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1 GENERAL

Vertical laminar airflow benches with negative pressure within the working area and physical separation between operator and product (gloves), the SCS Class III cabinets are designed to protect both the material to be manipulated from contamination coming from environment and to protect the operator and the environment from contamination hazards manipulated inside.

The dusted, filtered and sterile air passing through the main HEPA filter ensures optimum airflow laminarity on the work surface.

SCS Class III cabinets are suitable for the treatment of hazardous products and wherever a productpersonnel-environment cross-protection is required.

Especially suitable for applications such as:

- Manipulation of eziologic agents having a known pathogenicity on humans and animals.
- Presence of high concentrations of biologic materials.
- Presence of agents likely to cause genetic alterations or synergetic activities with other materials.
- Oncogenic.
- Cytotoxic preparations.

The performances of the cabinets are detailed in the TESTING CERTIFICATE.

Furthermore SCS Class III cabinets fulfil the harmonized standards EN 61010-1 as well as EN 61326 according to the applicable European directives regarding the CE marking.

SCS Class III cabinets comply with the above-mentioned standards <u>ONLY</u> if the instruments connected to the electrical socket positioned inside the work chamber are "CE" marked or in any case it meets the above mentioned standards aiming to avoid any electromagnetic interference.

All Faster's cabinets are provided with high insertion loss filters.

Faster s.r.l. cannot be held responsible for malfunctions, damage to people or property due to noncompliance, poor or no maintenance, or improper use of the cabinet.

2 INSTALLATION

2.A INSTRUCTIONS AND CHECKS ON DELIVERY

Considering the critical nature of the use of the SCS Class III cabinet and the need to keep it in optimum condition, installation is very important.

SCS Class III cabinets are positioned on a pallet wrapped in an extensible film and contained in a package of multi-layer strapped cardboard or a wooden cage.

After placing the cabinet in its site of use, opened the package and removed the extensible film, check that the equipment has not suffered any dents or scratches due to transport or improper handling of the package.

In case of any further transport, packing and storage by the user after the initial period of use (e.g.: change of laboratory or factory), contact the technical assistance service or the distributor for more accurate and precise instructions or for assistance by specialized technicians.

SCS Class III cabinets, with or without package, should be always located in a room sheltered from rain.

2.B INSTALLATION REQUIREMENTS

Install the cabinet away from drafts and heat sources (radiators, ventilators/convectors), to ensure proper functioning. For instance, in a small room (<30 m^3), if an exhaust duct is used to expel air outside the building, we recommend the installation of a grill in the room in order to provide an air supply equal at least to the quantity entering in the cabinet.

Install the cabinet in a well-ventilated room with a low degree of dust.

The distance between the cabinet and the exhaust system (if present) should be as short as possible.

Place the cabinet away from doors and windows, which may cause malfunctions

Place the cabinet in places where there is little human traffic.

The exhaust system should be installed on the roof or on a wall or through a window. Otherwise, it can be connected to a chimney.

The door of the room should be in such a position relative to the cabinet as to prevent drafts.

Min. temperature	5 °C
Max. temperature:	40 °C
Max. humidity:	80% at 31 °C, linear drop in relative humidity down to 50% relative humidity at 40°C.

The exhaust duct (optional), located on top of the cabinet, should be connected to the outside of the building, alternatively it is possible the connection with the conditioning plant, but the air must not be recycled.

The maximum length of the \emptyset 200mm exhaust hard duct should not exceed 10 linear meters. Otherwise some changes must be made in the extraction fan or a remote exhaust motor-fan must be installed.

Before connecting the cabinet to the mains power supply, check the necessary voltage and power indicated on the plate near the power cable. The room must be equipped with an earth connection.

Thimble method example

LEGENDA:

- 1. Exhaust air from the cabinet.
- 2. Air from the environment.
- 3. Bleed Air (100÷200 m³/h more than the exhaust air flow rate from the cabinet) to a dedicated exhaust fan (in the electronic board a voltage free contact is available – see electrical diagram- to check when ventilation is ON).



ATTENTION: the installation must be done by technicians authorized by Faster S.r.l. or by the official distributor.

2.C ELECTRIC CONNECTIONS AND INSTALLATION OF THE WORK SURFACE

The electrical connection of the SCS Class III cabinet is made by connecting the power cable located on the top of the right side of the cabinet to a suitable power point (see technical table). When the cabinet is connected, the green light on the control panel switches on (see chapter 4D).

If stipulated by local legislation, insert upstream of the power line an automatic protection overload switch provided with a differential relay, with a rated switching voltage no greater than 30 mA.

The SCS Class III can be supplied either with pneumatic or electric Air Tight Valve (ATV) to close and seal the cabinet during sterilization phase or pressure decay test.

If pneumatic value is supplied then dry and filtered 6-8 bar compressed air has to be connected to the solenoid values on the top of the unit. If an electric value is supplied, then just standard electrical connection is needed.

For the installation of the work surface, proceed as follows:

- remove the protective paper from the work surface leant against the back of the cabinet, taking care not to scratch its surface,
- open the safety front window by unscrewing the four screws,
- clean the work surface with a damp cloth soaked in alcohol or soapy water or with a commonly available product designed for stainless steel,
- place the work surface into the work chamber, let the back to slide on the chamber's supporting bases up to its back wall,
- close the safety front window with the four screws.

2.D POSITIONING OF THE CABINET ON THE SUPPORTING TABLE

SCS Class III Cabinets are supplied with the relevant supporting table, which they have to be fixed to.

After assembling the supporting table (see instructions at Para. 14) put the supporting table on a flat not sloping floor and be sure that all the parts of the cabinet, that can be opened (control board panel and sash) are locked. Then position the cabinet on the table (See instructions at Para. 15).

Technical Features Table

Description	Unit	SCS 312	SCS 315
Overall Dimensions (L x H x D)	mm	2010x2540x880	2315x2540x880
Useful dimensions (L x H x D)	mm	1192x740x580	1497x740x580
Weigh	Kg	330	440
Noise level	dB (A)	<55	<55
Lighting level	Lux	>1000	>1000
Main voltage	V	230V AC 2P+T	230V AC 2P+T
Frequency	Hz	50	50
Power	W		1950
Current	А		9,5
Electrical class		1	1
Protection level		IP20	IP20
Internal outlet (maximum current for all the sockets: 4A)		2P+T 230V 4A	2P+T 230V 4A
Fluorescent lamps	W	2x36	2x58

3 OPERATION PRINCIPLES

The following are the working principles of the SCS Class III cabinets.

