

USER MANUAL FOR DEPRESSED STATION TYPE:

**POWDERJET
9 - 12 - 18**

USER MANUAL FOR DEPRESSING STATION TYPE: POWDERJET

Dear,

You have just acquired a POWDERJET type depression position and we congratulate you.

This enclosure guarantees you:

- protection of the manipulator.*
- protection of the environment, of all risks of contamination.*

The Powderjet is a station which is suitable for handling powders, harmful products & powders.

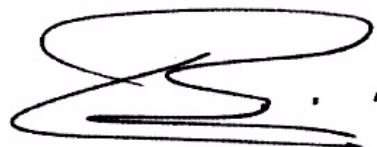
Wishing you good use of it, and, remaining at your disposal for any usage or technical information.

Eric FITOUSSI



Deputy director

Bernard BIJAOU



General manager

TABLE OF CONTENTS

I.	PRESENTATION	4
II.	STRUCTURE.....	5
III.	OPERATING PRINCIPLE	7
IV.	FILTRATION.....	9
V.	VENTILATION	11
VI.	CONTROL PANEL	12
VII.	USE	14
VIII.	USER MENU	19
IX.	TECHNICAL DATA	ERROR! BOOKMARK NOT DEFINED.
X.	EQUIPMENT.....	26
XI.	STANDARD PLANS.....	27
XII.	INTERVIEW	29
XIII.	MAINTENANCE	30
XIV.	PERIODIC VERIFICATION CONTRACT.....	ERROR! BOOKMARK NOT DEFINED.
XV.	GUARANTEE AGREEMENT	ERROR! BOOKMARK NOT DEFINED.
XVI.	PREVENTING THE UNEXPECTED.....	ERROR! BOOKMARK NOT DEFINED.

I. PRESENTATION



Powderjet 12 Example with PC (option)

Protection of the manipulator

Objective: Handling of powders, harmful products and powders.

II. STRUCTURE

1. FRAME

The frame is entirely made of epoxy painted steel and stainless steel.

The quality of the materials allows us to guarantee excellent resistance to impacts, scratches and variations in ambient temperature.

Fire standard: M1.

The surfaces are perfectly smooth and extremely easy to maintain and clean with common laboratory products.

The working volume is delimited on the sides by methyl methacrylate walls.

2. WORK PLAN

The work plan is made of INOX 304 L.

3. LIGHTING



Lighting is provided by white fluorescent tubes arranged outside the work volume; this allows the isolation of all electrical components.

The lighting tubes (light diffusion plate removed) on POWDERJET 18

4. BASE (OPTIONAL)

The structure of the base is made of mild steel, epoxy painted (or stainless steel 304L, as required).

Possible integrations on the base:

- Wheels
- Levelling cylinders

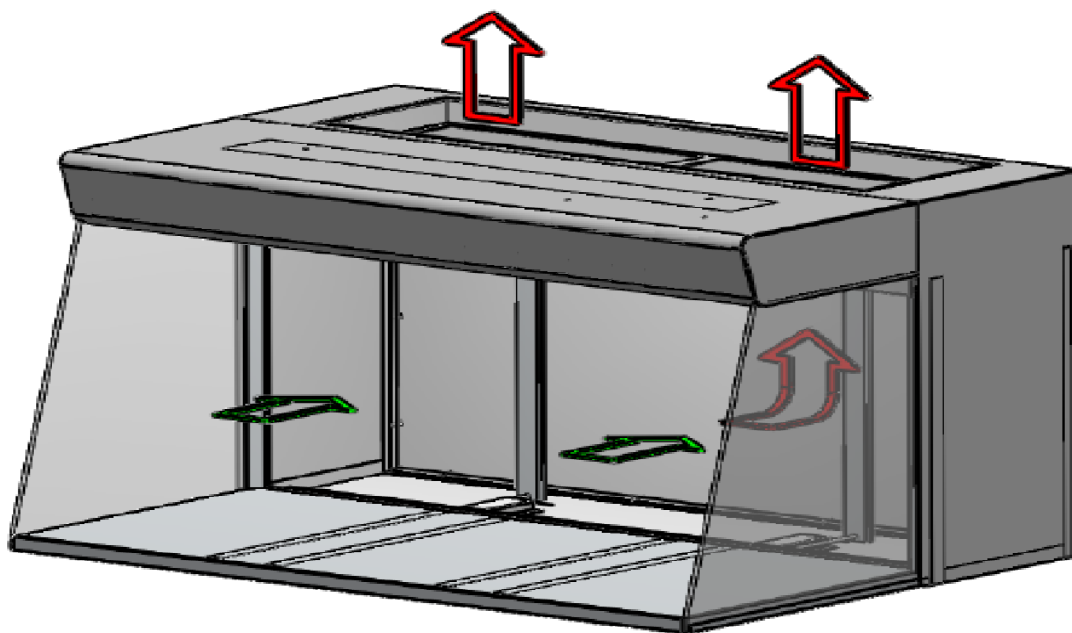


POWDERJET 12 example with PC
and Base on wheels

III. OPERATING PRINCIPLE

1. SCHEMATIC DIAGRAM

Environmental protection: rejection after passing through an absolute filter



**Protection of the manipulator:
Working volume in depression**

2. OPERATING PRINCIPLE

In depression on an absolute filter (efficiency H14), the Powderjet provides double protection (manipulator and environment) against any air contamination, such as the release of powders during weighing or sampling.

The frontal suction speed allows a homogeneous and complete recovery of all the particles present in the working volume. The recycling is total in the room which avoids a connection to the outside.

The ventilation system is provided by a centrifugal fan made of sheet steel with variable speed. The enclosure is equipped with automatic regulation to permanently guarantee a **frontal suction speed of around 0.4 m/s.**

3. AUTOMATIC FLOW SPEED REGULATION

The air speed through the absolute filter is maintained, whatever the clogging state of the filters thanks to flow management by a programmable microprocessor (ECM technology) integrated in the fan.

4. SECURITY / ALARMS

In order to ensure the greatest safety of handling, this hood is equipped with a fully automatic regulation which makes it possible to maintain constant flow rates whatever the clogging of the filters.

The display on the control panel shows the progress of the life of the absolute filters (100% = new filter). An audible and visual signal indicates the need to change the H.E.P.A. filter (s).

Finally, the different alarms are displayed in full (see alarms paragraphs, p.17).

5. STORAGE AND TRANSPORT

If the enclosure is stored, it is imperative to film the hood and store it in a place protected from climatic variations and respecting the conditions stipulated below.

