal with speed autoregulation based on filter clogging status. IP55 protection level (2 blowers in 1.8 model)	
Power supply	230V ~ 50Hz	
Power (W)	400	750
Internal sockets	1 + 1 UV	2 + 1 UV
Fluorescent lamps	2x30W	2x58W
Lighting	1200 lux	
Sound pressure level	55 dB(A)	57 dB(A)

Class II MicroBiological Safety Cabinet Type B2, SAFEMATE TOTAL

S@femate TOTAL Cabinets have been designed according to the airflow specifications for NSF49 Class II Type B2 cabinets, also known as "total exhaust". 100% fresh air is taken in from the lab, either from the front aperture and from a main inlet. The air from the main inlet is then cleaned by the main HEPA H14 filter to provide an ISO5 working area, and joins with the air from the front aperture on the bottom of the cabinet. All the air is then circulated behind the backwall of the unit and filtered via the exhaust HEPA H14 filter and reinjected into the environment.

This kind of units are designed to be hard ducted and provide the possibility to work safely with small amounts of chemicals without the risk of increased concentration due to the air recirculation.

MAIN SPECIFICATIONS

- Sloped front sash (5°)
- Sliding sash with electrical operation and auto recognition of the correct work position
- Swinging front window for optimal clearing access
- Front window presses on the gasket when in closed position to ensure no leakages.
- Maximum height of front aperture: mm 440.
- Front grid with "V" shape to avoid obstructing it with the arms. No need to use armrests.
- Filter replacement and electric/electronic components maintenance from front side.
- External surface in epoxy-painted steel.
- Working chamber and work surface fully realized in stainless steel AISI304 with SB finishing. Easy to clean as required by EN12469:2000.
- Work surface divided in sectors, available both solid or perforated.
- Front sash in stratified safety glass, 6mm.
- Air decontamination provided by HEPA H14 filters, with efficiency > 99.995% (test MPPS according to EN1822.1)
- DOP test port for easy check of HEPA filters integrity.
- Internal sockets with IP55 protection level.
- Constant monitoring of the following parameters:
    - Laminar flow speed;
    - Inflow speed;
    - Optical/acoustic alarm for insufficient inflow barrier;
    - Optical/acoustic alarm for insufficient laminar flow;
    - Operating hours visualization for: cabinet, HEPA filters, UV.
- Volt-free contact for remote blower control or connection to a remote alarm system.
- Exhaust connector: diameter 350mm.

STANDARD UTILITIES

Utilities are located on the back wall of the working area. Connectors for the utilities are located on the top of the cabinet towards the back.

Electrical sockets. On the back wall
DOP sampling port. Below the work surface, left side.
UV lamp installed on the back wall.

OPTIONALS ACCESSORIES

Description	Part No.
Stand for S@femate TOTAL 1.2	AS1L410
Castor kit	AZ1L010
2 Drawers file cabinet	AC10000

OPTIONAL UTILITIES

Vacuum tap. On right side.
Gas tap with safety solenoid valve. On right side.
Additional sockets
RS232 data transmission kit (Software not included)

TECHNICAL SPECIFICATIONS

MODEL	S@FEMATE TOTAL 1.2
Cabinet Part No.	LDK4E0N
Perforated work surface	AZ9K040
Solid work surface	AZ9K041
External size(lxpxh) mm	1380x840x1450
Work area size (lxpxh) mm	1230x600x700
Height including stand (mm)	2175
Front Aperture (mm)	195
Weight (Kg)	240
HEPA filters efficiency	> 99,995% MPPS (test MPPS according to EN1822.1)
Exhaust air volume	≈1400 m^3/h
Motorblower(s)	Centrifugal with speed autoregulation based on filter clogging status. IP55 protection level
Power supply	230V 50/60Hz
Power (W)	375
Internal Sockets	2
Fluorescent lamps	2x30W
Lighting	1200 lux
Sound pressure level	<58 dB(A)

Class III MicroBiological Safety Cabinet, S@FE3.