The air (A) is sucked from the top of the pass box of the cabinet through an H14 HEPA filter and pushed into the working area of the pass box. Then air pass through a second H14 HEPA filter on the back side of the pass box and is sucked by the main fan. The pressurized air pushed into the plenum passes through the LAF H14 HEPA filter and then downwards, in a laminar flow, into the working chamber (B) to protect the products handled. From here, through the perforated work surface, and than the air pass trough the channel situated at the rear of the work chamber (C). Part of the air is exhausted (D) through the two exhaust H14 HEPA filters. That process creates the negative pressure condition in the working area (B) to protect operator and environment.



4 **OPERATION**

4.A SYSTEM AND PERFORMANCES CONTROLS

The SCS Class III cabinet is provided with an automatic regulation system to keep the unidirectional down flow air speed and the negative pressure in the work chamber constant even with the progressive clogging of the HEPA filters up to the maximum pressure supported by the motor-fans.

The exhaust fan provides to keep -200 Pa, negative pressure, within the work chamber while the unidirectional down flow air velocity is 0,45 m/s.

The soft-touch control panel is microprocessor-controlled with a display showing all relevant data with regard to the operating functions, the different alarms and the error messages.

When the cabinet is running if you open the front glass, this action activates an audible and visual alarm, which cannot be silenced since there is no protection for operator.

When the cabinet is off the front glass can be opened completely by unscrewing the four knobs that fasten the glass

To optimize the visibility inside the work chamber, the cabinet is ergonomically angled sloping-fronted (abt. 7 degrees sloping as to the vertical)

4.B REMOTE SIGNALS

On the ceiling of the cabinet a PVC box contains 3 terminal clamps with the following dry contacts:

Ventilation status (ON/OFF)

It is possible to obtain a 12 Vdc output to connect a led light or alternatively a Normally Open voltage free contact to be connected to an external circuit.

There are two different working possibilities selectable in the software:

- 1 The signal starts when ventilation is turned ON and stops when ventilation is OFF.
- 2 The signal is flashing during the start up phase of the ventilation and is ON when the correct air flow conditions are reached.

Correct air flow conditions

It is possible to obtain a 12 Vdc output to connect a led light or alternatively a Normally Open voltage free contact to be connected to an external circuit. That signal is closed when air flow rate is in the correct range and it is open in case of any flow alarm.

External consent

On request with a software selection it is possible to allow ventilation to be turned ON by a remote volt free contact. When the ventilation is turned ON the cabinet stay in stand by (start up) till the remote normally open contact is closed.

If during normal ventilation the remote contact is open the following message will appear "REMOTE CONTACT OFF" and the operator has to switch OFF ventilation as soon as possible and then check the reasons of the failure.

4.C SYMBOLS OF THE CONTROL PANEL

List and description of all the symbols and controls of the control panel:



1 MAIN SWITCH:

•		
	Position "0"	in the "0" position, the green light of the mains voltage is on (3); the LCD displays the model name "SCS Class III". In this position the operator can activate only the fluorescent light (7), the optional U.V. lamp (14) and the power outlet (6) (with plug installed) and can see the data stored in the microprocessor by pressing the "STATUS" key (2).
	Position "I"	by pressing "I" the password to enter is requested. When the password is typed in (press arrow-up key (\blacktriangle) 5 times, arrow-down key (\blacktriangledown) 4 times) and SET pressed the green led of the switch lights up and the cabinet starts operating, LAF and exhaust motor-blowers are powered and first "CHECK PANEL" then "STAND-BY" appears on the display. The LCD shows the required time (about 40 seconds) for the laminar flow and the internal pressure to reach the pre-set values. In addition, an audible alarm will sound intermittently during this stand-by period, alerting the operator not to start working yet. When the audible alarm stops and the message "STAND-BY" disappears from the display, the cabinet is ready for use. The LAF velocity and the internal pressure are displayed.
2	DISPLAY	Rear lit liquid crystal "LCD" display composed of 2 lines of 20 characters each showing the operating parameters and alarms.
3	LINE	The green mains light switches on if the unit is connected to the mains and the line is live.
4	WORKING CONDITION	The green LED lights up when the ventilation works correctly.
5	GAS	Not activated.
6	SOCKET	This supplies voltage; when enabled, the display shows "POWER ON" (total current for all sockets: 6 Amp).
7	LIGHT	This switches on the fluorescent light; when enabled, the display shows "Light on". Switching on the fluorescent light automatically the optional U.V. lamp switches off.

8 UP/DOWN ARROWS	Use the arrow keys to scroll the menu, to program changing parameters and to put in the password. Three passwords are programmed: 1) to start the cabinet -2) to enter the operator menu -3) to enter the main menu to change the data input (allowed only to authorized technical staff $-$ service $-$ because unsuitable interventions can cause troubles and incorrect operation of the cabinet).
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- **9 ESC** ESC key deletes the operation of data input and goes back to the starting condition.
- **10 SET** SET key lets you enter the different functions or confirm the data input going back to the upper level.

11 STATUS If pressed in sequence, the following data will appear on the display:

External Temperature: Shows the temperature outside of the cabinet; the LCD will display (for example) "EXT. TEMPERATURE=27°C" This value is taken by an electron probe installed outside the cabinet.

Internal Temperature: Shows the internal temperature of the cabinet work area; the LCD will display (for example) "INT. TEMPERATURE =30°C". This value is taken by an electron probe located inside the cabinet.

U.V. Lamp Residual Lifetime: Shows the operating time of the U.V. lamp pre-set by the user with the appropriate keys. The LCD will display (for example) "U.V. TIME=XXXX h". When such time is over, the message "U.V. LIFETIME OVER" will appear on the line below.

F1, F2, F3, F4 and F5 **Residual lifetimes of filters**: it is the operation time of the filters installed in the cabinet that can be programmed by the user. The LCD will display (for example)" RES. TIME FILTER <u>1</u>=XXXX:YY h:min". When such time is over, the message "CHECK FILTER (es.) 1". will appear on the line below.

The filters installed in the cabinet follow the numbering listed below

TYPE of FILTERS	NUMBER
LAF HEPA	1
EXHAUST HEPA	2
MAIN HEPA	3
INLET HEPA (top of the pass boxes)	4
OUTLET HEPA (bottom of the pass boxes)	5

LAF Power: it is shown indirectly by the power supply voltage of the main motor, expressed as percentage of max. load voltage displayed also in proportion by a bar.