If the hood is to be transported, it must not be shocked. After each move, it is strongly recommended to re-check the installation.

IV. FILTRATION

The **POWDERJET** type station is equipped with 2 filtration stages: an absolute filter and a prefilter.

1. ABSOLUTE FILTER

The absolute filter called H.E.P.A filter, with efficiency up to 99.999% for particles of 0.3 [μm] consist of:

1. aluminum filter frame
2. fiberglass filter media
3. protective grid in epoxy painted steel

Life span: depending on the use of the station.

The efficiency certificate can be provided on request.



Absolute Filter on POWDERJET 12



(2 Absolute Filters) POWDERJET 18

2. OUTPUT PREFILTER'S FLOW

Consist of:

- synthetic fiber
- efficiency: G4
- role: prevent the passage of larger particles

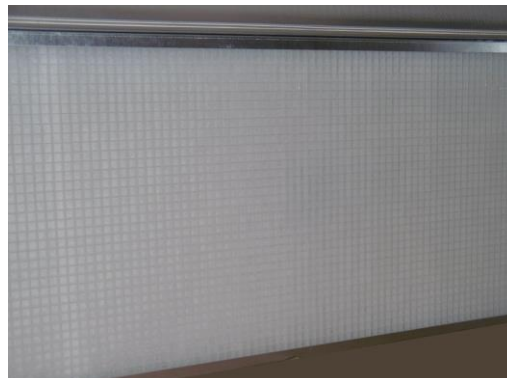


Prefilter on POWDERJET 18

3. PREFILTRER UPSTREAM OF THE ABSOLUTE FILTER (OPTIONAL)

Consist of:

- synthetic fiber
- Efficiency: G4
- Goal: prevent the passage of larger particle to protect the absolute filter.
- Life span: depending on the use of the station.



4. FILTERS MAINTENANCE

The dimensions of the filters correspond to international standards.

The absolute filter is accessible by detaching the rear casing from the working enclosure and the pre-filters are located above the enclosure, accessible without a stepladder.

The display on the control panel shows the progress of the life of the absolute filters. An audible and visual signal indicates the need to change the H.E.P.A. filters.

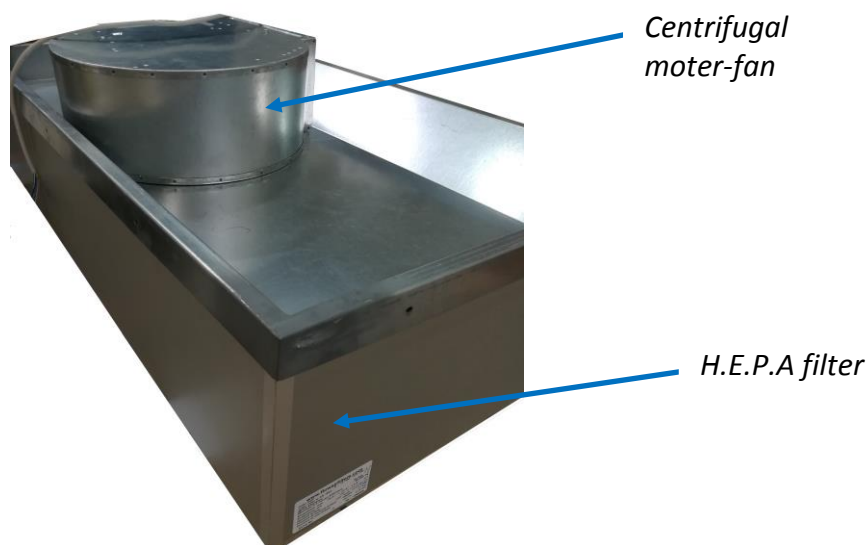
V. VENTILATION

This station is fitted with high-performance variable centrifugal motor-fans mounted on shock absorbers. The ECM version makes it possible to guarantee a constant flow rate despite the fouling of absolute filter(s).

The on-board electronics allow simplified management of information related to alarms and possible failures. The **automatic regulation of the flow at constant flow** is done, by simple programming, thanks to a **microprocessor** which analyzes three parameters (intensity, torque, engine speed) to find the equilibrium point corresponding to the requested flow compared to the pressure drop.

Automatic regulation compensates for clogging by increasing the suction rate.

All the motors are protected in accordance with electrical safety standards. The earthing of all electrical parts and all electrical grounds follow the regulations.

