

MICROBIOLOGICAL

Class II







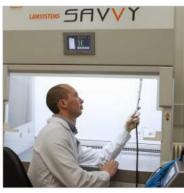




PRODUCT PROTECTION









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Conforms to EN 12469:2000-09



EH[C€

- Physical isolation (containment and controlled removal from the work zone) of pathogenic biological agents (PBA) and microorganisms to prevent airborne infection of the staff and contamination of the air in the work room and laboratory environment.
- Minimization of risk of contamination and crosscontamination of the product.
- Possibility to work with small amount of toxic chemicals and radionuclides as well as to remove work agent odors in case of mandatory connection to an active exhaust system using an exhaust hood supplied upon customer's additional request.
- Equipment of individual work places in medical, pharmaceutical and other institutions working with pathogenic biological agents and microorganisms.





PULLOUT UV UNIT:

- does not disturb the laminar flow
- does not require any additional space for storage
- reliable and simple in operation
- well-adapted for disinfection
- completely closes the front opening when equipment is idle
- controlled with optical position sensor
- passed TÜV NORD certification

The cabinet is featured with an audible and visible alarm system REFLEX LS activated in case the front air grille is blocked to indicate the reduction of the level of safety provided by the cabinet.





1200 mm

Operating mode monitoring system with audible and visible alarm indicates any disturbances of the airflow balance in the work chamber.

A proximity electromagnetic key reliably protects the control system from unauthorized access.

Front sash and UV unit position is controlled with optical sensors.

A removable ergonomic armrest prevents accidental blocking of the front air grille and ensures comfortable support of operator's arms.

Simple filter replacement.

A tabletop is divided in sections allowing their simple disinfection (within the work zone) and autoclaving.









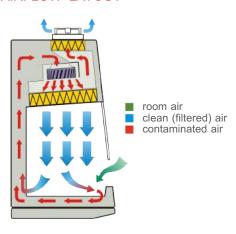
Installation work chamber air cleanliness class for suspended particle (aerosol) concentration as per ISO 14644-1:2015 Class of the cabinet as per EN 12469-2000, NSF/ANSI 49......II Class of HEPA filters as per EN 1822-1......H14 Air recirculation, %......≈70

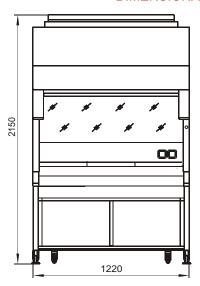
MAIN PARAMETERS AND DIMENSIONS

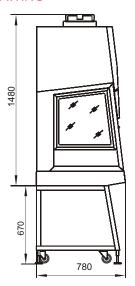
Article	2E-B.001-12
Maximum dimensions of the cabinet with stand* (WxDxH), mm	1200x770x2150*
Dimensions of the work chamber (WxDxH), mm	1105x610x750
Maximum input power without built-in electric sockets**, W	110**
Maximum allowed load on the built-in electric sockets, W	1000
Downflow, m³/h	795-817
Inflow, m³/h	333-378
Minimum illumination of the work zone (integral value determined along the whole area of the work zone), lx	1000
Maximum net weight of the cabinet with stand, kg	230
Maximum noise level at 1 m distance from the cabinet, dB(A)	55***

* Dimensions do not account for outstanding supports.

AIRFLOW LAYOUT







^{***} Power when HEPA filters are new (not clogged).

*** Level of noise at Main Operation mode measured as per DIN EN ISO 11201:2010 in free sound field over the sound-reflecting surface (noise level in real operating environment depends on the dimensions of the operating site as well as and on the total background noise and may vary by 3-4 dB(A)). Indeterminacy: k = 2 dB(A).



MICROBIOLOGICAL SAFETY CABINETS Class II

EH[**C** €

- Physical isolation (containment and controlled removal from the work zone) of pathogenic biological agents (PBA) and microorganisms to prevent airborne infection of the staff and contamination of the air in the work room and laboratory environment.
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- Possibility to work with small amount of toxic chemicals and radionuclides as well as to remove work agent odors in case of mandatory connection to an active exhaust system using an exhaust hood supplied upon customer's additional request.
- Equipment of individual work places in medical, pharmaceutical and other institutions working with pathogenic biological agents and microorganisms.