The display shows the notice: "MOT.LAF = XX % " (max.100%).

EXH Power: it is shown indirectly by the power supply voltage of the exhaust motor, expressed as percentage of max. load voltage displayed also in proportion by a bar.

The display shows the notice: "MOT.EXH = XX % " (max.100%).

Operating Time: Shows the operating time of the cabinet from the moment when the main switch is positioned on "I" The LCD will display (for example) "WORK TIME=XXXXXh". This value cannot be reset.

12 SPEED REDUCTION By pushing the corresponding red key the password (the same of start) is requested. Once confirmed the password the function is enabled. When it is enabled, the corresponding red LED lights up and LAF velocity and internal pressure are about 50% than their nominal values. The light and the gas electro valve cannot be switched on. If they are on, they switch off automatically. The following two messages appear alternatively:

>>>ATTENTION<<< DANGER

And:

REDUCED AIRFLOW >>>DO NOT WORK<<<

The "SPEED REDUCTION" function can be enabled only with the main switch in position "I". Only the power supply (3) can be operating.

- 13 U.V. TIMER Not activated
- 14 U.V. Not activated
- **15 MUTE** The red alarm LED lights up when an alarm condition occurs, which is shown also by the message appearing on the LCD. By pushing "MUTE" the alarm stops sounding.
- 16 UP/DOWN ARROWS Not activated

4.D MANAGEMENT AND PROGRAMMING OF RESIDUAL LIFETIME

Get access to operator menu when the cabinet is in stand-by pressing "ESC" [9] together with "UP arrow" [8] keys (password). The following diagram shows the organization of "OPERATOR MENU" By pressing "SET" [10] you can either go to the highlighted entry or confirm data entry while by pressing "ESC" [9] you go back to the beginning



LANGUAGE ESPANOL

TIMER (countdown):

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "TIMER SET UP." and press "SET" [10] key; the display will show:

TIMER SET UP SET UP hh:mm

- input the desired time and press SET [10] to confirm
- press ESC to exit the operator menu
- the display will show alternatively the countdown and the standard information
- when the countdown finish an audible signal will advise the operator. It is possible silence the signal with the ESC key

To disable the countdown:

- select "TIMER SET UP" and press "SET" [10]; the display shows:

TIMER SET UP

RESET? YES

- press "SET" [10] to confirm
- press "ESC" [9] to exit the operator menu.

ALARM CLOCK:

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "ALARM CLOCK SET UP" and press "SET" [10]; the disply shows:

ALARM CLOCK SET UP ENABLE? YES

- press SET [10] to confirm and the display shows:

. ALARM CLOCK SET UP DATE & TIME

- set the date and the time with the arrow keys and confirm pressing SET; when the time previously set is reached and audible signal will advise the operator. Is possible silence the signal with the ESC key.

To disable this function:

- select "ALARM CLOCK SET UP" and press "SET" [10]; the display shows:

ALARM CLOCK SET UP

ENABLE? NO

- disable the alarm clock choosing "NO" and press "SET" [10] to confirm
- press "ESC" [9] to exit the operator menu.

UV PROGRAMMING:

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "UV PROGRAMMING" press "SET" [10]; and the display shows:

UV LIGHTING LENGTH SET UP hh:mm

- input the desired time for the UV cycle and press SET [10] to confirm
- the display shows:

.UV PROGRAMMING

DATE & TIME

- set date and time with the arrow keys and confirm pressing SET. when the time previously set is reached the UV lamp switches ON, if the requirements to switch ON the UV lamp are not satisfied (e.g.: glass open) an alarm message will be displayed.
- press "ESC" [9] to exit the operator menu.

U.V. LAMP RESIDUAL LIFETIME:

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "U.V. LAMP RESIDUAL LIFETIME." and press "SET" [10] key; the display will show:

U.V. LAMP RESIDUAL LIFETIME set XXXX

- where XXXX shows the number of the hours set for lifetime of the U.V. lamp.
- Use the "up and down arrow" keys to adjust the hours parameter
- Then press the "SET" key [10] to confirm the data and/or go back to previous menu
- To conclude programming, press ESC" [9] key.

FILTERS RESIDUAL LIFETIME:

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "FILTERS RESIDUAL LIFETIME." and press "SET" [10] key; the display will show:

FILTER 1 RESIDUAL LIFETIME set XXXX

where XXXX shows the number of the hours set for lifetime of the FILTER 1

- Use the "up and down arrow" keys to adjust the hours parameter
- Then press the "SET" key [10] to confirm the data and pass to filter 2 and so on up to filter 5
- To conclude programming, press ESC" [9] key.

LANGUAGE SELECTION

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "LANGUAGE" and press "SET" [10] key; the display will show:

LANGUAGE

English

- With the "up and down arrow" keys select the desired language (Italian, English, French, German, Spanish). Press the "SET" key to confirm and exit the "LANGUAGE" menu.
- Press the "SET" key to exit the Operator Menu and return to the standard display.
- press "ESC" [9] key to go out.

SET UP THE CLOCK

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "SET UP THE CLOCK." and press "SET" [10] key; the display will show:

SET UP THE CLOCK set XXXX

- Use the "up and down arrow" keys to change the hours, minutes, days, month, year, weekday
- Then press the "SET" key [10] to confirm the data and/or go back to previous menu
- To conclude programming, press ESC" [9] key.

PASSWORD CHANGE

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "CHANGE PASSWORD" and press "SET" [10] key; the display will show:

CURRENT PASSWORD

PSW:

- digit the present Password then press "SET" key

SET UP PASSWORD

PSW:

- digit the new Password then press "SET" key

CHECK PASSWORD

PSW:

- digit the password again and then press "SET" key to confirm the data and/or go back to previous menu
- To conclude programming, press ESC" [9] key.

DISPLAY OF HISTORICAL FILES

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "HISTORY VIEW" and press "SET" [10] key; the display will show:
- use "UP/DOWN arrow" keys to scroll through the list of the possible troubles happened . The list is in chronological order and contains up to 64 voices
- To conclude programming, press ESC" [9] key.

REMOTE CONTROL

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "REMOTE CONTROL" and press "SET" [10] key; the display will show:

REMOTE CONTROL REMOTE ENABLE

- press again SET and the display shows the following message:

REMOTE ENABLE ENABLE? YES/NO

- Choose the desired option and press SET
- press "ESC" [9] to exit the operator menu.

VHP MODE

The VHP mode is used to seal compleately the cabinet when a disinfection by gas (H_2O_2 or Formaldehyde) is required.

