MODULAR CLEAN ROOM



ADS Laminaire Air Dépoussiéré Stérile Laminaire

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ADS Laminaire

ADS Laminaire main goal is controlling air contamination.

ADS Laminaire has been designing, manufacturing and marketing Laminar Flow equipment since 1968 and has gained notoriety in this field as a well known and experienced provider of top quality services and products to its



customers. In 1981 ADS Laminaire began manufacturing and producing air filters and in 2009 opened commercial offices in Chicago to cover the American market.

ADS Laminaire products meets the requirements of the highest standards of advanced techniques and technologies, whether it is filters, modular clean rooms, canopies, tables and hoods or modular clean rooms and laminar flow safety cabinets.

What is a modular room?

The SBM, modular clean room, is the answer to a growing demand from industrialists and research laboratories. The major advantage is to improve air quality without causing modifications to existing infrastructure.

Quels sont les secteurs d'activités ?

- Hospitals
- Medical devices
- Pharmaceutical
- Chemistry / Cosmetics
- Botanical
- Food
- Microelectronics

- Optical
- micromechanics
- Hydraulic
- Aerospace
- Army
- Plastics





International Organization for Standardization

ISO 14644 - Examples of clean rooms for aseptic processing

Air cleanliness class range ISO class	Airflow type b	Average, airflow velocity' rn/s	Examples of applications
5	U	>0,2	Aseptic core, and similar processing zones D
5-7	NL ou M	NA	Other processing zones directly supporting aseptic production. Processing zones for terminally sterilized products
7-8	NL ou M	NA	Support zones of aseptic production, including controlled preparation zones

Note NA = non applicable U = unidirectionnel NL = non laminaire M = mixé

Examples of microelectronic clean rooms

Air cleanliness class ^a ISO Class	Airflow type b	Average airflow velocity c m/s	Air changes per hour d m³/m² x h	Examples of applications
2	U	0,3 - 0,5	NA	Photolithography, semiconductor processing zone
3	U	0,3 - 0,5	NA	Work zones, semiconductor processing zone
4	U	0,3 - 0,5	NA	Work zones, multilayer masks processing, fabrication of compact discs, semiconductor service zone, utility zones.
5	U	0,2 - 0,5	NA	
6	М	0,1 - 0,3 directed airflow		Utility zones, multilayer processing, semiconductor service zones.
	NL ou M	NA	70-160	
7	NL ou M	NA	30-70	Zones de service, traitement de surface
8	NL ou M	NA	20-10	service zones



Examples of configurations



Modular Clean Room SBM ISO 5 -8 Electronics Industry



SBM of 30m² with doors + SAS ISO 6 Optical Industry (Class 1000)



IPS (integral blowing ceiling) Anti-static vinyl curtains

Benefits:

- Made to measure
- Capacity for improvement and modularity
- Value for money
- Completion time
- Low maintenance cost
- Does not require upstream work



PERSONALIZED CAPABILITIES

ADS Laminaire is able to custom produce, in its field, any type of non-standard material that does not appear in this catalogue and has got a professional technical sales team to support and help customers throughout their project.



MODULAR CLEAN ROOM - SBM ISO 5









MODULAR CLEAN ROOM - SBM ISO 5







MODULAR CLEAN ROOM MINI ENVIRONMENT



Receipt of kit material



Profile assemblies



Assembly of the structure



ADS Laminaire is renowned for its experience in providing modular structures in dedicated areas with controlled atmospheres. It has references for various business sectors, for which ADS has developed custom made modular units according to their specifications. Based on a reproducible design and precise factory preparation, the modular solution can represent, for certain project configurations, the effective alternative in terms of control (deadlines, cost, compliance) and technological by its ability to integrate and evolve.

CONSTRUCTION

The structure is assembled with aluminum profiles. Each project is studied by our engineers from the design office to guarantee rigidity, ease of assembly and modularity. Projects are followed by our design and sales support team from start to finish.

PRINCIPLE

The entire work area is swept by filtered and / or sterile air. This air flow produced, thanks to its flow speed, an overpressure in relation for the ambient environment and creates a barrier to external particles.





SBM ISO 8 for application electronic



SBM ISO 6 optical industry, doors + SAS



SBM ISO 5 high rigid walls



Rigid high walls in the mechanical industry



SBM high ceiling



SBM combined with exhaust.