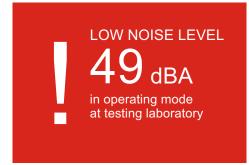
SIMPLE ADJUSTMENT OF AIRFLOW VELOCITY

The system individually controls the inflow and downflow velocities as well as automatically maintains airflow balance. Since there is no need to adjust the airflow balance manually, the time of maintenance at qualification, filter replacement and periodic checks is significantly reduced.

HIGHLY PRECISE MAINTENANCE OF PRESET VELOCITY of the airflows at any level of filter clogging and in case of environment change (humidity, temperature, pressure).

A TOUCHSCREEN CONTROL PANEL conveniently visualizes operating modes, simplifies the control process and provides extensive service and maintenance information.

SIMPLE AND SAFE FILTER REPLACEMENT PROCEDURE minimizes the risk of filter damage in the process of their replacement thanks to configuration of the cabinet and new spring fixation system.











Installation work chamber air cleanliness class for suspended particle (aerosol) concentration as per ISO 14644-1:2015 Class of the cabinet as per EN 12469-2000, NSF/ANSI 49......II Class of HEPA filters as per EN 1822-1......H14 Air recirculation, %......≈70

MAIN PARAMETERS AND DIMENSIONS

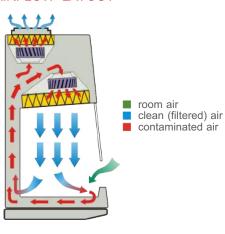
Article	2E-B.002-09	2E-B.002-12	2E-B.002-15 .	2E-B.002-18
Maximum dimensions of the cabinet with stand* (WxDxH), mm	1000x770x2095*	. 1200x770x2095*	1500x770x2095*	1800x770x2095*
Dimensions of the work chamber (WxDxH), mm	905x610x700	1105x610x700	1405x610x700	1705x610x700
Maximum input power without built-in electric sockets**, W	110**	110**	142**	300**
Maximum allowed load on the built-in electric sockets, W	1000	1000 .	1000	1000
Downflow, m³/h	656-674	795-817	1008-1036	1210-1245
Inflow, m³/h	273-309	333-378.	426-484	510-580
Minimum illumination of the work zone (integral value determined				
along the whole area of the work zone), lx	2000	2000 .	2000 .	2000
Maximum net weight of the cabinet with stand, kg	195.5	230 .	293 .	295
Maximum noise level at 1 m distance from the cabinet. dB(A)	52***	49***	57***	59***

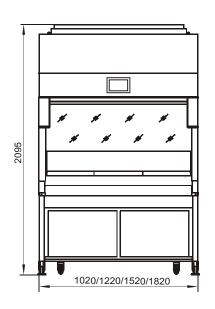
* Dimensions do not account for outstanding supports.

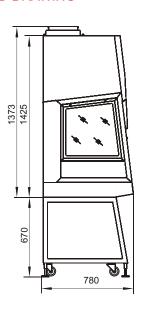
** Power when HEPA filters are new (not clogged).

*** Level of noise at Main Operation mode measured as per DIN EN ISO 11201:2010 in free sound field over the sound-reflecting surface (noise level in real operating environment depends on the dimensions). of the operating site as well as and on the total background noise and may vary by 3-4 dB(A)). Indeterminacy: k = 2 dB(A).