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "VHP MODE" and press "SET" [10] key;
- Follow the instructions: close hatch panels and press "SET", when the ATV is closed you can start to vaporize the sterilization agent.
- At the end of sterilization phase press set, ATV will be open and the exhaust fan will start. Open the hatch panels to let aeration phase to start.
- After a pre-set time the cabinet will actumatically switch ON ventilation to end the cycle.

PRESSURE TEST

The pressure test is used to find out the leakage rate of the cabinet enclosure.

- use "UP/DOWN arrow" keys [8] to scroll the operator menu
- select "PRESSURE TEST" and press "SET" [10] key;
- using "UP/DOWN arrow" keys [8] it is possible to scroll through 3 menu: START PRESSURE TEST, SET TEST PARAMETERS, LAST TEST RESULTS.

4.E DISPOSAL OF WASTES AND CONTAMINATED MATERIALS

DISPOSAL OF ELECTRIC AND ELETTRONIC DEVICES (AEE)



INFORMATION FOR EUROPEAN UNION USER

This symbol on the device means that when it needs to be disposed, it must be handled separately from urban waste.

At the moment of the disposal, contact the dealer, to receive information about the collect and disposal in accordance with the laws in force in the country.

Appropriate disposal of this product will help to prevent potential negative effects on health and environment and to promote re-use and / or recycling of materials of the equipment.

The improper disposal of the product by holder involves the application of sanctions in accordance with the regulations in their own country.

INFORMATION FOR USERS OUTSIDE THE EUROPEAN UNION

This symbol is valid only in the European Union If you want to dispose this product, contact your local authorities or dealer and ask for the correct method of disposal.

ATTENTION: Before disposal, the cabinet where contaminants and pathogens have been manipulated, must be sterilized

The fluids of pathogenic material removed from the work surface and the liquid collection tank located under the table as well as from the HEPA filters replaced during maintenance work are toxic and harmful and must be submitted to special treatment. For more detailed information on such treatment, see the standards and regulations in force on the treatment and disposal of biologically/toxic/harmful wastes.

All other materials, which the cabinet is made, are recyclable but cannot be disposed as local waste materials.

MATERIALS, WHICH THE CABINET IS MADE OF

PARTS OF THE CABINET	MATERIALS
External structure	Epoxy powder coated steel
Inside work chamber	AISI 304 stainless steel
Work surface	AISI 316L stainless steel
Motor-fans	Galvanized steel
Filters	Frame: in aluminium alloy Filtration bed: glass fibre Protection: Fe net/epoxy powder painted Gasket: polyurethane
Keyboard	PE, graphite, circuits in materials compatible with Rohs regulations
Front glass	Stratified soda-calcic silicate sheet
Gaskets	EPDM
Wirings	Wires according to Rohs regulations, flame-proof cases in PVC

4.F ERGONOMICS

This cabinet has been designed and manufactured according to the general directions on the ergonomics provided for by the EN ISO 14738 standard.

Furthermore all maintenance operations are assured to be carried out in safety by merely following the instructions given in this manual at chapter 7.

5 LIMITATIONS

PRECAUTIONS for the correct use of the cabinet

Listed below are the most important guidelines to be followed and the main substances to be avoided to ensure the correct use of the SCS Class III cabinet:

NEVER USE chlorine-based substances (e.g. sodium hypochlorite) as they are corrosive for the metal structure of the cabinet, and in particular for stainless steel parts.

When the nature of the work carried out under the cabinet changes completely or following an accidental spilling of pathogenic material, STOP working and start again only after having cleaned and decontaminate the cabinet,

DO NOT use ethanol as a sterilizing substance if a heat source is used under the cabinet,

DO NOT use cosmetic powders, nail polish, hairspray or cosmetics in general during work,

DO NOT eat, drink or smoke in the work zone,

AVOID substances that release explosive vapors.

In addition, when working with the cabinet, AVOID:

The introduction of extraneous material

The introduction of paper or cloth that might clog the holes of the work surface

Upstream contamination of the material, putting the hands or any object between the absolute filter and the sterile material

Working under the cabinet if the airflow has not yet been activated, i.e. when the display "STAND-BY" appears, indicating that the motor-fans are not yet on. After the cabinet is switched on, and if the work requires special sterile conditions, chemical sterilization of the work chamber must be carried out using a cloth soaked in proper cleaning agent. Then wait for the decontamination to take effect.

6 OPERATING PROCEDURES

6.A PRELIMINARY CHECKS

Before carrying out any type of work, the following conditions should be verified:

- That the cabinet power cable is connected to a power point at a suitable voltage and frequency as per instructions shown on the label stuck near the electric cable
- That all alarm lights are off
- That the work area inside the cabinet is free from materials used during the previous session.
- That the cabinet has been sterilized in case of change in the nature of work to be carried out

6.B SWITCHING ON the SCS Class III cabinet

To start the cabinet, proceed as indicated below:

- 1. turn on the light by pushing the button [7]
- 2. be sure that the frontal window is closed
- 3. press the main key I/0 [1] (see chapter 4D.) and enter the password to switch on the ventilation. At first the display shows "CHECK PANEL" and the corresponding control leds of the keyboard light up. Then the message "STAND-BY" is displayed for about 40 seconds and the hour-counter starts operating
- 4. after 40 seconds of stand-by, the cabinet is ready for work. "STAND-BY" disappears from the screen and the LAF velocity and work chamber pressure are displayed
- 5. wait for approx. 5 minutes before starting work
- 6. during this period of time, introduce into the internal work zone of the cabinet only the materials which are indispensable for the job

All movements made under the laminar air-flow cabinet should be parallel to the work surface, taking care to work in the middle of the table to avoid upstream contamination (for instance, when taking a sample from a bottle, hold the bottle gently but firmly with one hand, keeping it slightly inclined, and work with the other hand, so that the air that comes into contact with the hand does not directly contact the inside, but rather the outside of the bottle).

6.C SWITCHING OFF THE SCS Class III CABINET

ATTENTION: Be careful that materials in the work area can be contaminated with pathogenic material. Behave accordingly.

At the end of the work session, proceed as follows:

- 1. Remove the material from the internal work chamber
- 2. Clean the work surface and the inside walls of the chamber, as indicated in the "Cleaning Instructions" section (chapter 7A)
- 3. Let the laminar air-flow cabinet run for 10 minutes after the work is over
- 4. Turn off the light by pushing the key [7]
- 5. Press "I/0" [1] key switch and enter the password for switching off the cabinet ("up-arrow" for 5 times, "down-arrow" for 4 times, then press "ENTER").