MAIN FEATURES

- Manufactured in accordance with EN12469:2000 standard
- State of the art microprocessor control system
- Main switch with removable key
- Soft touch keyboard
- Bar graph for exhaust air flow conditions; permanent display
- Alarms for low air flow
- Sloped front for the most comfortable access
- Front and side access for filter maintenance and service

- C-shaped support stand for easy *one man installation* procedure
- Transfer hatch with interlocked doors (right positioned)
- Class III cabinet with exclusive three filter design and Class 100 inner chamber.
- Controls comfortably located at eye level
- Fan speed and aeraulic controlled by Microprocessor
- Three operating modes: normal, stand-by, calibration
- High speed rinse at start up
- Self calibration and internal Watch-dog cycle before "SAFE" condition is reached
- Visual display of "SAFE" conditions and "UNSAFE" conditions (LED and bar graph)
- Elapsed time meter
- Microprocessor control with following specifications:
  - Multilevel alarms, with redundancy functions.
  - Permanent display of working conditions.
  - High air flow stability both in case of transitional disturbances or to progressive filter clogging
  - Power failure alarm
- Volt-free contact for remote monitoring of exhaust fan.
- Automatic reset of initial conditions in case of power failure
- C-shaped support stand for easy *one man installation* procedure
- Anti blow back valve (optional) for ducted configuration
- Magnehelic Gauge for internal chamber pressure constant monitoring
- One (1) Electrical Socket as standard option.
- UV-Light installed on top (standard option)
- Sloped front design for the highest operational comfort.
- Stainless Steel internal surfaces with 2B finishing
- Liquid retaining work surface (Stainless Steel 2B finishing)
- Total visibility air and aerosol-tight front window equipped with robust gloves (Class III) for the safest operation when working with Risk Group 4 pathogens.
- Class III: Exclusive four filter design for the highest safety of the environment and the operator (Risk Group 4 pathogens): one (1) prefilter, one (1) HEPA H14 In-Let, two (2) HEPA H14 Exhaust Filters.
- H14 class High Efficiency Particulate Air filters with 99.995% efficiency on MPPS (most penetrating particle size) (EN1822-1 and EN 13091:1999 tested and certified)
- Filter change and maintenance from the front of the cabinet.
- Exhaust transitions easily installable.
- Anti-blow-back valve available as add-on option
- Key operated. The key can be removed when the unit is in SAFE mode, in order to avoid unwanted operation. In case of power failure, the cabinet is re-set to original working conditions.
- Visual display of SAFE conditions. Pre-warning before actual alarm conditions are reached (visual and acoustic alarms)
- Soft touch control with keys for standard service utilities. Interconnected UV and fluorescent lights.

TECHNICAL SPECIFICATIONS

Model	Safe³ 1.2
Part No.	**LT20000**
External size (lxdxh) mm	2015 x 822 x 1300
Working chamber size (lxdxh) mm	1200 x 660 x 700
Gloves	2
Exhaust air volume (m3/h)	> 180 m3/h
Internal pressure differential (Pa)	< -220
Weight (kg)	210
Power supply	220/240V 50Hz
Power (W)	500 W
Sound pressure level	< 58dB(A)
Lighting	>1000 lux

Safety Cabinet with operator protection for StemCell Manipulation, STEMSAFE

The StemS@fe iREF workstation series has been developed to provide the most controlled and safe environment for stem cell culturing. The heated work surface **keeps the cells at a constant temperature during all the steps**, creating a more uniform growth and/or differentiation behaviour. This allows to make sure that experiments involving the use of those cells return more consistent results.

The possibility to install one or two (on the 1.8 size cabinet) **microscopes in the working area** allows the operators to check on their cells while still in a safe, sterile environment.

The StemS@fe iREF cabinets is a **high retention efficiency recirculating cabinet engineered according to the EN12469:2000 European Standard for Microbiological Safety Cabinets**, that offers **Product, Operator and Environment Protection**. The specially designed air flows allow users to work in full safety, allowing the use of viral vectors or cells of human origin by providing the same level of protection of a Class II cabinet, even with the microscopes installed in the working area!