Whatever the activity sectors, the quality required for the sizing of a clean room can only be obtained by the analysis and synthesis of technical means, in terms of the design of these areas and their future maintenance. Understanding and solving the problems posed requires an in-depth study of all the areas of contamination, whether from the inside or the inside.

The study carried out takes into account production factors according to the user needs and will lead to the optimization of an architectural designed clean room of which one of the main components will the aeraulic system necessary, among other things, of the mechanism for removing contaminants from the air but also generated by:

- Human being
 - Animals
- The equipments etc.
- The process The materials







Electronic cabinet and control panel



Hardware SAS



IHM (see p.10)



Glass modular clean room door





CONTROL PANEL

COMMANDES

• On/Off : Switch on or off the equipment, (more precisely ventilation) and all the functions. This 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 alphabetically

• 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 lighting duration) depending on the model proposed

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



Human-Machine Interface

There are also several advantages to the HMI control panel. Among them, a wide variety of communication protocols as well as a possibility of adjustment, notably box by box are available and possible.





SBM ISO 5

Modular clean room

















CLEAN ROOM DOORS















SBM ISO 5



40×40 SUPER LIGHTWEIGHT EXTRUSION



40×40 LIGHTWEIGHT EXTRUSION







40×40 FACE EXTRUSION



40x40 CORNER EXTRUSION



The T-BAR system is a false ceiling suitable exclusively for the clean room area.

The aluminum profiles (anodized or epoxy painted) have a metric thread over their entire length, which allows the screwing of all mounting accessories (spider, omega, fixing lug ...). The aluminum frame will then be completed by filtration boxes (terminals or FFU type), flush lighting boxes or strips fixed on the frame and false ceiling plates. The T-BAR is delivered as a ready-to-assemble kit. The cross is located at the crossroads of 4 profiles and joins them. Thanks to the thread of the profile over its entire length, the omega will be screwed in the most suitable place to hang on the concrete slab. It is often possible to save preliminary work such as installing a primer and very easily avoid all obstacles present on clean room sites such as ducts and the passage of cables and fluids.



MODULAR PROFILE SYSTEM



40x40 super lightweight extrusion type C03-1



40x40 corner extrusion type C01–7



40x40 double face extrusion type C02–4



Softline extrusion 40x40 type C03-8



40x80 base extrusion type C01–3

Application

Light extrusions help save costs! They can be used to create lightweight designs with excellent carrying capabilities. Partially closed extrusions are particularly attractive in design, retain more cleanliness and can be used in a wide range of applications. For all types of cabinets, as well as for structures with mainly closed extrusion faces and for applications with an attractive design.

Connectors -Assembly





HPL PARTITIONS



What is high pressure laminate [HPL]?

High pressure laminate, or 'HPL' as it is often called, is created in a multi-step process. The product consists of six to eight layers of paper including a layer of resin, and a transparent coating.



What is melamine [LPL]?

Low pressure laminate, also known as prefinished panel or melamine, is a thin melamine paper stuck directly on a substrate (usually DIY wood or particle board).







ADS Laminaire works mainly with HPL. According to the requirements of each project, all cuts and electrical channels are already prepared in the production plant. This specific technique enables excellent quality and allows very quick installation on site.













MODULAR CLEAN ROOM-IPS







Some of our SBM / IPS...





MODULAR CLEAN ROOM - IPS











VINYL CURTAINS

Vinyl curtain with "U" profile



Characteristics

- Antistatic vinyl
- Flexibility
- Thermal insulation
- Soundproofing
- Long life expectancy
- Scratch and impact resistant
- High resistance to chemicals
- Environmentally friendly and recyclable

Format

• Rolls, strips and panels

Sizes

- Length: 0.3 / 1 meter (width)
- Thickness: 1mm

Description

Soft antistatic PVC is a charge dissipating material (antistatic). It prevents sparks and all other damage resulting from static electrical charges. The flexible antistatic PVC strips and partitions can be used in various applications such as an explosive environments (mines, chemical sites, laboratories, etc.) or in areas sensitive to static electricity (Data centers, factories of electronic parts, packaging, etc.)

Vinyl curtain with hook system avantages Characteristics

- Easy to install
- Universal system that accommodates all strap widths
 - All cover combinations are possible to ensure the optimum resistance to noise, thermal differences.

dust or air currents.