6.D How introduce material

To introduce material in the cabinet, it is necessary use the pass box mounted on the left side of the cabinet. The pass box has two timed doors electrical interlocked. To open the external doors you have to push the button on the control panel near the led that show the doors status:

- Red led switched on means doors locked
- Green led switched on means doors unlocked

The timer is manually settable in the control panel in order to allow the pass box air to be clean before opening the second door.

To introduce material in the cabinet follow this steps:

- 1. Push the button (with this action you unlock both the external doors for 5 seconds)
- 2. Open the external door.
- 3. When the external door is open it is not possible to open the internal door.
- 4. Introduce the material in the pass box.
- 5. Close the external door.
- 6. Wait till the green light is ON (after a prestabilished time the external doors are automatically unlocked for 10 seconds; when this time is expired if there are no actions the green light switch OFF, and the external doors are locked).
- 7. Press the footswitch to open the internal door.
- 8. When the internal door is open the red light switches on and the external door is locked.
- 9. Introduce the material in the working chamber and close the internal door.
- 10. When the internal door is closed, after the pre-set time, the green led switches on again and all the doors are unlocked.

When a door is opened and closed there is a pre-set time to wait before open the next door. During this time the object in the pass boxes are decontaminated with a shower of clean air.

To exit material, follow the opposite procedure.

7 MAINTENANCE

IMPORTANT: It is recommended to perform the standard tests and maintenance once per year by specially trained and authorized service personnel according to the standards, in order to ensure the efficiency and safety of the (microbiological safety/laminar flow/cytotoxic safety/chemical fume hood) cabinet.

7.A INSTRUCTIONS FOR DAILY CLEANING OF BIOSAFETY CABINETS (by users)

Clean the outside of the SCS Class III cabinet using a damp cloth soaked in soapy water or some other commonly available products for stainless steel surfaces. The procedure to follow is:

- switch off the cabinet and disconnect the feeding cable;
- Clean carefully all stainless steel surfaces using a damp and squeezed cloth with soapy water or equivalent product.
- Wipe all the surfaces using a soft cloth absolutely not abrasive.

Clean/sterilize the internal work chamber with a decontamination agent chosen according to the product manipulated (e.g. hydrogen peroxide, ethyl alcohol, ethanol, phenolic compositions, aldehydes, quaternary ammonium salts, etc.). The procedure to follow is:

- switch off the cabinet and disconnect the feeding cable;
- protect your hands wearing gloves if required by the cleaning agent you are using;
- put the cleaning agent on the side walls, the back wall and the work surface in a such uniform way to avoid leaving not cleaned zones;
- do not put the cleaning agents on the HEPA filters to avoid damages;
- Wipe carefully all the cleaned zones using clean blotting paper. Be sure to remove any residual of the decontaminating agent.

If hazard material has been spilled during the work session, decontaminate the work surface, and then remove it. Decontaminate the spilled materials contained in the collection basin located under the work surface and remove all spilled material by means of absorbent paper.

For thorough cleaning we suggest the use of a 70% ethanol solution or a solution of other decontaminating agents.

WARNING: Never use solutions containing free chlorine (for instance, sodium hypochlorite), which cause corrosion to steel and stainless steel, resulting in irreparable damage to the cabinet structure.

7.B CLEANING OF GLASS

For the internal cleaning of the glass proceed as follows (see also Para 14A):

- 1. unscrew the four knobs that fasten the frontal glass
- 2. open the glass and clean the back of the windows with suitable detergents
- 3. Close the windows and fasten it with the four knobs.

ATTENTION: the inside of the sash window can be contaminated. It is operator's responsibility to decide if the sterilization is necessary before cleaning.

7.C HEPA FILTERS (by technical assistance personnel)

ATTENTION: before replacing HEPA filters, the isolator must be decontaminated (see Para. 7C.) and a sterilization certificate must be issued to the technicians before starting the service operation. For the safety of the personnel and the environment, the use of relevant personal protection devices is recommended as well as the collection of the replaced HEPA filters in polyethylene bags.

Pass box top HEPA filters (F3)

- 1. Remove the pre-filter support frame as indicated on 6D.
- 2. Unscrew the bolts [20] that fasten the top pass box filter [21]
- 3. Replace the clogged filter
- 4. Repeat steps from 3 to 1.



Pass box rear HEPA filters (F4) (see diagram for maintenance operations page 44)

- 5. Open the external door of the pass box
- 6. Unscrew the two screws [7] that fasten the rear grid [22] and remove it
- 7. Unscrew the screws of the frame to release the HEPA filter [20]
- 8. Repleace the HEPA filter
- 9. Repeat the steps from 8 to 5.

LAF Filter (F1)

- 10. Switch off the cabinet and disconnect it from the mains
- 11. Open the control board [1] turning the locks [2] with the proper exagonal key.



12. Remove the internal panel [3] unscrewing the relevant fastening screws.



13. Rotate the threaded bars [4] to release the HEPA filter [6].



(Rear view)

- 14. Remove the HEPA filter wearing PPD and put it in a hermetically sealed polythene bag.
- 15. Place the additional gasket (if it is not already present) on the filter shoulder frame opposite the shoulder gasket of filter (already present).
- 16. Install the new HEPA filter.
- 17. Lock the HEPA filter [6] by means of the threaded locking bars [4]

Exhaust Filter (F2)



18. Rotate the fastening threaded bars [7] to lift down the plenum group [8] and to release the HEPA filter.

(Rear view)

- 19. Proceed as indicated in above 6, 7 points.
- 20. Lock the HEPA filter by rotating the fastening threaded bars [7].
- 21. Re-close the internal panel [3] with the special fastening screws.
- 22. Re-close the control board [1] with care and lock it with the closures [2].
- 23. Proceed with the necessary control-calibration procedures of the laminar air-flow cabinet.

Additional exhaust HEPA filter

- 24. Unscrew the fasten ing bolts on the top of the cabinet to release the box of the additional exhaust filter
- 25. Replace the clogged filter [21]
- 26. Fasten again the box of the additional filter with the relevant bolts [22]

ATTENTION: Gaskets should be of the EPDM closed-cell type and have no interstices in the joining points.

ATTENTION: Having replaced the filters, proceed to check the calibration of the air flow parameters. Carry out a check with a particle counter and possibly a leak test (DOP test). For these operations, contact your local distributor.

