

**TopSafe™ Series**  
**Class I and Class II type A2**  
**MICROBIOLOGICAL SAFETY CABINETS:**  
**Safety you can afford**

**Technical Specifications**



- Fully EN12469 certified by Tüv Hamburg (Class II Type A2; Class I pending)
- State of the art microprocessor control system
- Main switch w/removable key
- Soft touch keyboard
- Bar graph for exhaust and downflow airflow conditions permanent display (Class II)
- Bar graph for exhaust air flow conditions permanent display (Class I)
- Alarms for low air flow and wrong front window position
- Sloped front and back wall for the most comfortable access
- Front access for filter maintenance and service
- C-shaped support stand for the easiest *one man installation* procedure
- Easy retrofit option kits



TopSafe™ Class II type A2 microbiological safety cabinets are supplied in three different sizes (1.2mt, 1.5mt and 1.8mt).

TopSafe One™ Class I microbiological safety cabinets are supplied in one comfortable size (1.2mt)

These last generation Microbiological Safety Cabinets, have been certified according to the most stringent safety standards (EN12469-2000). The Class I model is manufactured according to EN12469 (certification pending)

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, NSF49 and AS2252 standards and have been certified by the most prestigious European certification bodies for Safety Cabinets.

Certified 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.

### **Main specifications**

- Fully EN12469 certified by Tüv Hamburg (Class II type A2)
- 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:
  - Alarms. Multilevel alarms, with redundancy functions.
  - Permanent display of working conditions.
  - Highest air flow stability both in case of transitional disturbances or to progressive filter clogging
  - Continuous monitoring of front barrier air flow for the highest operator safety
  - Low barrier alarm
  - 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 the easiest *one man installation* procedure

### **Mechanical and functional specifications**

- Sloped front design for the highest operational comfort. Sloped back side of the working chamber for the best down flow distribution (cabinet carcass EN12298 tested and certified for air tightness)
- Utilities inlets from the top of the cabinet.
- Stainless Steel internal surfaces with 2B finishing (including spillage tray). Solid work surface (3 sections) and special designed front grill.
- Exhaust grill (Class I) with high aerodynamic efficiency for a reduced turbulence exhaust air pattern inside the cabinet
- Comfortable 200mm front opening
- Easy to install retrofit options through lateral sides.
- Exposed exhaust Hepa filter for easy visual integrity check.
- H14 class High Efficiency Particulate Air filters with 99.999% efficiency on .3micron particles (most penetrating particle diameter) (EN1822-1 and EN 13091:1999 tested and certified)
- Both exhaust and main filters (Class II type A2) are equipped with a micromesh membrane located downstream which acts as airspeed equalizer expansion plenum, as well as a clear indicator of filter damages.
- 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.

- Self calibration cycle performed when cabinet is switched on.
- High speed rinse and set up cycle performed, before reaching the SAFE operating mode.
- 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.
- For Class II type A2 models, the exhaust and recirculating flow rates ensure 25 air changes/min in the working area (30% 70% split)
- For Class II type A2 models, the front barrier air speed is  $\geq 0.5\text{m/sec}$
- For Class I model, the total exhausted air flow ensures a minimum average front speed  $\geq 0.7\text{m/sec}$
- Aperture protection Factor (Apf)  $\geq 1.5 \times 10^5$
- Cleanability Index CC grade.(EN 12296 tested and certified)
- Light intensity on work surface  $> 900\text{ lux}$ .
- Noise level  $\leq 60\text{dB(A)}$  1.2 mt Model (ISO 11201, ISO 4871 and ISO EN 3744 tested and certified)
- Work surface displacement (vibration)  $< 0.005\text{mm RMS}$  between 20Hz and 20,000Hz (ISO 5349 tested and certified)
- 230V, 50Hz
- Max power (for each power point) 3Amps.
- Microprocessor equipped with analogical watch dog.
- CE certification according to Machinery Directive 89/392/EEC, 91/368/EEC, 93/44/EEC 93/68/EEC.