TECHNICAL SPECIFICATIONS

• Ready for the installation of 1 or 2 (only on 1.8 size cabinet) Olympus SZX10 or SZX16 stereo microscopes
• ThermoHeat technology-based heated built-in worktop with PID control.
• ThermoHeat technology-based heated built-in sample glass stage with PID control granting ±0.5°C overall accuracy with PID self-tuning control system for optimized temperature control performance.
• 6 mm safety glass front sash and lateral sides offer great luminosity and cleanability. Front sash can be opened for cleaning purposes.
• Aperture protection factor (Apf) >=105 as defined by the EN12469:2000 standard for Biohazard Class II cabinets.
• RS232 interface and volt-free contact
• Soft touch Membrane Keyboard
• Internal work chamber in stainless steel AISI 304 with radiussed corners
• Glass side walls.
• Unique removable work surface for easy maintenance and microscope replacement.
• Vertical laminar air flow cabinet providing ISO 5 environment for stem cell culturing and In-Vitro Fertilisation procedures.
• H14 filter with micromesh downstream equalising plenum, for the highest airflow speed uniformity.
• Gassing flow meter(s) [number and placement depends on size].
• Electrical socket(s) [number and placement depends on size].
• Front glass, main filter and back wall sloped for better visibility and air flow uniformity.
• Exhaust HEPA filter fully visible for visual inspection of filter's integrity.
• Main HEPA filter maintenance and changing from the front of the cabinet
• Programmable UV light kit (delay and exposure times) via cabinet software.
• Back-lighted digital display with constant viusalisation of cabinet parameters:
- Nominal functioning conditions "SAFE".
- Downflow air speed in m/sec.
- Exhaust air flow speed in m/sec.
- Bar-graph for immediate visualization of air flow balancing.
• 2 HEPA filters class H14 with 99.999% efficiency on particles with 0,3 micron diameter (99.995% on MPPS as per EN1822-1)
• 1 Motorblower (2 on 1.8 size cabinets)
• Partially Recirculating air flow, granting 25 changes per minute in the working area

OPTIONAL FEATURES

UV Light on back wall, controlled by built-in microprocessor, interlocked with the fluorescent lights and front panel.
Integral LCD monitor19" installed on back wall of work area. Can be connected to an external server or to the stereoscope camera.
Integral CO2 incubator 14 lt. For the optimal work conditions, direct access from the inner work chamber.

OPTIONAL ACCESSORIES

Support Stand available in fixed and electrical adjustable height versions.
Warming blocks for Petri dishes.
Warming blocks for test tubes from 12 to 17 mm diameters.
Humidifier Glass Flask ensures the 5% CO2 / gas mixture is humidified and heated before delivering it to the glass hoods.
Glass Hood Incubators for media in culture dishes

TECHNICAL SPECIFICATIONS:

Model	StemS@fe iREF 1.2 With 1 microscope	StemS@fe iREF 1.8 with 1 microscope	StemS@fe iREF 1.8 with 2 microscopes
External size (wxdxh) mm	1680x840x1450	1990x840x1450	1990x840x1450
Internal size (wxdxh) mm	1325x650x730	1930x650x730	1930x650x730
Height including stand (mm)	2175	2175	2175
Motorblowers	1	2	2
Weight (Kg)	190	300	300
Filters efficiency	Higher than 99,999% (for particles with a diameter >= 0,3 micron)	Higher than 99,999% (for particles with a diameter >= 0,3 micron)	Higher than 99,999% (for particles with a diameter >= 0,3 micron)
Exhaust air volume	about 500 m^3/h	about 600 m^3/h	about 600 m^3/h
Power supply	230V single phase 50Hz	230V single phase 50Hz	230V single phase 50Hz
Power requirement (W)	750	800	800
Installed sockets	1 shuko	2 shuko	2 shuko
Fluorescent lamps	2x58W	2x58W	2x58W
Lighting intensity	>900 Lux	1200 Lux	1200 Lux
Aperture protection factor (Apf)	>=10^5	>=10^5	>=10^5
Noise pressure (lower than)	57 dB(A)	57 dB(A)	57 dB(A)

Active Charcoal filtration Hoods, S@FEHOOD.