AIRFLOW LAYOUT











MICROBIOLOGICAL SAFETY CABINETS Class II



900 mm 1200 mm 1500 mm 1800 mm

EH[**C** €

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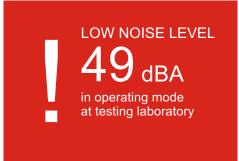
HAS ALL THE ADVANTAGES OF SAVVY MODEL (see page 4)

DISTINCTION FROM SAVVY MODEL: POWER-DRIVEN FRONT SASH

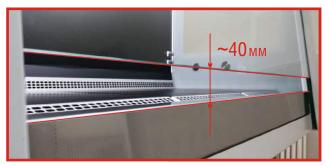
Five preset positions of the front sash:

- 1. OPERATING POSITION in Main Operation mode.
- 2. UP POSITION for work chamber loading/unloading.
- 3. STOP BEFORE CLOSING for safety (at ~40 mm height from the work surface to prevent any trauma of operator's hands).
- 4. CLOSED POSITION in Standby mode or for work chamber UV irradiation.
- 5. DOWN POSITION for disinfection of the upper part of the front sash.

For safety reasons, the moving front sash automatically stops ahead of obstacle (in case of contact with an object or a hand of the operator).









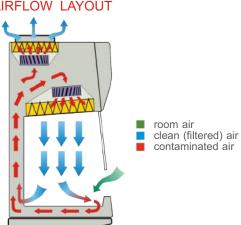
Installation work chamber air cleanliness class for suspended particle (aerosol) concentration as per ISO 14644-1:2015 Class of the cabinet as per EN 12469-2000, NSF/ANSI 49......II Class of HEPA filters as per EN 1822-1......H14 Air recirculation, %......≈70

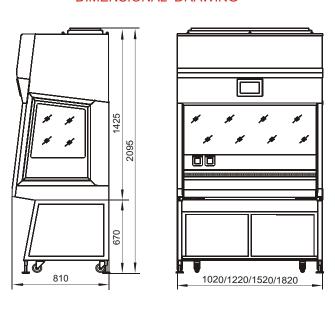
MAIN PARAMETERS AND DIMENSIONS

Article	2E-B.008-09	2E-B.008-12	2E-B.008-15	2E-B.008-18
Maximum dimensions of the cabinet with stand (WxDxH), mm	1000x810x2095*	1200x810x2095*	1500x810x2095*	. 1800x810x2095*
Height of the cabinet with stand and				
completely opened front sash, mm	2180	2180	2180	2180
Dimensions of the work chamber (WxDxH), mm	905x610x700	1105x610x700	1405x610x700	1705x610x700
Maximum input power without built-in electric sockets, W	570	570	570	610
Maximum allowed load on the built-in electric sockets, W	1000	1000	1000	1000
Downflow, m³/h	656-674	795-817	1008-1036	1210-1245
Inflow, m³/h	289-328	354-402	451-512	548-623
Minimum illumination of the work zone (integral value determined along	9			
the whole area of the work zone), lx	2000	2000	2000	2000
Maximum net weight of the cabinet with stand, kg	215	255	300 .	335
Maximum noise level at 1 m distance from the cabinet, dBA	52**	49** .	57**	59**

^{*} Dimensions do not account for outstanding supports. ** Level of noise at Main Operation mode measured as per DIN EN 18C 11201:2010 in free sound field over the sound-reflecting surface (noise level in real operating environment depends on the dimensions of the operating site as well as and on the total background noise and may vary by 3-4 dB(A)). Indeterminacy: k = 2 dB(A).

AIRFLOW LAYOUT







SAVVY CYTOS*

MICROBIOLOGICAL SAFETY CABINETS

Class II





- Protection of the personnel from the impact of cytostatic and cytotoxic agents that are manipulated in the work chamber.
- Aseptic production of antineoplastic agents.
- Reduction of risk of infection of an operator working with airborne pathogenic agents and microorganisms, protection of the environment as well as the product from external contamination and cross-contamination.
- In case of the cabinet connection to the exhaust ventilation system, the capacity of the system shall be from 750 to 1000 m3/h. The necessity of the cabinet's connection to the exhaust system shall be determined solely by the operating organization based on the risk assessment and analysis.
- In case the cabinet is used for work with biological pathogens and high-risk (especially hazardous) microorganisms, a corresponding protective (antiplague) coverall shall be used.