### Technical Features **TopSafe™** Class II Type A2

Model	1.2	1.5	1.8
Code number	LDE0000	LDF0000	LDG0000
Overall dimensions (lxwxh) mm	1380x840x1450	1685x840x1450	1990x840x1450
Usefull dimensions (lxwxh) mm	1230x580x700	1530x580x700	1840x580x700
Weight kg	190	230	300
Front aperture mm	200	200	200
Noise level	$< 60\text{dB(A)}$	$< 61\text{dB(A)}$	$< 61\text{dB(A)}$

### Technical Features **TopSafe One™** Class I

Model	1.2
Code number	TBA
Overall dimensions (lxwxh) mm	1380x840x1450
Usefull dimensions (lxwxh) mm	1230x580x700
Weight kg	190
Front aperture mm	200
Noise level	$< 60\text{dB(A)}$

## Options for TopSafe™ Class II Type A2 and TopSafe One™ Class I

### Stands and UV

AS1A000	Stand for TopSafe 1.2 Class II Type A2 and Class I 1.2
AS1B000	Stand for TopSafe 1.5 Class II Type A2
AS1C000	Stand for TopSafe 1.8 Class II Type A2
AKC0000	Mobile UV light kit for TopSafe 1.2, 1.5, 1.8 Class II Type A2 and Class I 1.2
*TBA	Kit for UV light, rear wall mounted, for TopSafe 1.2, 1.5, 1.8 (not installed) Class II Type A2 and Class I 1.2
*TBA	UV light on rear side for TopSafe 1.2, 1.5, 1.8 (Installed) Class II Type A2 and Class I 1.2

### Transition Adapters

AZ1A200	Passive transition adapter kit for TopSafe 1.2 Class II Type A2 with exhaust enhancement grill (not installed). For ducts length up to 18 mt.
AZ1B200	Passive transition adapter kit for TopSafe 1.5 Class II Type A2 with exhaust enhancement grill (not installed). For ducts length up to 18 mt.
AZ1C200	Passive transition adapter kit for TopSafe 1.8 Class II Type A2 with exhaust enhancement grill (not installed). For ducts length up to 18 mt.
TBA	Passive transition adapter kit for Top Safe One 1.2 Class I for ducts length up to 18mt
TBA	Anti-blow-back valve for Top Safe One 1.2 Class I
AZ1A300	Extraction open hood ("thimble" no fan) for TopSafe 1.2 Class II Type A2 and Top Safe One 1.2 Class I
AZ1B300	Extraction open hood ("thimble" no fan) for TopSafe 1.5 Class II Type A2
AZ1C300	Extraction open hood ("thimble" no fan) for TopSafe 1.8 Class II Type A2
AZ1A100	Motorised extraction kit for secondary exhaust HEPA filter or charcoal filter (filter excluded: see below "Other options") For TopSafe 1.2 Class II Type A2
AZ1B100	Motorised extraction kit for secondary exhaust HEPA filter or charcoal filter (filter excluded: see below "Other options") For TopSafe 1.5 Class II Type A2
AZ1C100	Motorised extraction kit for secondary exhaust HEPA filter or charcoal filter (filter excluded: see below "Other options") For TopSafe 1.8 Class II Type A2
AZ10000	Motorised remote extraction kit for all models (to be ordered in conjunction with Passive transition adapter) for ducts length >18 meters. Can be equipped with HEPA or Charcoal filters (see below "Other options" filter size for 1,2 meter cabinet) for TopSafe 1.2 Class II Type A2 and Top Safe One 1.2 Class I

### Optional Utilities

AZZ5000	Retrofit Additional Vacuum tap Kit for all models, not installed.
AP50000	Installed Additional Vacuum tap for all models
AZZ6000	Retrofit Additional power point kit for all models, not installed (Max 3 per cabinet)
AP60000	Installed Additional power point for all models (Max 3 per cabinet)

### Other Options

AZ33000	Formalin vaporizer for all models
80010035	Secondary Exhaust HEPA filter for TopSafe 1.2 to fit on item AZ1A100

80010040	Secondary Exhaust HEPA filter for TopSafe 1.5 to fit on item AZ1B100
80010039	Secondary Exhaust HEPA filter for TopSafe 1.8 to fit on item AZ1C100
CP21000	Secondary Exhaust General Purpose Charcoal filter for TopSafe 1.2 to fit on item AZ1A100
*TBA	Secondary Exhaust General Purpose Charcoal filter for TopSafe 1.5 to fit on item
*TBA	Secondary Exhaust General Purpose Charcoal filter for TopSafe 1.8 to fit on item AZ1C100
AC10000	2- drawers file cabinet for all TopSafe models

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\*TBA = To Be Advised; Please for further information contact:

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