7.D REPLACEMENT OF MOTOR-FANS (by technical assistance personnel)

ATTENTION: before replacing the motor-fans, the cabinet must be decontaminated and a sterilization certificate must be issued to the technicians before starting the operation (see par. 7D). For the safety of the personnel and the environment, the use of PVC gloves is recommended as well as the collection of the replaced materials in polyethylene bags.

Replacement of main motor-fan.

- 1. Proceed as indicated in sub-section "Replacement of HEPA filters", from 1 to 3 points.
- 2. Remove the frame [19] in front of the fan and release the textile plenum



- 3. Disconnect electrical connectors from terminal board in the plastic box.
- 4. Unscrew fastening screws [10] of the main motor-fan [11] and the flow sensor group [15] unscrewing the relevant stirrup from the motor-fan



5. Remove the main motor-fan [11] including the side stirrup [12].

- 6. Position the new motor-fan after having mounted again the flow sensor group [15] and the relevant stirrup.
- 7. Fasten the motor-fan with the relevant screws and reconnect electrical connectors.
- 8. Proceed as indicated in the sub section "Replacement of HEPA filters", points 12 and 13.

Replacement of exhaust motor-fan.

- 1. Proceed as indicated in sub-section "Replacement of HEPA filters", from 1 to 3 points and remove the exhaust HEPA filter.
- 2. Remove the textile plenum



- 3. Remove the screws [20] of the exhaust fan [13] and the electrical connection. Place the new exhaust fan and set the wiring.
- 4. Re-place the textile plenum

7.E REPLACEMENT OF FLUORESCENT LAMPS (by technical assistance personnel)

- 1. Disconnect the mains power.
- 2. Open the front control panel [1] unscrewing the fastening locks [2],
- 3. Replace the lamps [16]
- 4. Close the front control panel [1] with the fastening locks [2].

7.F SPARE PARTS LIST

CODE	DESCRIPTION	SCS Class III 312	SCS Class III 315
V01000019500	Pressure transmitter	1	1
V2000004510	Plate IP-55	1	2
V2000004325	Unel socket	1	2
V20000035100	RJ45 socket	Optional	Optional
V2000006040	36 W/84 fluorescent lamp	2	
V2000006050	58 W/84 fluorescent lamp		2
V2000006360	2x36W lamp holder	1	
V2000006370	2x58W lamp holder		1
V2000006900	Power line filter	1	1
V2000006880	Magnetic sensor	3	3
V3000000010	Shielded Proximity Namur AEG 8/2	1	1
V3000000090	Proximity Namur AEG 8/2	1	1
V3000000780	BHX/24	1	1
V3000005000	Keyboard	1	1
V3000007400	MicroP "BHCPU_CY" card	1	1
V3000007100	"BIOHP_A" power card	1	1
V4000004120	250N gas spring for front window	2	
V4000004070	Gas spring for front window		2
V4000004150	300N gas spring for control panel	2	
V4000004160	400N gas spring for control panel		2
V5000000070	DDM 133/190 Exhaust motor-fan	1	
V5000000080	DDM 146/190 Exhaust motor fan		1
V5000000200	DDM 9/9, 300W C/F main motor-fan	1	
V5000000420	DDM 10/10 E6G3604		1
V5000000910	LAF sensor fan diam. 200	1	1
V50000100360	LAF HEPA filter with laminator sheet 610x1220x69 (F1)	1	
V50000100370	LAF HEPA filter with laminator sheet, 610x1525x69 (F1)		1
V50000100230	Exhaust HEPA filter, 457 x 610 x 69mm (F2)	1	
V50000102230	Exhaust HEPA filter, 457 x 610 x 115mm (F2)	1	
V50000100240	Exhaust HEPA filter, 457 x 762 x 69mm (F2)		1
V50000102240	Exhaust HEPA filter, 457 x 762 x 115mm (F2)		1
V50000102110	Top Pass box HEPA filter, 305 x 305 x 115 mm (F4)	1	
V50000102120	Top Pass box HEPA filter, 305 x 457 x 115 mm (F4)		1
V50000100120	Pass box HEPA filter 305X457X69 mm	1	1
V50000201040	Pre-Filter	1	1
K60024230400	Front window 212	1	

K60024330400	Front window 215		1
K60022430500	300 mm internal glove circular support	2	3
K60020430600	300 mm external glove circular support	2	3
K60020430900	Pass box external glass door	1	1
K60020430200	Pass box internal plastic door (part 1)	1	1
K60020430300	Pass box internal plastic door (part 2)	1	1
V2000004630	Magnetic lock internal door	1	1
V4000003890	Magnetic lock external door	2	2
K60021230000	Textile Bag Plenum 212	1	
K60021530000	Textile Bag Plenum 215		1
V2000005800	Single-phase switching CSF3	1	1
V20001100300	LED indicator Green DX0507GR	1	1
V20001100320	LED Indicator Red DX0507RD	1	1
V20000007510	Button to open the frontal doors	1	1
V20001100130	Foot Switch Black	1	1

8 MONITORING SYSTEM

ALARM OR ERROR MESSAGE	DESCRIPTION
Min. LAF Alarm	Airflow speed in the work chamber under minimum threshold value
Min Pressure Alarm	The pressure of the work chamber is raised under the minimum alarm value (-75 Pa). It can be due to a hole in the gloves or to the opening of a door.
LAF Triac Failure	Too fast and uncontrollable main motor-fan (LAF)
No encoder input LAF	No input from the fan anemometer installed on the LAF main motor- fan
No encoder input EXH	No input from the fan anemometer installed in the exhaust duct
Max LAF Alarm	Airflow speed in the work chamber over maximum threshold value
Front glass open	The front window is not closed correctly
Sensors failures	Failure to one of the sensors. Press "MUTE" key and the correspondent sensor is displayed
BLACK-OUT	Warning of black-out when the cabinet is working Press "MUTE" to stop the alarm
HEPA Filters Check	Possible clogging of absolute (HEPA) filters
Exhaust Duct Check	Possible clogging of the exhaust duct
Position the window	The front window is not in the correct position
F1 (2, 3, 4, 5) lifetime over	Filter 1 (2, 3, 4, 5) residual lifetime is over
ATTENTION DANGER Reduced airflow. DO NOT WORK	Warning to pay attention when the speed reduction is activated (only for keyboards with "SPEED REDUCTION" key)