1200 mm

WORK CHAMBER:

- tabletop made of stainless steel, power-driven sliding front sash made of laminated safety glass, side windows made of tempered glass;
- tray under the tabletop is made of stainless steel, has easy-to-clean configuration and prevents any leakages inside the cabinet or on the preliminary HEPA filters;
- work chamber lighting is LED.

SUPPLY AND EXHAUST AIR FILTRATION SYSTEM:

- one supply HEPA filter H14 located above the work chamber;
- one exhaust HEPA filter H14 located in the upper ventilation chamber;
- four parallel preliminary cylindrical HEPA filters H14 located under the tabletop. THE FILTERS ARE REPLACED within the work chamber WHEN THE FANS ARE ON and do not require any disassembly of the cabinet, thus, minimizing the risk of contamination of the personnel or the environment.

CONTROL SYSTEM COMPONENTS:

- automatic airflow maintenance independent of the level of the HEPA filter
- automatic switching-off of the UV light in case of opening the front sash or UV unit screen.











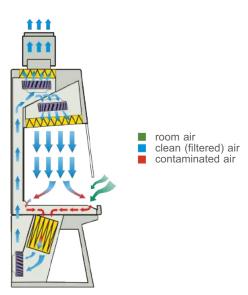
MAIN PARAMETERS AND DIMENSIONS

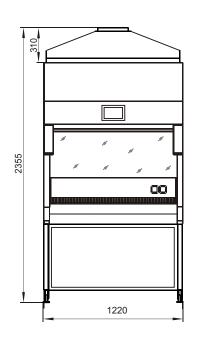
Article	2E-B.005-12
Maximum dimensions of the cabinet with exhaust hood (WxDxH)*, mm	1200x810x2355*
Dimensions of the work chamber (WxDxH), mm	1105x610x700
Maximum input power without built-in electric sockets, W	820
Maximum allowed load on the built-in electric sockets, W	1000
Downflow, m³/h	795-817
Inflow, m³/h	354-402
Minimum illumination of the work zone (integral value determined along the whole area of the work zone), lx	2000
Maximum net weight of the cabinet, kg	
Maximum noise level at 1 m distance from the cabinet, dB(A)	58**

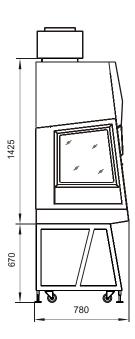
^{*} Dimensions do not account for outstanding supports.

** Level of noise at Main Operation mode measured as per DIN EN ISO 11201:2010 in free sound field over the sound-reflecting surface
(noise level in real operating environment depends on the dimensions of the operating site as well as and on the total background noise
and may vary by 3-4 dB(A)). Indeterminacy: k = 2 dB(A).

AIRFLOW LAYOUT









SAVVY SL CYTOS

MICROBIOLOGICAL SAFETY CABINETS

Class II





CYTOSTATIC

- Protection of the personnel from the impact of cytostatic and cytotoxic agents that are manipulated in the work chamber.
- Aseptic production of antineoplastic agents.
- Reduction of risk of infection of an operator working with airborne pathogenic agents and microorganisms, protection of the environment as well as the product from external contamination and cross-contamination.
- In case of the cabinet connection to the exhaust ventilation system, the capacity of the system shall be from 750 to 1000 m3/h. The necessity of the cabinet's connection to the exhaust system shall be determined solely by the operating organization based on the risk assessment and analysis.
- In case the cabinet is used for work with biological pathogens and high-risk (especially hazardous) microorganisms, a corresponding protective (antiplague) coverall shall be used.



WORK CHAMBER:

- tabletop made of stainless steel, power-driven sliding front sash made of laminated safety glass, side windows made of tempered glass;
- tray under the tabletop is made of stainless steel, has easy-to-clean configuration and prevents any leakages inside the cabinet or on the preliminary HEPA filters;
- work chamber lighting is LED.

preliminary filter replacement as per DIN EN 12980:2017-05 HAS ALL THE ADVANTAGES OF SAVVY CYTOS MODEL (see page 8) DISTINCTION FROM SAVVY CYTOS MODEL: POWER-DRIVEN FRONT SASH

Five preset positions of the front sash:

- OPERATING POSITION in Main Operation mode.
 UP POSITION for work chamber loading/unloading.
- 3. STOP BEFORE CLOSING for safety (at ~40 mm height from the work
- surface to prevent any trauma of operator's hands). 4. CLOSED POSITION in Standby mode or for work chamber UV irradiation.
- 5. DOWN POSITION for disinfection of the upper part of the front sash. For safety reasons, the moving front sash automatically stops ahead of obstacle (in case of contact with an object or a hand of the operator).