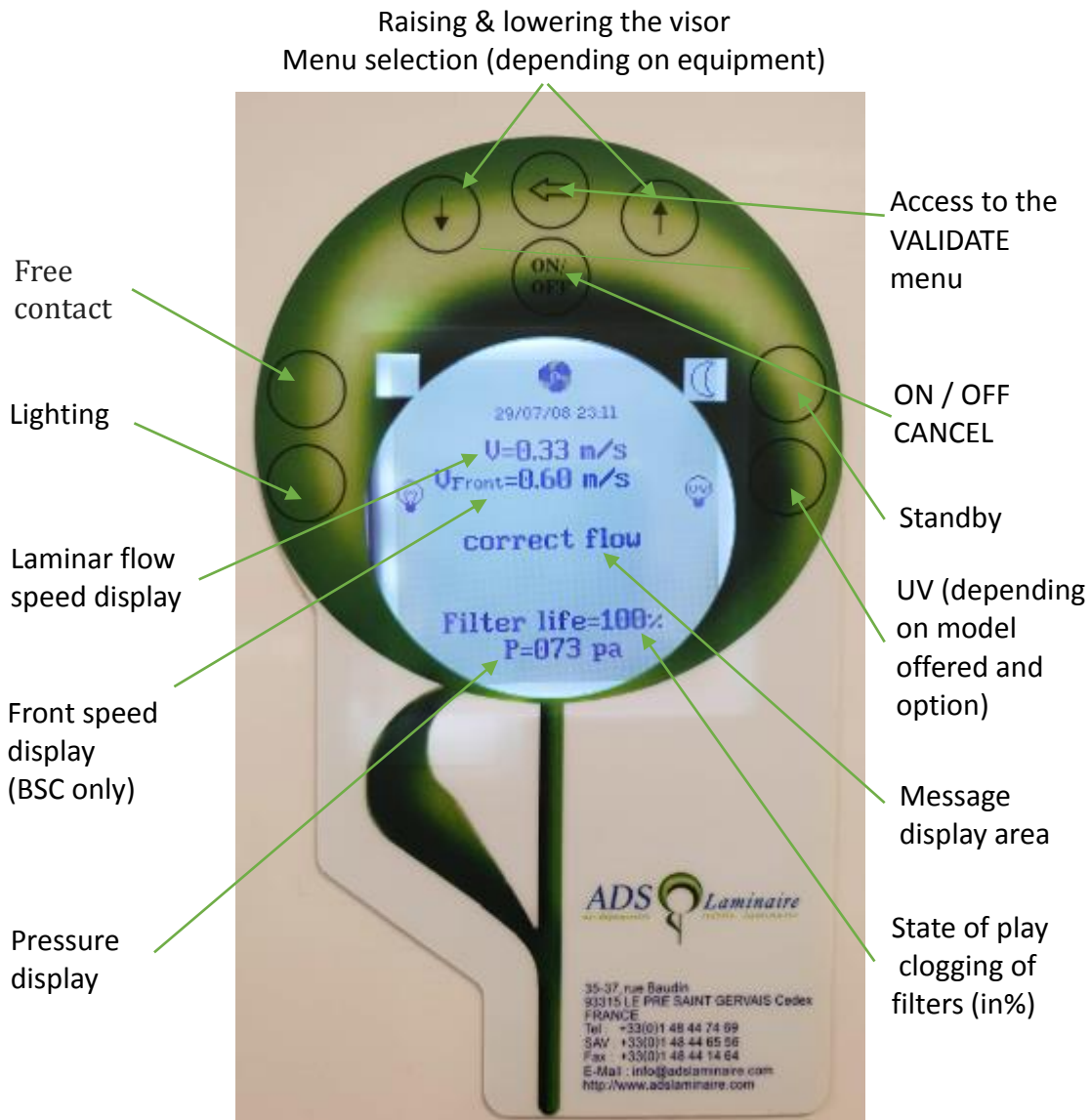


Advantages:

- Low consumption: reduced by 30% to 40% compared to traditional fans.
- Very high efficiency of 80% for a fan with continuous supply (against 40% for a fan with a conventional asynchronous motor).
- Low temperature rise.
- Absence of probe (speed or pressure) to regulate the flow: no calibration problem related to measurement variations or to climatic changes (temperature, pressure, hygrometry) to which the probes are sensitive.
- Very high precision.
- Low noise level.

VI. CONTROL PANEL

5. PRESENTATION





6. COMMAND KEY

- **On/Off** : Switch on or off the equipment, (more precisely ventilation) and all the functions. Also allows you to exit a menu or cancel an action

- **Standby** : Switching from normal to standby mode and vice versa.



-  : Used to navigate through the menu, select a choice or scroll through the alphabet.
-[Pressing the 2 buttons simultaneously for 2s resets the system].

-  : Enter button. Enables you to enter a menu, a submenu or to validate an action or a choice.

- **Lighting**: Main lighting on / off.



- **UV** : On / Off of the UV lamp (programmable ignition duration)
(depending on the model proposed).

- **Free contact** : Opens and closes a free contact on the power card intended to connect an accessory (Solenoid valve, electrical outlet, etc.)

VII. USE

1. TERMS OF USE


The following environmental conditions must be observed for your POWDERJET to function properly:

Ambient temperature: from + 5 [° C] to + 40 [° C].

Humidity: from 30% to 95%.

The POWDERJET should not be installed near an open window, under an air vent or flow.

2. PUT INTO OPERATION :

If a password has been programmed (modifiable in the menu), you must enter it and validate each digit with the key .

The screen displays "Wait".



To turn off the hood, perform the reverse procedure:
Press the ON / OFF button.


If no password has been programmed (factory setting: 0001), the device will stop immediately.

If a password has been programmed (modifiable in the menu), you must enter it beforehand.



3. STANDBY :


Between 2 uses, it is strongly advised not to turn off the ventilation of the station, which would result in breaking the cleanliness of the work volume. It is recommended to keep the hood on standby, i.e. a minimum ventilation flow is maintained. The cleanliness of the work volume is thus maintained.

To enter standby mode, press the button  for 2 seconds. Sleep mode is engaged as soon as the moon becomes dark and the light goes out. In standby mode, the lighting can be switched on again if necessary. After a few seconds, the flower logo will appear in standby mode and the air flow will automatically decrease to the programmed value.

If no password has been programmed, the device will stop immediately.

If a password has been programmed (factory setting: 0001) you must type it beforehand. You can change it in the Menu (in the "STANDBY LOCK" section).



To switch from standby mode to working mode, press the button  for 2 seconds until the moon becomes clear. As soon as the hood returns to normal mode, the message "correct flow" is displayed.



4. VARIOUS FUNCTIONS :

Lighting : Press the light button to turn it on or off. When the lights are on, small rays appear on the screen logo.



UV (according to the models): Press the UV button to turn the UV lamp on or off. The UV lamp can only be turned on in standby mode. If the device is in normal mode, the message “Standby mode for UV” appears



When the UV lamp is on, small rays appear on the screen logo. The UV lamp switches off automatically after the programmed duration (factory setting: 30 minutes). Can be modified in the "UV duration" section of the user menu.

Free contact : Press the “Free contact” button to close or open the free contact (solenoid valve, electrical outlet, etc.)

5. ALARMS :

« Clogged filter» :

This alarm is triggered when the service life of the filter is less than 10%. Quickly plan to change the absolute filter(s).

« Speed too low» ou « Speed too high» :

Means that the speed is outside the defined range. Check that nothing is blocking the air circulation in the substation.

Ventilation fault:

The fan has a malfunction or is no longer regulated by the card. It is advisable to carry out a complete restart (see paragraph “malfunction”).

Provide control :

The check date has been passed. Contact our services to organize the intervention of one of our technicians.

6. MALFUNCTION :

If the device has malfunctions, it is advisable to perform a complete system restart according to the following procedure:

The procedure is as follows :

Turn off the hood on the control panel (ON / OFF key - Password 0001).