SAFEHOOD are fume cupboard with activated carbon filters for the removal of a variety of toxic fumes, gases or vapours from the exhausted air.

Working with volatile toxic substances is not a problem when using a Safehood ductless work station. No cumbersome installation needed and minimum space requirements makes Safehood the easiest way to solve your safety problems when handling toxic chemicals.

The quality and extensive range of activated carbon filters will help you to find the right solution for all your safety requirements.

The high quality of the components and the accurate design ensures years of trouble free operation.

Safehood main applications are for the protection of operator and environment when:

- Handling chemical substances in the laboratory.
- Sample preparation for anathomo-pathology.
- Rigid or flexible endoscopes decontamination.
- Handling of adhesives and solvents.
- Handling of airborne powders and chemical aerosols.

MAIN FEATURES

COMFORTABLE
Smooth operating sliding sash glass window offers easy access to the work area.
The glass side walls offer excellent visibility and ease of cleaning.
Choice of polypropylene, ceramic or Stainless Steel work surface with liquid containment.
Integral fluorescent lighting.
Extremely low noise level induction fan.

SAFE
Highest containment factor provided by the most sophisticated microprocessor controlled air speed regulation that maintains barrier average velocity of 0,5 M/sec, which is independent from the sliding sash.
Visual and acoustic alarm for low barrier speed window position.
All electrical components are isolated from the air flow.
Optional dual exhaust safety filter (4Kg).
Safety slot(s) on the front panel for visual filter(s) identification (in according with European safety regulation).

EFFICIENT
Extra large activated carbon filters with optimised granularity for the highest chemical specificity and efficiency. Maximum weight (12kg),maximum residence time.(110mm height).
Large choice of specific application filters.
Front window aerodynamically designed to ensure minimum turbulence whilst providing maximum containment
Reduced speed function for standby application

USER-FRIENDLY
Ready to use: Just place the cabinet on a bench or on the optional support stand and plug into a standard domestic mains socket .No need for calibration or expensive ductworks.
Prefilters provided as standard, easily removable from inside of the cabinet providing the highest operator safety.

ACCESSORIES

Part No.	Description
AS44000	Support stand for SAFEHOOD 75
AS43000	Support stand for SAFEHOOD 120
AS45000	Support stand for SAFEHOOD 165
AZ90000	Working surface in stainless steel AISI 304 safehood 75
AZ90100	Working surface in stainless steel AISI 304 safehood 120
AZ90200	Working surface in stainless steel AISI 304 safehood 165
CP30100	6 Prefilters pack
AZP9340	Utilities taps (Nitrogen, vacuum, water, compressed air)

CHARCOAL FILTERS

CP31000	Main filter (12Kg) for organic solvents, general purpouse
CP32000	Main filter (12Kg) per formaldehyde
CP33000	Main filter (12Kg) per ammonia
CP41000	Safety filter (4Kg) for organic solvents, general purpouse
CP42000	Safety filter (4Kg) for formaldehyde
CP43000	Safety filter (4Kg) for ammonia

Other filters (e.g. inorganic acids, mercaptans, mercury vapours, ethers, HEPA) are available. Multilayered or custom filters can be provided if needed.

TECHNICAL SPECIFICATIONS

MODEL	75	120	165
Part No.	FS2050N	FS1050N	FS30000
Aerodynamics			
Treated air volume (m3/h)	300	550	800
Average barrier air flow speed (m/sec)	>0,4 (set point 0,5 m/sec)		
Electrical specifications			
Power supply	230 V – 50Hz		
Power (W)	420	800	1170
Lighting (Lux)	>800		
Controls	Control Panel Soft-touch control panel with fan on-off switch; alarm mute, separate main switch		
Functions & Alarms	Continuous front barrier average speed display; display in mt/sec or fmp; alarm LEDs for fan(s),air flow, front window position, filter efficiency.		
Filtering system			
Motorblower(s) (# and W)	1 x 375W	2 x 375W	3 x 375W
Main filters 12Kg (#)	1	2	3
Safety filters 4Kg (#)	1	2	3
Prefilters (#)	1	2	3
Construction	Main body Epoxy painted cold rolled steel Lateral windows Safety glass		
Size specifications			
External size (LxDxH) mm	750x720x1200	1200x720x1200	1650x720x1200
Working chamber (LxDxH) mm	670x550x600	1120x550x600	1570x550x600
Weight (without filters) Kg	95	130	180

CO$_2$ Incubator, S@fegrow PRO

With their high performance and high quality the S@fegrow incubators provide the ideal environment for cell growth, whether you are using primary cell lines or stem cells.