- Suitable for both out and in doors.
- Can be attached to the wall or on the door frame
- Easy to replace low maintenance
- High resistance for strong security doors
- Ideal in the aggressive environment industry



IPS-WHEELS

Brackets:

HRIG series - Made of die-cast aluminium, with sealed ball bearings in the swivel head, hexagon steel plate, female thread in the bolt hole. Powder-coated, colour ivory. Truck lock made of hard rubber, black. Height adjustment with flat spanner or integrated adjustment wheel. Bolted wheel axle.

Wheels:

POA series - Made of high-quality, impactresistant nylon, 70° shore D, black. Bearing type: Plain bore.

Swivel castors	Whee l Ø	Whee width	Load capacity *	Bearing type	Total height	Max. total height	Adjustment range	Width across flats on hexagon	Bolt hole Ø	Offset
	(D) [mm]	(T2) [mm]	[kg]		(H) [mm]	(h) [mm]	(T4) [mm]	(SW) [mm]	[mm]	[mm]
HRIG-POA 45G	45	18	180	Plain bore	72	80	8	40	M8 x 12	32
HRIG-POA 50G	50	24	250	Plain bore	84	90	6	46	M12 x 15	38
HRIG-POA 63G	63	30	500	Plain bore	104	114	10	65	M12 x 15	46
HRIG-POA 72G	72	32	750	Plain bore	122	132	10	67	M16 x 16	52

* The load capacity is determined under the following test conditions:

Speed: max. 1 km/h

Temperature: +15° C to +30° C

Hard, horizontal surface without obstacles

Travel distance: Cool down periods of 15 min. are required after max. 50 m



IPS-Cylinders





LIGHTING



Reliable up to 200 W per line Including switch

- -

Luminaire à LED T5

LED PANEL 30*60 32W

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17307487	32W 295*595 Warrs White	30008	2850	295"585"11	5.3kg
17307486	32W 295*595 Cool White	4200K	3070	295'595'11	5.3kg
17307490	32W 295*595 Cold White	6000K	3150	295'595'11	5.5kg

LED PANEL 60*60 45W

(and approxim	Description	102	10000	101 (mm)	-
17307482	45W 595*595 Warm White	3000K	3800	595'595'11	5.94
17307480	45W 595*595 Cool White	4200K	3900	595'595'11	5.94
17317481	45W 595*595 Cold White	6000K	4000	595*595*11	5.94

LED PANEL 30*120 52W

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Recessed LED PANEL 30X60 см

- SII authorization.
- High quality LED
- Light output greater than 3X18W
- External pilot with international standard type LIFUD
- Suitable for installing in plaster and suspended ceiling
- IRC 85
- 30,000 hours of work
- Spacers can be purchased separately for conversion to 605 * 605 ceilings

Recessed LED PANEL 60X60 CM

- SII authorization.
- High quality LED
- Light output greater than 4X14W
- External pilot with international standard type
- Suitable for installing in plaster and suspended ceiling
- IRC 85
- 30,000 hours of work
- Spacers can be purchased separately for conversion to 605 * 605 ceilings

Recessed LED PANEL 30X120 CM

- SII authorization.
- High quality LED
- Light output greater than 2X36W
- External pilot with international standard type LIFUD
- Suitable for installing in plaster and suspended ceiling
- IRC 85
- 30,000 hours of work
- Spacers can be purchased separately for conversion to 605 * 605 ceilings



MODULAR CLEAN ROOM - IPS

ORDERING INFORMATION

- Aluminum structure
- Lighting 500 lux
- Vinyl surround
- Useful height 2.2m
- On cylinders

- Rollers option: add suffix R
- ex: IPS5 12/12 R
- Height: 2500mm
- Useful: 2090mm
- Width of a column (with wheel): 8cm

Modèle	Dimension mm	Dimension ft	ISO 14644 class	Supply 50-60 Hz	FFU Qty
IPS-5-12-12	1416×1427	4 ^{1/2} ×4 ^{1/2}	5	230 v	2
IPS-5-US-12-12	1416×1427	4 ^{1/2} ×4 ^{1/2}	5	110 v	2
IPS-7-12-24	2647×1427	4 ^{1/2} ×8 ^{1/2}	7	230 v	1
IPS-7-US-12-24	2647×1427	4 ^{1/2} ×8 ^{1/2}	7	110 v	1
IPS-5-12-24	2647×1427	4 ^{1/2} ×8 ^{1/2}	5	230 v	4
IPS-5-US-12-24	2647×1427	4 ^{1/2} ×8 ^{1/2}	5	110 v	4
IPS-7-24-24	2647×2669	8 ^{1/2} ×8 ^{1/2}	7	230 v	2
IPS-7-US-24-24	2647×2669	8 ^{1/2} ×8 ^{1/2}	7	110 v	2
IPS-5-24-24	2647×2669	8 ^{1/2} ×8 ^{1/2}	5	230 v	8
IPS-5-US-24-24	2647×2669	8 ^{1/2} ×8 ^{1/2}	5	110 v	8