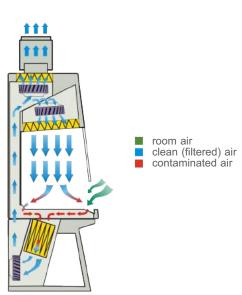
MAIN PARAMETERS AND DIMENSIONS

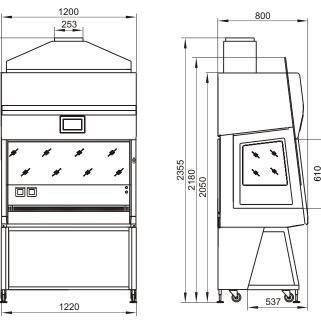
Article	2E-B.013-12
Dimensions of the cabinet assembled with the exhaust hood /WxDxH/*, mm	1200x810x2355*
Dimensions of the work chamber (WxDxH), mm	1105x610x700
Maximum input power without built-in electric sockets, W	820
Maximum allowed load on the built-in electric sockets, W	1000
Downflow, m³/h	795-817
Inflow, m ³ /h	354-402
Minimum illumination of the work zone (integral value determined along the whole area of the work zone), lx	2000
Maximum net weight of the cabinet, kg	330
Maximum noise level at 1 m distance from the cabinet, dB(A)	58**

^{*} Dimensions do not account for outstanding supports.

** Level of noise at Main Operation mode measured as per DIN EN ISO 11201:2010 in free sound field over the sound-reflecting surface
(noise level in real operating environment depends on the dimensions of the operating site as well as and on the total background noise
and may vary by 3-4 dB(A)). Indeterminacy: k = 2 dB(A).

AIRFLOW LAYOUT







SAVVY B2, NEOTERIC B2

MICROBIOLOGICAL SAFETY CABINETS
Class II

1200 mm 1500 mm 1800 mm

SAVVY B2 touchscreen control panel **NEOTERIC B2**pushbutton
control panel

THE CABINET DOES NOT PROTECT FROM TOXIC CHEMICALS AND RADIONUCLIDES!

In case of work with small amount of toxic chemicals and radionuclides as well as to remove work agent odors, the cabinet shall be connected to an active exhaust system via exhaust hood (part of the delivery set)

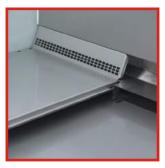
In all other cases, it is up to the organization operating the cabinet to decide whether it is necessary to connect the cabinet to the exhaust system based on the risk assessment and analysis.

ER[C€

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Installation work chamber air cleanliness class for suspended particle (aerosol) concentration as per ISO 14644-1:2015 Class of HEPA filters as per EN 1822-1......H14 Air recirculation, % no recirculation

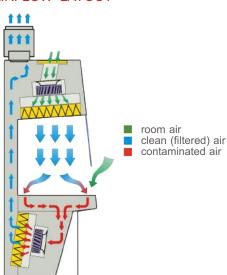
MAIN PARAMETERS AND DIMENSIONS

	SAVVY B2	NEOTERIC B2	NEOTERIC B2
Article	2E-B.003-12	2E-B.003-15	2E-B.003-18
Type of control panel	touchscreen	pushbutton	pushbutton
Maximum dimensions of the cabinet with exhaust hood* (WxDxH), mm	1200x810x2325*	1500x810x2220*	1800x810x2325*
Dimensions of the work chamber (WxDxH), mm	1105x610x705	1405x610x705	1705x610x705
Maximum input power without built-in electric sockets, W	730**	730**	960**
Maximum allowed load on the built-in electric sockets, W	1000	1000	2000
Downflow, m³/h	795-820	1008-1036	1070-1100
Inflow, m³/h	1180-1220	1502-1550	1675-1745
Minimum illumination of the work zone (integral value determined			
along the whole area of the work zone), lx	2000	2000	2000
Maximum net weight of the cabinet with exhaust hood, kg	270	330	370
Maximum noise level at 1 m distance from the cabinet, dB(A)	56***	59***	59***