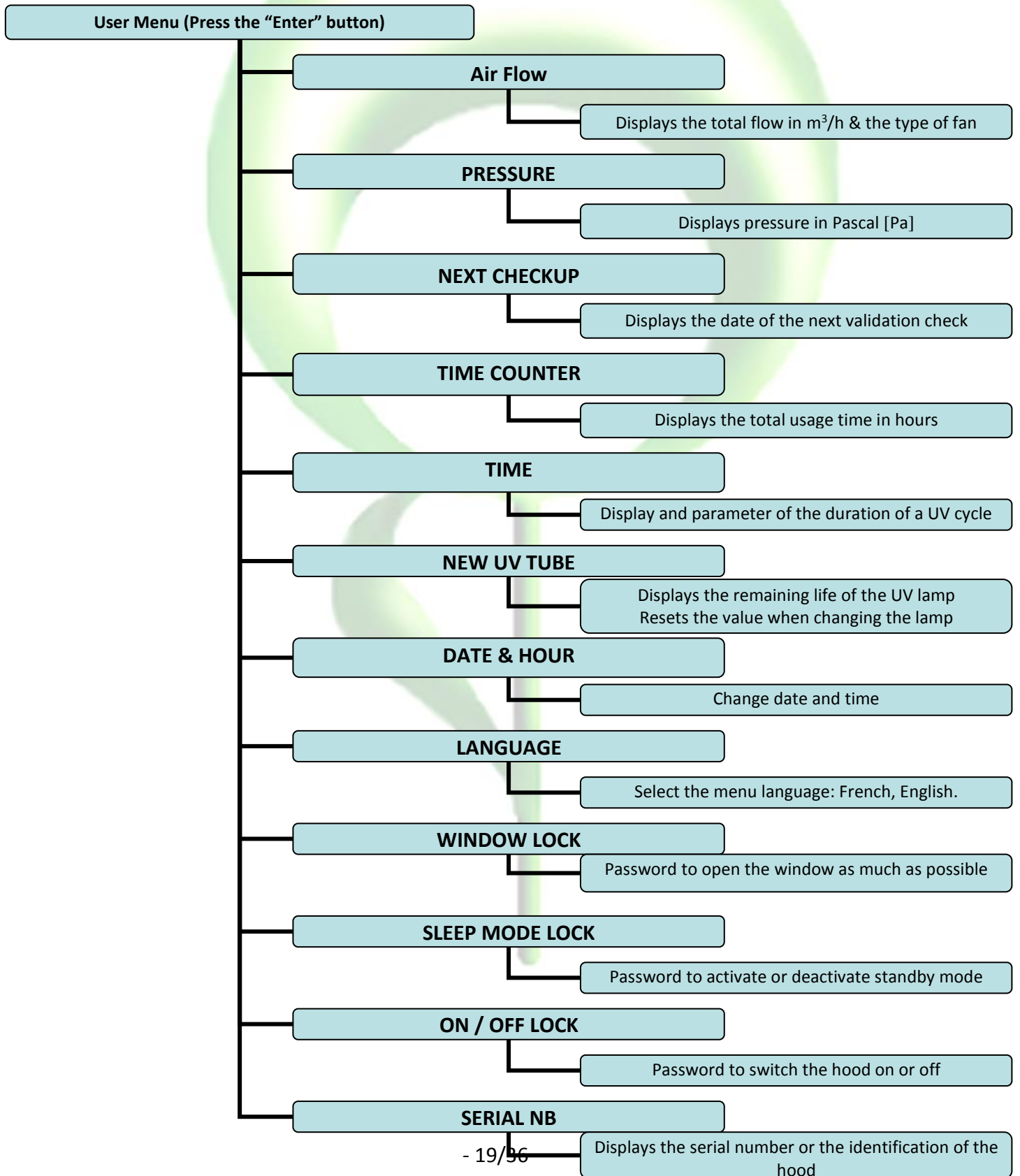
Disconnect electrically.

Reconnect.

Switch the hood back on (ON / OFF button - Password 0001).

VIII. USER MENU

7. ORGANIZATION:



8. PARAMETERS :

Air Flow:

Displays the flow rate in m³ /h and the type of fan.



Pressure:

Displays the pressure in Pascal.



Next checkup:

Displays the date of the next check.




Time counter :

Displays the total operating time of the hood in hour (normal operation and standby).





UV Time:

Displays how long the UV lamp is set to be on for each use. The factory setting is 30 min, to change the duration, press on  and save the desired duration.



New UV tube (depending on equipment):

Displays the remaining life of the UV lamp.

When changing the UV lamp, it is necessary to reset the counter: press on  and enter: press on  and enter the password 2375.



Date & Hour :

Allows you to set the date and time by pressing ←



Menu language:

To change the menu language push on ← then select the desire language:
French, English, Czech, Portuguese, Dutch, Castilian and Hebrew



Sleep mode lock:

Factory setting: 0000. Allows you to protect normal standby / on with a password.

To change a password: enter the old password and then the new one.



On/Off lock:

Factory setting: 0001. Protects the complete shutdown of the hood by promoting standby (manufacturer's recommendation to keep the air flow clean in the working volume).

To change the password: enter the old password and then "0000" as the new password.



Imperial unit:

Display yes or no (Y / N).



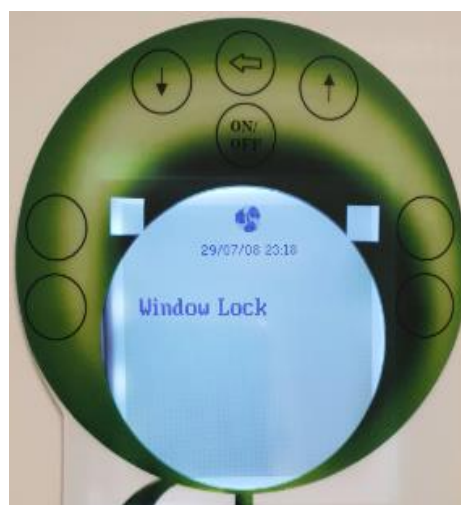
Serial NB :

Display the serial number or the identification of the hood.



Window Lock:

Password to open the window as much as possible.



IX. TECHNICAL DATA

	POWDERJET 9	POWDERJET 12	POWDERJET 18
Useful width (mm)	910	1225	1820
Total Width (mm)	945	1245	1845
Useful height (mm)	575 - 620		
Total Height (mm)	813 (without base) 1663 (with base)		
Useful depth Work surface (mm)	570		
Total Depth (mm)	916		
Flow (m³/h)	850	1100	1650
Fan type	DS 11-4		DS 11-4 x2
Absolute filter	M14-69-250-A-P, Quantity : 1	M14-612-250-A-P, Quantity : 1	M14-69-250-A-P, Quantity : 2
Rejection prefilter	W-04-12-20-2-C, Quantity : 1	W-04-12-20-2-C, Quantity : 2	W-04-12-20-2-C, Quantity : 3
Lighting	Power:30[W]		Quantity: 2
Sound level	< 60 [dB] according to European standard		
Power supply	Mono 230 V + T 16 A 50 Hz		
Max power	500 W		< 1 kW
Weight (kg)	About 90 kg	About 100 kg	About 150 kg

ADS Linaire reserves the right to change the references of certain components of the POWDERJET.