Interior view of an SBM. Flush lighting ISO 5





Interior view of an SBM with T-Bar ceiling. Non-flush lighting ISO 5



IPS 4 Mini-environment



IPS ISO 7 (Class 10000)



IPS very high flexible-space research



Flexible IPS in the food industry





Flexible IPS in the pharmaceutical industry







MS - LAMINAR WALL







After passing through a double filtration stage (G4 prefilter and H14 absolute filter), an ISO 5 class air flow is blown horizontally and laminarly across the entire working volume. This controlled environment thus protects the area from external contamination.

The horizontal laminar flow creates an overpressure zone guaranteeing a sterile environment (ISO class 5).

The automatic flow regulation compensates for clogging of the WEPA filters and thus ensures a constant air flow. The ECM fan is supplied with a direct current wich has many advantages:

- Low consumption: reduced from 30% to 40% compared to conventional fans
- Very high yield
- Low heat loss
- Regulation without probe (speed or pressure) independent of surrounding conditions
- Very high precision



MODULAR CLEAN ROOM: MOBILIT VERSION



STERILE OVERPRESSURE MOBILIT ROOM

- MOBILIT ADS Laminaire with sterile vertical laminar flow protects the patient against germs carried by the ambient air
- Easy to install, requiring no modification to the room in which it is installed.
- MOBILIT represents an economical and efficient solution
- The patient is in a sterile environment, without being socially isolated from hospital staf
- Construction, ventilation, prefiltration and final filtration meet ISO 14 644 standards
- The transparent flexible vinyl curtains attached to the periphery of the MOBILIT help guide the air flow towards the ground and marks the boundaries of the protected area
- REINFORCED PHONIC INSULATION through foam; (sound traps) guarantees a very low noise level below 48 Dba for the comfort of the patient and the hospital staff

PROTECTION OF THE ENVIRONMENT AND THE CONTAGIOUS PATIENT

The sterile air pulsed on the patient is then taken up at the level of the bed in a suction box furnished with absolute filters, in which the contagious particles emitted by the patient are fixed. The entire volume of the MOBILIT is under vacuum, a low-level air intake at ground level causes the contaminated air towards the suction box and thus protects its surrounding.

OPTIONS

- Specific lighting
- Distribution of medical fluids
- Power outlet and TV outlet / Network outlet
- Bell, alarm report
- Air conditioner
- Ceiling suspension



Mobility in depression



Air shower



Examples of doors with oculus





View of the interior nozzles



Electrical cabinet example



Shower structure in stainless steel



Filtration



Air shower

The air shower, which is the last area to cross before entering the clean room, ensures complete dust free outfits. This process can also decontaminate users who have handled powders. The ultra-filtered air (ISO 5) is pulsed at very high speed (17 to 21 m / s) then entirely recycled on hepa prefilters and by return grills located in the lower part of the shower. The automation of the entry / exit procedure guarantees the passage of each user in the flow. The PLC program can be modified in consultation with our design office.



Air shower for passing trolleys with roller doors

DIMENSIONS

Useful dimensions for 1 operator: 900x900x2100 mm. For the simultaneous passage of several users, the interior volume will be that of a corridor. Possibility of tailor-made Technical box:

- on the side
- on the back



FFU filters





The new FANJET type FFU housings with system ECM (direct current) allows management centralized by a PC. A network mod bus connects the boxes between them to the PC station. Possibility of management by remote control over the internet.

2 Grilles



Air is drawn in through a G3 prefilter by a motor powerful and silent fan. Overpressure air is filtered by a HEPA filter (ULPA option). The MONOBLOC system guarantees the integrity of the box.