Comfort for cells...

The Advanced Direct Heating system, with its 4 indipendently controlled elements and 7 thermal sensors, provides unparalleled temperature uniformity and the solid-state IR CO$_2$ sensor guarantees the most precise control on gas levels.

...and users!

The seamless internal chamber and the fully removable shelving system with 4 non-perforated shelves allow for extremely easy and effective cleaning! The integrated on-demand High Temperature Decontamination cycle completes the system allowing to keep contamination events under control!

Maximum cleanability:
- The inner chamber is derived from a single sheet of stainless steel, resulting in a seamless surface with big round corners
- Shelving system is fully removable with no fixtures on the inner chamber's walls
- Water is placed inside an easily removable and cleanable dedicated steel pan
- No air circulation channels or conduits

Advanced Direct Heat system:
The Direct Heat system has been designed to provide top level performances in term of uniformity and recovery:

- 4 indipendent heaters controllers → maximum precision!
- 73 meters of heating elements on 6 sides → maximum uniformity!

Infrared CO$_2$ Sensor:
The humidity indipendet IR sensor provides high accuracy in CO$_2$ level measurement, and the programmable AutoZero function makes sure it always works at top performance!
The sensor has been designed in order to allow running the High Temperature Decontamination Cycle without the need to remove it!

High Temperature Decontamination Cycle
This standard feature of S@fegrow PRO incubators allows to raise the internal chamber temperature to 125°C in order to remove residual contaminations and keep the incubator clean!

Full optional
Access port, RS232 port for connection to data logging systems, Volt-Free connection for external alarms

MODELS

Part No.	Description
CO20010	S@fegrow PRO - CO2 Incubator - 230 Volts, 50/60 Hz - Double Door w/Glass - Right open (hinges on the left) - "Direct heated"
CO20011	S@fegrow PRO - CO2 Incubator - 230 Volts, 50/60 Hz - Double Door w/Glass - Left open (hinges on the right) - "Direct heated"

OPTIONS & ACCESSORIES

Part No.	Description
COA08100	Stacking kit for S@fegrow, composed of base with castors and intermediate plate
COA0004	Inner glass door. 4 doors version for S@fegrow mod.: CO20010
COA0005	Inner glass door. 4 doors version for S@fegrow mod.: CO20011
COA0040	Set of 4 perforated shelfs for S@fegrow
COA08105	Inlet CO2 Filter for S@fegrow
COA08106	Autozero Filter for S@fegrow
COA08109	Bottles Change Over for S@fegrow
COA08110	Portable electronic CO2 analyzer for S@fegrow
COA08111	5,0% CO2 Small Bottle for analyzer calibration
AS70001	Stand w/castors for S@fegrow 188, height 540 mm

TECHNICAL SPECIFICATIONS

Internal Chamber	Stainless steel 304, seamless
Internal Volume (total/available)	188,6 liters/140 liters
External size (LxHxP) mm	680 x 896 x 746
CO2 Sensor	Solid State IR, with Autozero function and not influenced by humidity level
CO2 Range	From 0.5 to 20 % CO2, step 0.1%
CO2 Control	± 0.1% CO2
CO2 Accuracy	± 0.2% @ 5% CO2
Temperature range	10°- 50°C, from 5°C above ambient
Temperature control	± 0.1° C
Temperature Accuracy	± 0.1° C
Temperature Uniformity	Better than ± 0.3° C
Shelves	4 stainless steel solid shelves
Shelves size	510 x 455 mm, distance between shelves 150mm
External connectors	RS232, Volt-free, Cable pass-through

BIOAIR ®

Your Safety is Our Commitment

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