9 TROUBLESHOOTING - Probable causes of malfunctions

PROBLEM	CAUSE	REMEDY	
Cabinet does not work	 the electricity supply has been cut off at the mains 	 check the voltage input to the cabinet 	
	 Electronic board out of order 	 Replace PCB 	
	 Blown fuse(s) 	 Replace fuses 	
Alarm: "HEPA filters check"	Main HEPA filter clogged	Replace HEPA filter	
Alarm: "Min. Pressure alarm"	The exhaust motor-fan does not	Check the gloves integrity	
	work properly	Check F6 fuse on the power card	
		Check that the exhaust duct is not clogged	
		Check the exhaust motor-fan	
Alarm: "Minimum LAF alarm".	HEPA filters are clogged.	Replace HEPA filters.	
	The main motor-fan does not work	Check the terminal voltage of the power card of the main motor-fan	
		Check F7 fuse on the power card	
		Replace the power card	
		Replace the microprocessor card	
Alarm: "Black-out "	Blackout	Check the feeding cable, the connection plug/socket, the power supply line	
		Press "Mute" [15] key to silence the alarm	
Alarm "Sensors failure"	Failure of sensor XX	Replace XX sensor.	
Alarm: "No encoder input LAF"	No signal from LAF flow sensor	Replace the LAF sensor	

10 TRANSPORT, PACKING and STORAGE INSTRUCTIONS

ATTENTION: Disconnect the power and sterilize the unit before performing any of the following operations

The following instructions are essential if the end user needs to transport, pack or store a cabinet after a period of routine use (e.g. laboratory/plant relocation):

- If the cabinet exhausts to the outside of the building or is connected to the intake channel of the air treatment system, remove the connection tube from the cabinet to the outside or cabinet to the air treatment system. Be careful not to damage or cover with dust (or any other material) the exhaust filter of the cabinet
- Remove the work surface and cover it with a protective film
- Close the cabinet front opening

If the cabinet is to be moved from one laboratory to another within the same building:

- By a forklift: put the cabinet on a pallet to ensure good stability and to protect the basin under the cabinet and the front window against damage in transit

Take care not to damage protruding parts (e.g.: exhaust duct) when passing through doors/windows

If the cabinet is be kept temporarily unused at final destination, cover the cabinet itself with a protective film (pluriball or expansible film) taking care to protect also the exhaust filter, especially from dust

We recommend extreme caution in long-distance moving carried out by forwarding agents (e.g. change of address): we suggest that you use the original packaging supplied by the manufacturer with the cabinet.

Cardboard outer package of the following dimension:



Cabinet model	Α	В	С	D
SCS 312	2600	900	2000	120
SCS 315	2600	900	2000	120

Steel straps and clips

During transport take care to maintain the package in a vertical position (i.e. the pallet at the bottom) The cabinet (with or without the package) must be kept in a place with the following environmental conditions:

- Min. temperature: 0 °C
- Max. temperature: 70 °C
- Max. humidity: 90%

11 ADDITIONAL INFORMATION

11.A GUARANTEE

The guarantee for SCS Class III vertical laminar air-flow cabinets is 12 months from date of invoice.

In addition to those cases specifically indicated in Chapter 5 relating to improper use of the cabinet, the guarantee offered, also excludes certain improper uses described in the instruction manual, of which the most important are listed again below:

installation in a place which does not conform to the manufacturer's recommendations

wrong power voltage

poor earthing

use of chlorine or its derivatives, incompatible with stainless steel, for cleaning the cabinet,

tampering or changes made by the client

tampering with the cabinet using any type of tool

improper connection between the electrical outlet and the power cable, wrong connection between the gas cock or electro-valve and gas mains

11.B ADDRESS FOR TECHNICAL ASSISTANCE (for the distributor)

12 TESTS PERFORMED ACCORDING TO EN 14644-3 STANDARD

12.A MEASUREMENT OF LAMINAR AIRFLOW VELOCITY

The LAF velocity is measured at 250 mm under the HEPA filter taking the reading in at least 8 points:



In our tests the readings are taken in 12 points as above-diagrammed. Each one of the 12 readings lasts at least 1 minute. The velocity is measured with a hot-wire thermo anemometer with the following features:

Measure-Range	0÷2 m/s
Precision (of the device including the probe)	+/- 0.05 m/s +/- 5%
Working temperature	From – 20 to + 70°C.
Resolution	m/s

The average velocity is obtained by the following formula:

Average velocity = $(V_1 + V_2 + ... + V_n) / n$

n = number of readings points

 $V_1, V_2...V_n$ = velocities measured in the various points.

The average velocity must be 0,45 m/s

Ensure that no single measurement differs from the average of all the measures by +/- 20 %.

12.B MEASUREMENT OF THE INTERNAL PRESSURE

Check the internal pressure by connecting a calibrated manometer to the transparent pipe in the front control panel. Use a 3 ways "T" connector to allow the pressure transmitter and the calibrate manometer to be connected together.

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12.C MEASUREMENT OF THE NOISE LEVEL

For a correct testing the background noise in the laboratory with the cabinet off should not exceed 55 dB(A).

The microphone of the phonometer must be placed at 1 m from any part of the cabinet.

The sound pressure level must not be over 60 dB(A).

The measure taken must be reported in then "Test report".

12.D MEASUREMENT OF LIGHTING

Take the measure with a luxmeter placed inside the work chamber in the middle of the work surface.

Consider at least 4 readings points where the two side points should be 150mm away from the side walls and the middle points will be spaced max. 300 mm, if possible. Then calculate the average value, which should be at least 750 lux.

Register the average value of the lighting in the "Test report".

12.E MEASUREMENT OF VIBRATION

Take the measures with a vibration analyzer, which is to be placed in the middle of the two central sections of the work surface

The test must be performed firstly when the cabinet is off and then when the cabinet is working. The difference of the taken values is the real datum of the cabinet vibration. This value should not exceed 0.005 mm RMS

Record the data in the "Test Report"

12.F CONTROL OF ALARMS

ALARM FOR MISFUNCTIONING OF MAIN MOTOR-FAN (LAF)

This alarm can be simulated by disconnecting the feeding cables of the main motor-fan. When the cabinet is switched on and the "stand-by" period is over, check that the red light of the relevant alarm and the visual and sound (buzzer) signals start.

ALARM FOR MISFUNCTIONING OF SECONDARY MOTOR-FAN (EXHAUST)

Also this alarm can be simulated by disconnecting the feeding cables of the main motor-fan. . When the cabinet is switched on and the "stand-by" period is over, check that the red light of the relevant alarm and the visual and sound (buzzer) signals start.