X. EQUIPMENT

1. STANDARD EQUIPMENT

The standard equipment for POWDERJET vacuum hoods is as follows:

- Control panel (with standby)
- Lighting by white fluorescent tube (600 and 800 lux)
- Methyl methacrylate walls
- 304L stainless steel worktop
- Filtration (2 stages: Pre-filters and HEPA filter)
- ECM regulation

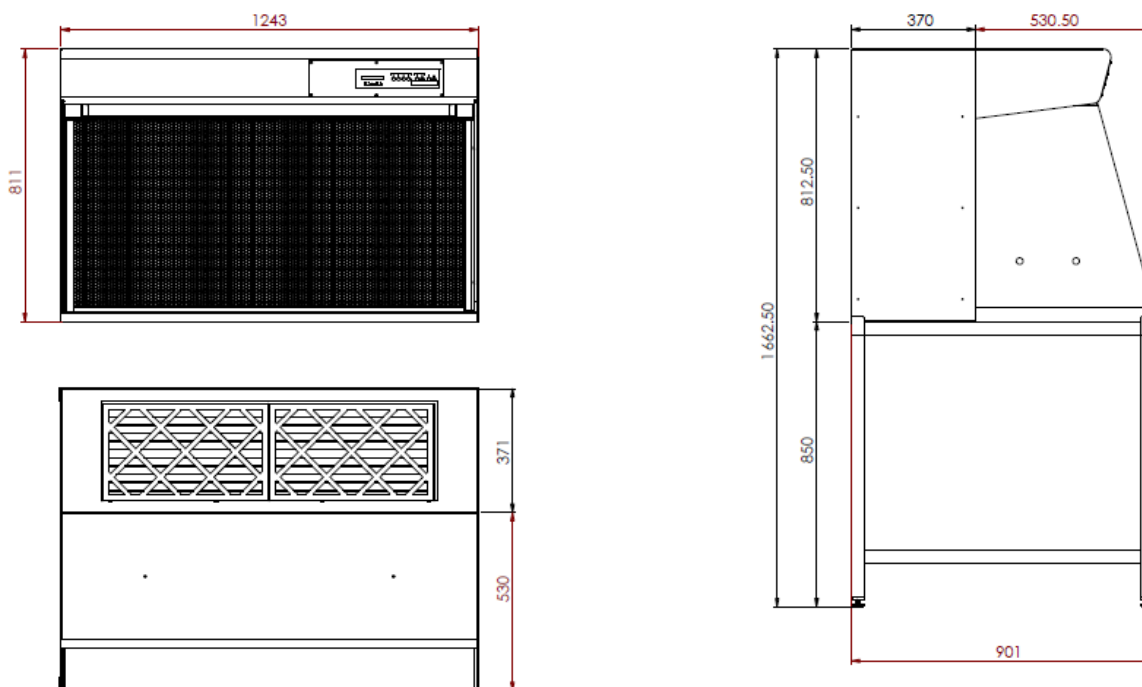
2. OPTIONS AVAILABLE

Other optional equipment is available:

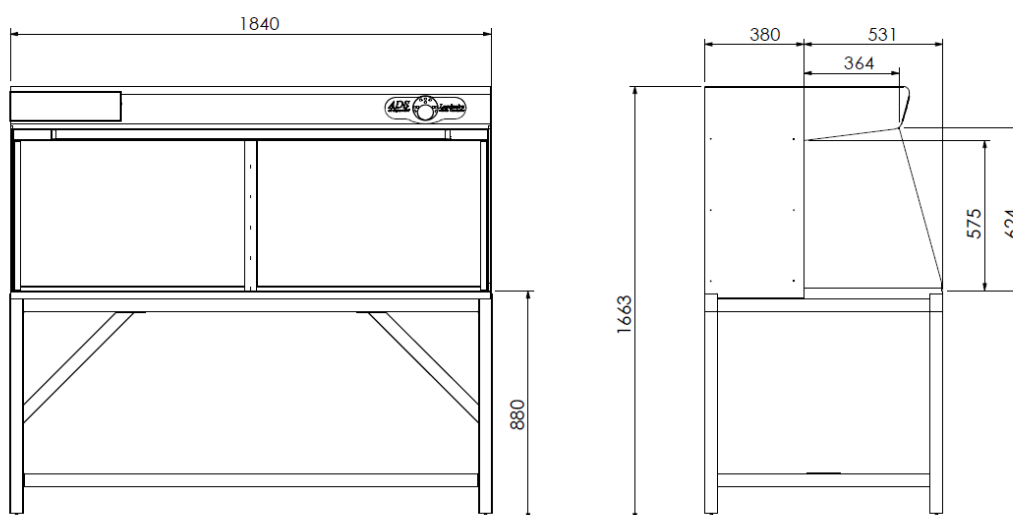
- Prefilter installed upstream of the absolute filter
- Painted steel base (wheels or levelling cylinders)
- Fluid passage (air, gas) with tap
- Act Inactinic lighting
- Power outlet (on base)
- Hanging bar