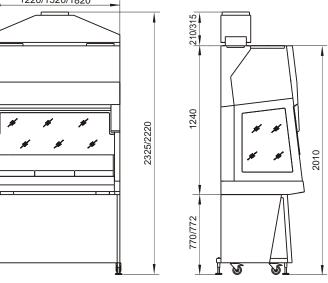
^{*} Dimensions do not account for outstanding supports.

*** level of noise at Main Operation mode measured as per DIN EN ISO 11201:2010 in free sound field over the sound-reflecting surface (noise level in real operating environment depends on the dimensions of the operating site and cabinet as well as and on the total background noise and may vary by 3-4 dB(A)). Indeterminacy: k = 2 dB(A).

AIRFLOW LAYOUT



1220/1520/1820



^{**} Power when HEPA filters are new (not clogged).



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LAMSYSTEMS CC

DESIGN, MANUFACTURE, SALE AND MAINTENANCE OF HIGH-TECHNOLOGY LABORATORY EQUIPMENT, CLEAN ZONES AND CLEAN ROOMS













MANUFACTURE

About 7000 square meters of production facilities are fitted with up-to-date machines and equipment of well-known international brands, i.e. from German, Japanese and Swiss manufacturers. Annual output amounts to about 2500 units. More than 30 models are serial. LAMSYSTEMS products are supplied to numerous countries of CIS, Europe and Asia. LAMSYSTEMS is a top supplier in the market of the Russian Federation – 80%.





ACCEPTANCE TESTING

All of the products manufactured by LAMSYSTEMS are certified. The acceptance testing site is designed as a Class 7 clean room and is fitted with qualified equipment for testing each item released.



LABORATORY

We continuously test materials, structures and technologies using up-to-date instruments and equipment in our own testing laboratory. As a result, we are able to design the equipment that corresponds to international quality and safety requirements.

SERVICE

Strict requirements to service quality are significant part of our corporate culture. Well-experienced service engineers are able to perform any type of works related to maintenance and repair of LAMSYSTEMS equipment.



www.lamsys.com

LABORATORY EQUIPMENT

FOR FACTORIES AND LABORATORIES WITH STRICT REQUIREMENTS TO AIR CLEANLINESS

MICROBIOLOGICAL SAFETY CABINETS













Class I

LAMINAR FLOW CABINETS

IVF WORKSTATIONS

PCR-CABINETS

Class II

FUME HOODS

ISOLATORS (GLOVE BOXES)

STERILE STORAGE CABINETS













CUSTOMIZED ASSEMBLY

WE ARE ABLE TO CREATE CONTINUOUS TECHNOLOGICAL PROCESS LINES BASED ON OUR EQUIPMENT.

The lines can consist of biosafety cabinets, laminar flow cabinets, fume hoods, positive and negative-pressure isolators etc.



CLEAN ZONES

Our protfolio comprises more than 500 clean zones ensuring a required cleanliness class as per ISO 14644-1









MICROBIOLOGICAL SAFETY CABINETS

ADDITIONAL OPTIONS

Class II









- Inflammable gas tap with electromagnetic valve*
- Vacuum tap with electromagnetic valve*
- Exhaust hood for connecting the cabinet to the exhaust system
- Additional sockets
- ULPA filters
- Hydrogen peroxide (H2O2) disinfection kit
- Holes in side walls
- Cabinet base stand





A gas tap or a vacuum tap can be installed into an operational cabinet without any additional qualification required.

* The electromagnetic valve automatically locks gas and vacuum supply in case of power cutoff, the cabinet switching-off or alarm activation.



LAMSYSTEMS CC

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