FILTRATION HEPA filter Filter: Miniplis type Efficiency: 99.995% MPPS H14 Protection grid: epoxy painted steel Frame: anodized aluminum



Size ft	Code	Lmm
2X2	6/6	600×600
2X3	6/9	905×600
2X4	6/12	1210×600
4X4	12/12	1220×1220

VENTILATION

- <u>Fan</u> • Normal use: 120 W, 1000 rpm / 220-230V
- Power: 240W / 220-230V (max)
- Turbine rotation: 1200 rpm (max)
- Noise level: 54 dBA (48 dBA on false ceiling)
- Voltage: 110 V / 230 V

SOUND CATCHERS

PREFILTRATION

Frame: cardboard

<u>Available references:</u> Fanjet 6/6 Fanjet 6/9 Fanjet 6/12 Fanjet 12/12



CONVOYAIR MODULAR LAMINAR FLOW BOX

PRINCIPLE

These modules are assembled mechanically to each other, thus offering great flexibility of use. The entire working volume is swept by a laminar flow of ISO class 5 (double filtration stage: G4 prefilter and absolute filterH14). Air flow speed and overpressure provide protection from handling. Vinvl curtains channel the air flow and materialize the work volume.

After use and before using again, the standby mode ensures that the area remains clean.

CARACTERISTIOUES

- 304L stainless steel structure
- 2 filtration stages
- Automatic regulation
- of the flow
- Vinyl curtains
- Support base development
- configuration
- Sound level <60 dBA

OPTIONS

- Hanging rings
- Base / castors
- Remote control panel
- Inactinic lighting
- **Rigid walls**
- Computerized management (centralized by PC)
- ULPA filter (CI ISO4)
- Centralized management system

CONVOYAIR CX CONVOYAIR CX CONVAYAIR CX DIMENSIONS

•			9	9	12	3/3	
		Useful	overall	Useful	overall	Useful	overall
	Length (mm)	915	1055	1220	1360	915	1055
	width (mm)	610	680	610	680	915	1055
	Box height (mm)	60)5	60)5	60)5
	weight (kg)	4	0	5	0	6	0

C 14.2

hese laminar flow boxes are designed to be assembled according to the configuration requested.



Examples of configurations

ECM FAN

The automatic flow regulation compensates for clogging of the absolute filter and thus ensures a constant air flow. The ECM fan is supplied with a direct current and which has many advantages:

- Low consumption: reduced from 30% to 40% compared to conventional fans
- Very high yield
- Low heat loss
- Regulation without probe (speed or pressure)
- independent of surrounding conditions
- Very high precision

FAN ECM





H14 absolute filter





Bright

Convovair

Model

Convovair with vinvl

curtains



CONTROL VALIDATION

SPEED CONTROL

- Equipment used Hot wire anemometer Goals Carry out a speed map and check the laminar flow Measure the frontal suction speed Determine the flow rates and
- the hourly renewal rate Materials concerned Laminar flow hoods.
- Microbiological safety stations, Clean rooms, Fan ceilings, Fume cupboards, ETRAF Standards in force

ISO 14644, EN 12469, NFX 15211, EN 14175, BPF

AERAULIC DIAGRAM (smoke test)

- Equipment used Smoke ampulet and pier
- Goals

Visualize the laminarity of the flow

Check the absence of induction Test the ventilation of the hood Check the pressure flow Visualize the effectiveness of takeovers (protection of personnel)

Materials concerned

Laminar flow hoods, Security Stations Microbiological, Clean rooms, Ceilings blowers, Fume cupboards, ETRAF

• Standards in force ISO 14644. NFX 15211. EN 14175, EN 12469





PARTICULATE COUNTING

Equipment used

Laser particle counter

Goals

Determine the dust class of an area Highlight leaks (by scanning filters) or contaminated areas. Material concerned

Laminar flow hoods, Security Stations Microbiological, Clean rooms, Fan ceilings

• Standards in force

ISO 14644, BPF, EN 12469





MAINTENANCE

EMERY INTEGRITY TEST (optional)

Materials used

Spectrophotometer

Aerosol generator (product used: Emery 3004)

Goals

Check the integrity of the filters by looking for leaks on the filter media and the attached surface

Materials concerned

Laminar flow hoods, Security Stations Microbiological, Clean rooms, Fan

ceilings

 standards in force ISO 14644, EN 12469, BPF

OTHER CHECKS (consult us)

- Qualifications (IQ / OQ)
- Sound level
- Illuminance
- Bacteriological control .
- Temperature / Hygrometry •
- Saturation test of active carbon filters
- SF6 gas confinement test

Control reports accompanied by calibration certificates of our instruments are provided after testing. All our control devices benefit from COFRAC calibration or COFRAC connected.