ALARM FOR REDUCTION OF THE EXHAUST DUCT CAPACITY

To verify this alarm, clog the exhaust duct gradually at the end of stand-by period and check that the red light of the relevant alarm and the visual and sound (buzzer) signals start. Furthermore check that when the clogged duct is cleared, the alarm stops.

ALARM FOR OPENING OF THE FRONT WINDOW OF THE CABINET

To verify this alarm it is enough you move the front window from its standard work position removing the four knobs and check that the red light of the relevant alarm and the visual and sound (buzzer) signals start. Reposition the window in its standard work position and check that the alarm stops.

ALARM FOR REDUCTION OF LAMINAR AIRFLOW VELOCITY IN THE WORK CHAMBER

During the normal working of the cabinet, cover the work surface almost completely with a PVC or cardboard sheet and check that the relevant red light switches on. When the correct operating conditions of the laminar airflow are restored, the alarm will stop.

OTHER ALARMS

With the help of technicians also the alarms for LAF and protection barrier velocity below the minimum threshold or over the maximum threshold can be checked

12.G D.O.P TEST FOR HEPA FILTERS

OBJECT AND PRINCIPLE OF THE TEST:

Check of the integrity of the HEPA filters through an analysis of the filtering system, able to find out possible small leaks and/or defects altering the efficiency of the filters and at the same time to test leaks around gaskets.

The HEPA filter system fitted to the cabinet is tested for leakage by subjecting it to an aerosol on the upstream side and measuring passage of the aerosol to the downstream side

INSTRUMENTS TO BE USED FOR TESTING:

- 1. Aerosol generator
- 2. Photometer

REAGENTS:

Liquid aerosol agent composed of Emery 3004 or equivalent in concentration of 60 μ g/l. Suitable measures must be taken to prevent or reduce the operator's exposure to aerosol.

TEST PROCEDURE:

The photometer must be used at a threshold sensitivity specific to the test aerosol of 0.0001 μ g/l and capable of measuring aerosol concentrations up to about 80 μ g/l.

The test must be performed as follows:

- Place the aerosol generator in such a way that the aerosol produced is immediately catched by the barrier airflow and then recycled into the intake channel
- Switch the generator on and adjust the photometer to give a reading of 100% when sampling this concentration
- Ensure that the threshold of reading sensitivity of the photometer is 0.0001 μg/l.
- Operate the cabinet with airflow velocity as per specs.
- Using a sampling probe attached to the photometer scan the main and exhaust filter faces, seals and construction joints, moving the sampling probe at not more than 30 mm/s
- Check the values read by the photometer constantly, in order to detect possible leakage.
- The maximum acceptable reading is 0,01%.

13 Drawings AND DIAGRAMS

LEGENDA

Ref. DESCIPTION

- 1 Electric Air Tight Valve
- 2 Exhaust HEPA Filter (F2)
- 3 Exhaust Plenum
- 4 LAF HEPA Filter (F1)
- 5 Working Chamber
- 6 Main HEPA Filter Screws
- 7 Main HEPA filter (F3)
- 8 Front Window Screws.
- 9 Front Window gas springs
- 10 Control Panel locks
- 11 Lamps
- 12 Control Panel
- 13 LAF Plenum
- 14 EXHAUST motor-fan
- 15 LAF Fan Screws
- 16 LAF Plenum Screws
- 17 Window for auxiliary monitor
- 18 Pass Box (Hatch) Panel
- 19 Top (inlet) Pass Box HEPA Filter (F4)
- 20 Bottom (outlet) Pass Box HEPA Filter (F5)
- 21 Additional exhaust heap filter
- 22 Screws
- 23 Closure panel for fumigation

13.A DIAGRAM FOR MAINTENANCE OPERATIONS







13.B FRONTAL DIAGRAM



13.C SIDE DIAGRAM



14 SUPPORT TABLE



15 ASSEMBY OF THE CABINET ON THE SUPPORTING STAND

When the stand has been assembled the isolator can be installed following this procedure:

- Check the correct levelling of the stand and in case adjust the height of the feet [3]
- Check the tightening of all the screws and the firmness of the stand
- Lift the isolator with suitable equipment (for example a forklift) complying with the safety rules (the weight of the isolator is shown in the "table of technical features" Para. 9) and put it on the stand. The isolator can be lifted using the two eyebolts on the top of the unit.
- Put the isolator on the stand, taking good care to fit together the jutting feet of the isolator and the cavities of the stand



16 SENSORS LIST

PCB PLUG	SOFTWARE NAME OF THE SENSOR	DESCRIPTION
J3		Pressure
J9	SO	LAF
J10	S1	not used
J11	S2	not used
J12	S3	not used
J13	S4	Frontal glass
J14	S5	Foot switch
J15	S6	not used
J16	S7	not used
J17	S8	not used
J18	S9	not used

17 WIRING DIAGRAM







-CAD

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NUANTITY SAFEFAST ELITE 312
1 4A T
1 CSF3
1
1
1 AEG 8/2
1 AEG 8/2
1 0,16 AT
1 1 A
1 2 A
1 4 A
1 4 A
1 3.15 AT
1 6.3 AT
1 1.6 A
1 BHCPU_C
1 BIOHP A
1 BHX_A
1 36 W
1 36 W
1 GTP-34-10W-24-V147
1 GTP-34-10W-24-V147
1 VF1E/P180ELR
1 DDM 9/9 300 W
1 DDM 133/190
1 FN2070A-10-06
2 I.P. 44
1 12 V d C
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DATE 10/05/11PAGE 6 0F6 DRAWER: E.F.F.Ie: 00242 DRAM

EL.SYSTEM .SAFEFAST ELITE CLASS III

CUSTOMER :

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18 DECLARATION OF CONFORMITY

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The undersigned legal representative of the company Faster S.r.l. hereby declares that the follow products:

SCS Class III

are in compliance with the following directives:

2006/42/EC	Directive of the European Parliament and of the Council on machinery

- 2004/108/EC Directive of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility
- 2006/95/EC Directive of the European Parliament and of the Council on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits

and with the following standards:

EN 12469	Biotechnology: performance criteria for microbiological safety cabinets
EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: general requirements
EN 61326-1	Electrical equipment for measurement, control and laboratory use EMC requirements

and, according to the above-mentioned directives, the CE IIA mark has been applied.

The undersigned also declares that the person who is authorised to compile the relevant technical documentation is Mr.:

Ing. Pietro Bascapè

Faster S.r.I. Maria Giulia Turzi Chairman of the board