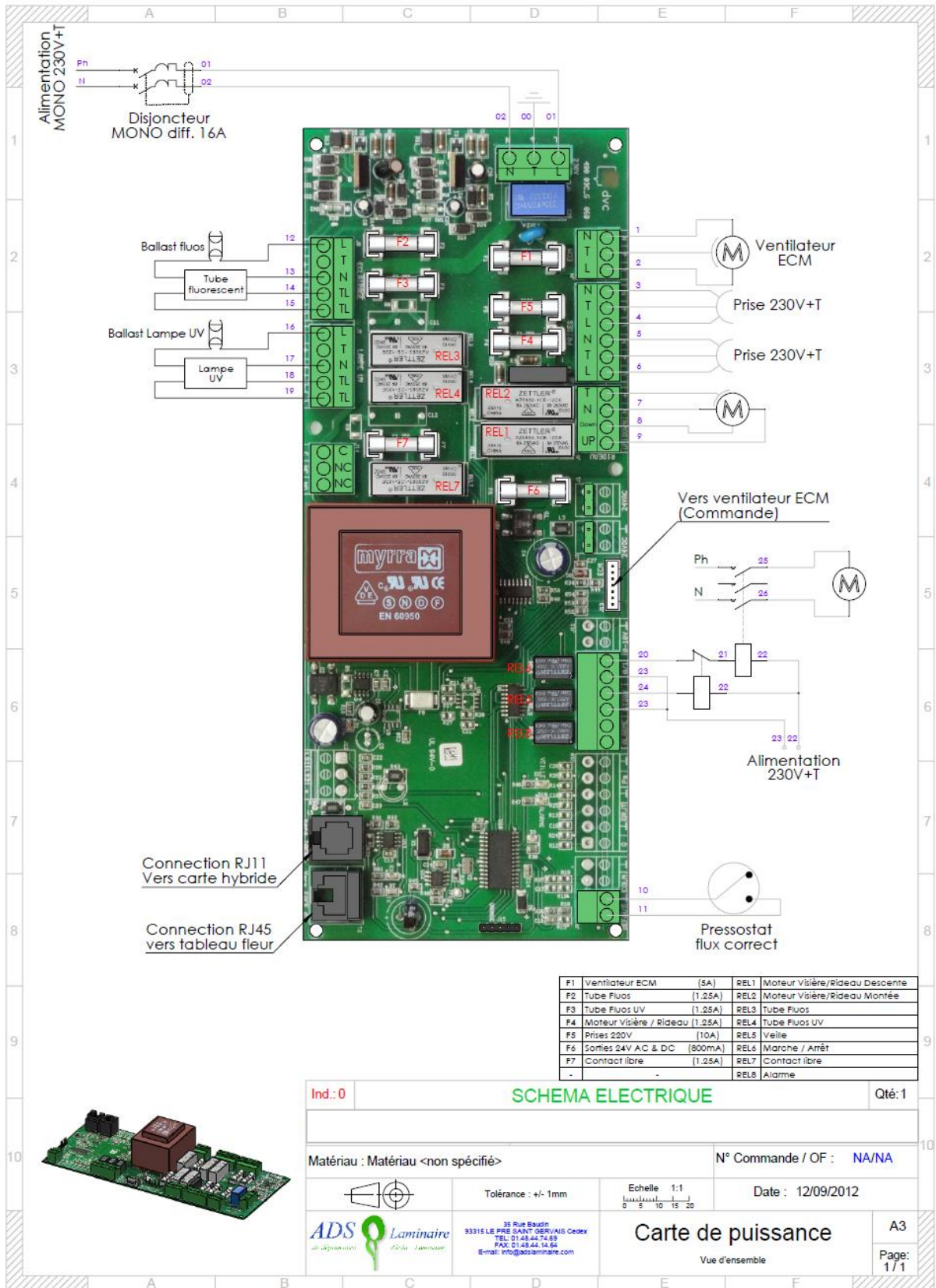
XI. STANDARD PLANS

3. POWDERJET 12



4. POWDERJET 18





XII. INTERVIEW

5. CLEANING THE WORKING VOLUME

The hoods must be cleaned **after each use and before entering standby mode.**

While cleaning the work space (**excluding the suction filter**), leave the hood in normal operation.

Use large rags with the particularity of being sufficiently large and being lint-free (or non-shedding), to guarantee good working conditions. **(Our PPE / Utilities service is available to advise you and direct you to the best reference).**

Soak the cloth with a bactericidal and fungicidal cleaning product. All alcohol-based products are compatible with the structure of the hood (Example: ADS wipes ref: 6LS7030). You can also spray the walls of the enclosure (**do not spray any product on the filter**).

Clean all accessible parts in a circular motion with the impregnated cloth.

To avoid :

- The use of chlorine-based products such as bleach on all stainless steel parts unless they are very diluted.
- The use of alcoholic products or solvents is not recommended on the methyl methacrylate parts.

6. FILTRATION

Refer to chapter XIII: Maintenance of this manual.

XIII. MAINTENANCE

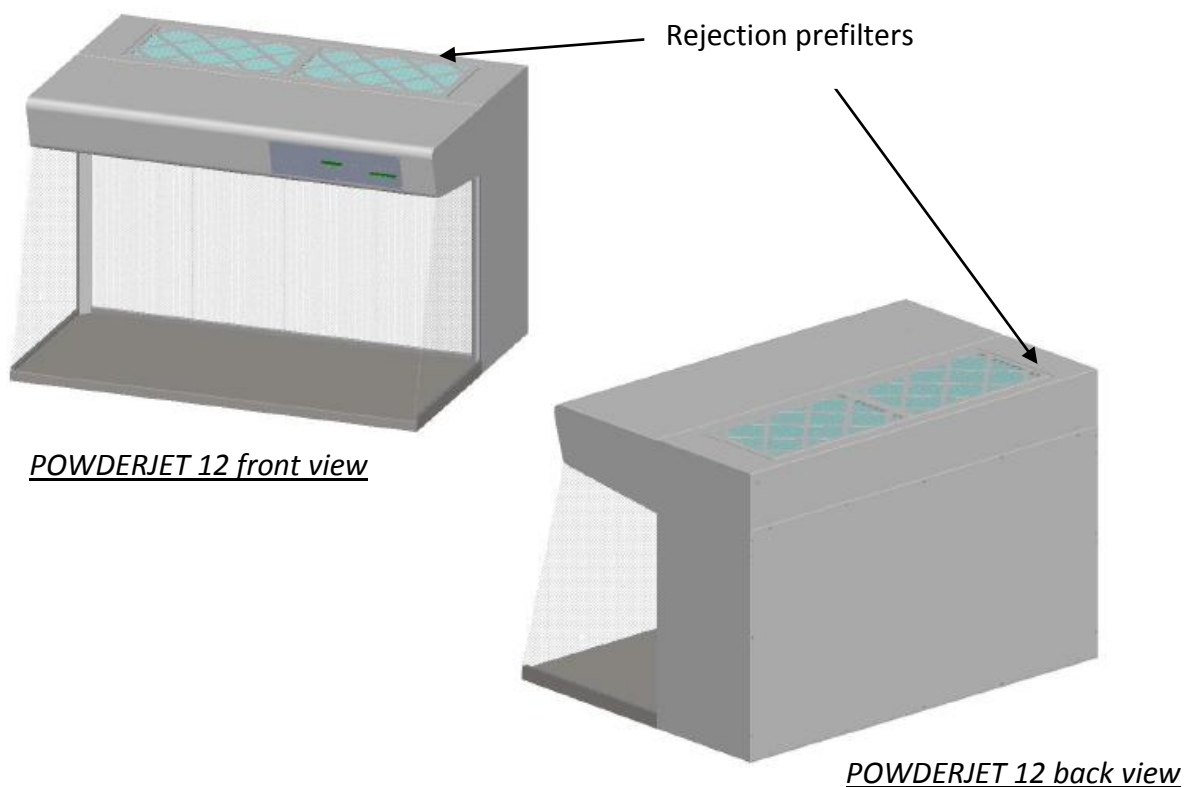
ADS Linaire designed the **POWDERJET** type station so that maintenance is very simple.