ADS Laminaire with its 50 years of experience together with is 4 professional teams of technicians are at our customer's disposal everywhere in France and neighboring countries to help with maintenance and testing of hoods of all brands.

Maintenance

- Change of filters (hepa, prefilters, charcoal)
- Adjustment, resetting
- Decontamination (compulsory for all
- intervention on a post used for handling of pathogens)
- Filters recovery for destruction
- Various repairs, change of parts

Maintenance

- Spare parts are readily on demand due to our large permanent stock in the Paris region:
- 2000 hepa filters (standard dimensions)
 - 500 electronic cards 10.000 prefilters Ftc.
- 500 fans









CLEAN ROOM LAYOUT

TABLES & ASSISES Ref: J14221400 INOX table for clean room. Work table with rounded corner, thickness 15/10. Lower tray Structure in AISI 304 stainless steel Fixings with stainless steel screws and bolts Total load allowed: 100 kg/m² Delivered disassembled for easy transport Dimensions: 1400 x 700 x 900H mm.

Clean room furniture

AISI 304 stainless steel with nickelchrome 18/10 Completely welded structure in square tube 40 x 40 mm with adjustable feet



Work surface, with 1 rounded side in 12/10 stainless steel

Sitting up :

Ref 7KA 80YHFO 00 905 Base in the shape of a "horseshoe" in steel coated with black plasticized PVC. Black gas lift column, tilted and immobilized in rotation.



Adjustable seat height adjustable from 750 to 980 mm with riser. Cylindrical seat in black flexible polyurethane foam, with incorporated handle. Ergonomics and design, small footprint Reduces fatigue

CHAIRS

On offer we have got a range of chairs from our French partner, who is a seat expert for over 20 years and comes with their warranty. Ask for a 10 day free trial offer with no purchase obligation

Polyurethane asynchronous chair

Ref: 7NG 40GHLP 01 905

• 5 branch chromed steel base on articulated pads

• Chrome gas lift column for adjustable seat height from 560 to 800 mm

- Seat cushion
- Monobloc aluminum

footrest, adjustable in height with peripheral clamping

• Comfortable seat in black flexible polyurethane foam

• Asynchronous tilt adjustment of the seat and backrest with a single lever. Backrest in black flexible polyurethane foam, adjustable in height



CLEAN ROOM LAYOUT

CHAIRS

UCL350D clean room chair: Class 100 (ISO 5), ESD 5 branch base on casters Presence of a footrest Filter integrated to the chair Adjustable seat height



EDD polyurethane chair Ref: 7NG 40GHLP 01 905

• 5 branch chromed steel base on articulated pads

• Chrome gas lift column for adjustable seat height from 560 to 800 mm

- Seat cushion
- Monobloc aluminum footrest, adjustable in height with peripheral clamping



• Comfortable seat in black flexible polyurethane foam

• Asynchronous tilt adjustment of the seat and backrest with a single lever. Backrest in black flexible polyurethane foam, adjustable in height



Concept polyurethane seat

Reference: 7NK 90NHDP 00 905

- 5 branch black steel base with articulated pads
- Black gas lift column for adjustable seat height
- from 610 to 855 mm
- Seat cushion
- Deformable seat in soft black polyurethane foam, tilted 2 ° forward
- Self-adapting system to user movements



Particle counters

TSI 9303 Portable particle counter:

Counts 6 particle sizes simultaneously, data transferable to computer, particle size: 0.3μ , 0.5μ , 0.7μ , 1μ , 2μ , 5μ . Flow rate: 0.1 cubic feet / min. Available in 1 and 2 feet3 / min.

Portable particle counter:

AEROTRACK® 9303 - Analysis of the distribution and size of particles in the air. Complies with ISO 21501-4 (sold individually). This particle counter with laser diode counts particles from 0.3 µm to 25 µm.

Its molded plastic case, 8.1 cm (3.2 in) screen and large buttons make it easy to handle. The meter can be connected to a computer through its mini USB port. The meter is calibrated with PSL spheres, traceable by NIST.

Dynamically measures and displays the results for three particle sizes:

Channel 1: displays particles of 0.3 µm

Channel 2: is configurable and displays particles of

 $0.5\,\mu\text{m}, 1.0\,\mu\text{m}, 2.0\,\mu\text{m}$ or $2.5\,\mu\text{m}$

Channel 3: displays 25 µm particles Characteristics :

Internal memory: 1500 measurement results.