7. PREFILTER OUT OF THE FLOW

The prefilter is located above the enclosure.

Remove the used pre-filter then install the new pre-filter.

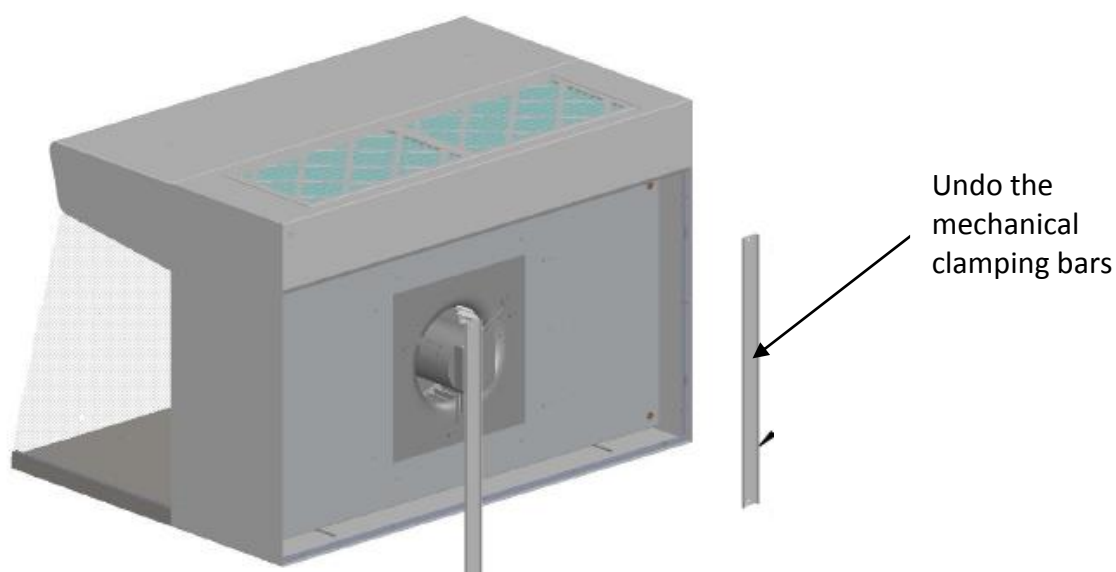
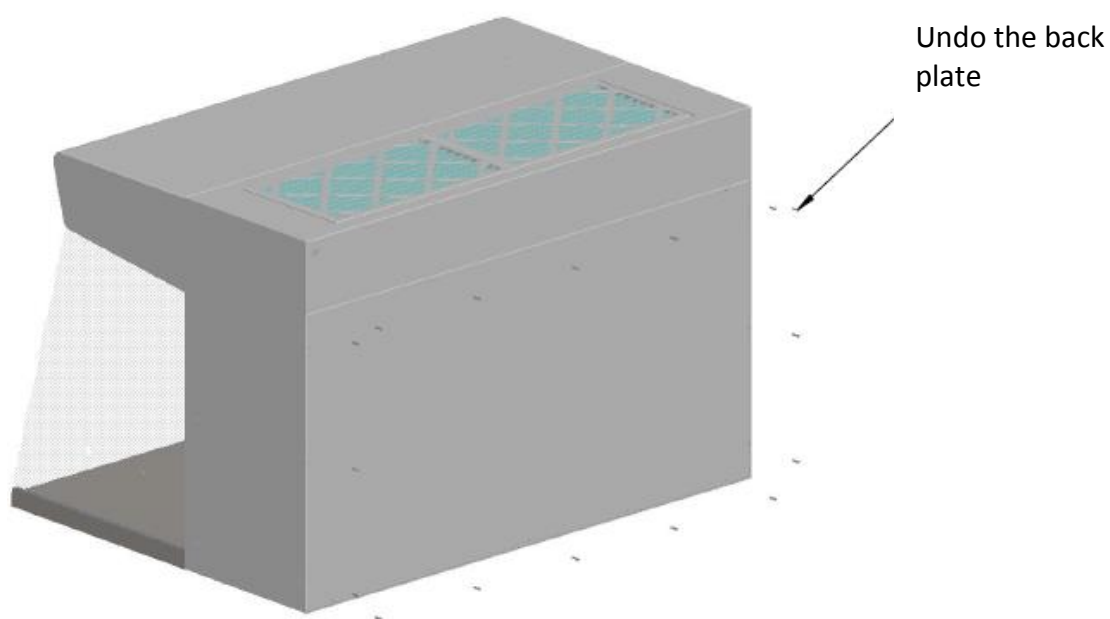
Visual check for fouling.

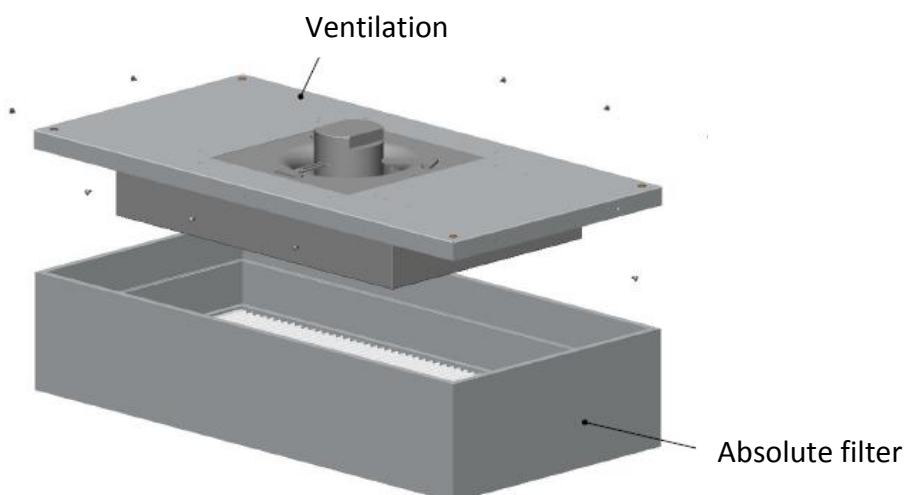
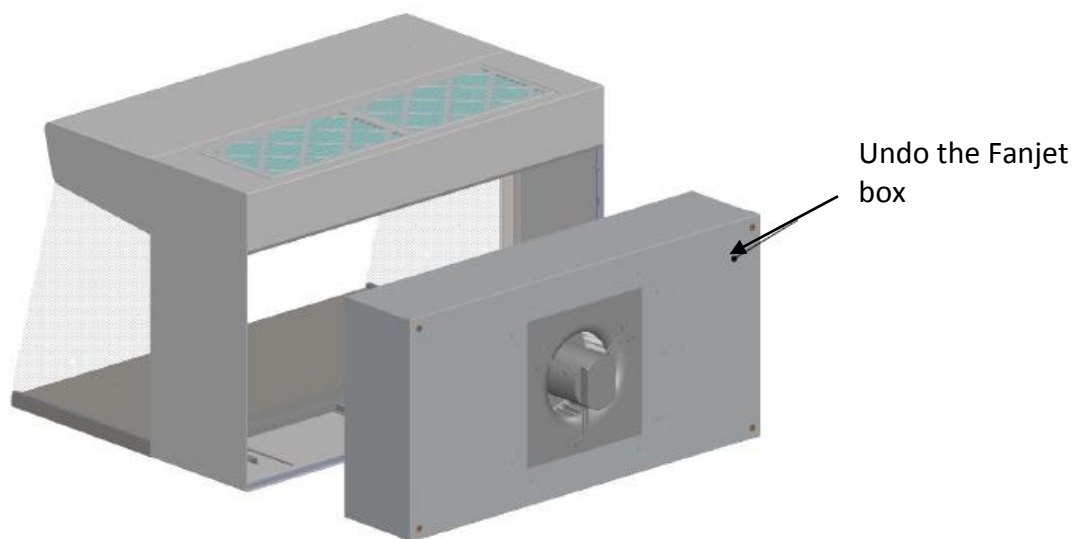


8. ABSOLUTE FILTER

As soon as the display of the service life of the filters falls below the 10% threshold, plan to replace the HEPA filters.

The absolute filter is fixed to the FANJET type box. Maintenance of the absolute filter is facilitated by detaching the rear casing from the working enclosure.





Replace the absolute filter (reference: see part IX. "Technical data" of this manual).

Reinstall the Fanjet filtration unit, replace the mechanical clamping bars and the plate. Then check the POWDERJET.

IMPORTANT

- Replacement operations for absolute filters must be carried out by a qualified technician and must be followed by a validation check of the enclosure.
- In the event of replacement, moving or prolonged shutdown of an enclosure, a validation check must be carried out by a qualified technician before restarting it.

9. MOTO-FANS

Maintenance free.

10. FLUORESCENT LIGHTING

Direct access by the work volume, behind the plexiglass plate.

XIV. PERIODIC VERIFICATION CONTRACT

Concerned about the use of your POWDERJET type enclosure under optimal conditions, we have drawn up for you a Periodic verification contract that can be carried out by our after-sales service.

This contract commits our company ADS LAMINAIRE to carry out control and monitoring visits to your hood at periods defined with your establishment, to be mutually agreed.

This maintenance contract includes:

- the displacement of our technical service (as part of a tour).
- verification of connections and contactors.
- a speed map and a calibration of its display (flower table)
- restarting the hood.
- sending of the Control report

ADS LAMINAIRE will repair and / or replace the defective parts as well as the filtration elements if it deems it necessary, and after agreement, to ensure the proper functioning of the equipment until the next passage provided for in the contract.

3 months warranty for spare parts changed by us during the intervention.

We have your maintenance contract at your disposal, do not hesitate to contact your ADS LAMINAIRE correspondent.

XV. WARRANTY CONTRACT

The POWDERJET enclosure is guaranteed for 1 year for parts and labor (in mainland France, Benelux, Switzerland and Israel) for any manufacturing defect (excluding consumables).

CONDITIONS OF APPLICATION OF THE GUARANTEE:

- During the warranty period, the customer will benefit in the event of a breakdown from free parts and labor.
- The warranty does not apply to consumables whose renewal is necessary.
- Warranty is excluded:
 - In the event of damage resulting from improper use or lack of maintenance (non-compliance with the instructions) or even that resulting from an external cause (theft, water damage, fire, fall, etc).
 - In the event of external intervention, other than by ADS LAMINAIRE during the warranty period.

XVI. PREVENTING THE UNEXPECTED

11. MALFUNCTIONS:

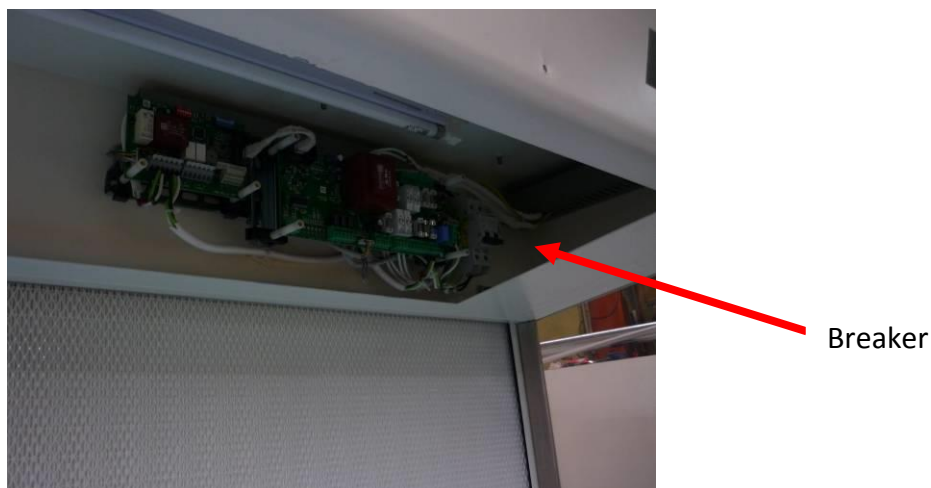
If the device malfunctions, it is possible to reset the system.

The procedure is as follows:

- Press the "up" and "down" buttons at the same time for 3 seconds
- The parameters are reset to the factory values.

12. NO POWER:

Check that the speaker is plugged into a 230 V + T mono power outlet.
 Check the circuit breaker located under the light shield.



13. NO LIGHTING

Change the fluorescent light.

Do not hesitate to contact your ADS LAMINAIRE correspondent for any incident at: 04.624.73.30