Sampling rate: 2.83 L/minute (0.1 CFM). Removable lithiumion

battery. Autonomy:

4.5 hours. Dimensions (LxWxD): 23 cm x 11 cm x 6.2 cm. Weight: 580 g





Anemometer:

The 9515 is an economical choice for a digital flow meter, without compromising accuracy or precision. Professionals believe that they are the ideal tool for measuring the frontal speed in checking hoods, paint booths or ventilation systems. The air speed meters of models 9535 and 9545 simultaneously measure and record several ventilation parameters using a single probe with several sensors. Both models measure speed, temperature and calculate flow.

Model 9545 also measures relative humidity and calculates the dew point and wet temperature.







ISO

6		
CERT	IFICA	State Cla
	TE OF REGIS	
Système de Man	agement de la Quali	ité / Quality Management System
	ADS LAM	INAIRE SA
	14 mm M4110	ICE de broglie
L 4	FRANCE - 93600 - /	AULNAY SOUS BOIS
mete	n auvre et entretient un Sys conforme aux exis	tilme de Management de la Qualité jences de la nome
operates a		which complies with the requirements of
	ISO 900	01 : 2015
600	Pour les activités sulvantes /	for the activities detailed below
empoussièrement	contrôlé et à flux lami	intenance et contrôle d'enceintes à inaire, de hottes chimiques et distribution res pour salle blanche
Design, manufacturing, sa	in, maintenance and check of ceb themical hoods and distribution of	inets with dusty-accumulation managed and with lambar flow, Titlers and utilities for obtaining room
Design, manufacturing, so	themical hoods and distribution of	inds with dusty-accumulation managed and with lambar flow, filture and utilities for desiring more d'activité / Operative unit(s)
1	themical hoods and distribution of Bille(s) de production ou	Titlers and utilities for cleaning room
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QUESTIONNAIRE OF SBM

			General des	cription											
N° OF	N° Quotation														
Equipment															
		Delivery / Intervention													
Adress															
Contact on s	site														
Phone / Fax	/ E-mail														
Hours															
Security hor	ne		□ Yes □ No Hours :												
Dim of narro	west passage														
Certification	1	🗆 Electria	c □Che	mical 🗆	Forklift :	□ Other :									
Clean room delivery	Personnal protection accessories		🗆 Yes	□ No											
Floor		🗆 Ele	vator 🗆 Ste	aircase 🗆	Crane	Elev Dim :									
Qualification	7	🗆 Installa	ar □V	alidation se	ervice	□ IQ/OQ									
			Technical	l data											
Requested I	50 class	□ ISO 5 □ ISO 6 □ ISO 7 □ ISO 8 □ ISO 9													
Useful dime	nsions	Strict : 🗆 Yes 🗆 No													
Available sp	ace														
Hanging		□ Yes I	□ No	Height un	der beton ce	iling :									
FFU					Quantity :										
Lighting		□ No		🗆 Flus	h	🗆 Visible									
Walls (see a	liagram)	□ Vinyl □Polycarbonate □ HPL □ Glass □ Flush □Methacrylate □ PVC □ LPL													
Doors (see d	diagram)		Quantity :												
Wheels		🗆 Yes 🗆 No													
Control pane diagram)	l (location on	🗆 Manual 🗆 Flower 🗆 Other													
Double belt				🗆 Yes	es 🗆 No										
Air condition	ner		/es □1	No	□ Temperature □Hygrometry										
		1	Electric												
Available at	the customer	□ Mono 2 □ Mono 1	30 V □ Tri 3 10V	380V +T +N	I □ Tri 38 □Other :	OV +T(without neutral) :									
I max		A	□ At the cu client	stomer	□ To be	transmitted to the									
P max		кw	KW □ At the customer □ To be transmitted to the client												
Lenght of po	ower cable														
Planning (PC,)														



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ADS LAMINAIRE FRANCE 34 RUE MAURICE DE BROGLIE ZL LES MARDELLES 93600 AULNAY -SOUS-BOIS France TEL: +331 48 17 85 10 FAX: +331 48 17 85 11

47 W POLK STREET SUITE 204 CHICAGO, IL 60605 USA TEL: (312) 622 1697

ADS AIR FILTERS USA

info@adslaminaire.com

marina.cassin@adslaminaire.com



www.adslaminaire.com www.adslaminaire-usa.com