



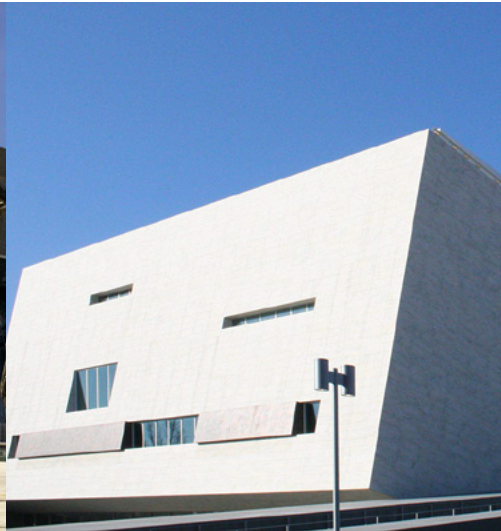
VERT LAB

**AIRTIGHT INTEGRATED
METAL CEILING SYSTEM**

**AIRTIGHT
PATENTED**

**AIRTIGHT
CERTIFICATED**

ANTONIO



GUERRASIO



The philosophy of Antonio Guerrasio, the company that has been putting its experience at the service of architecture for over 50 years, was born from the meeting of history, craft tradition and advanced technology.

A philosophy summarised in the company vision: **technology & ideas for architecture.**

With three production sites, strategically located in northern, central and southern Italy, the production includes, starting from sheet metal coils, the cold working of the sheet by master carpenters, with the support of systems and numerical control machines for bending, pressing, laser cutting and powder coating.

Through constant research and development, Guerrasio produces metal profiles and systems for the sector of technical interior finishes, metal ceiling systems integrated in panels, slats or gratings for civil and religious buildings, for naval furnishings, for the hospital and penitentiary sectors; it also produces ceiling lights and airtight diffusers, patented flexible metal profiles (with the VERTEBRA® brand), road sound barriers and a wide range of completing accessories. And, besides the standardized productions, what makes Guerrasio unique is the ability to respond to the particular needs of professionals and companies with ad hoc solutions designed for the individual construction site, being able to engineer any architectural proposal thanks to the team of specialized technicians who work in synergy with the designers.

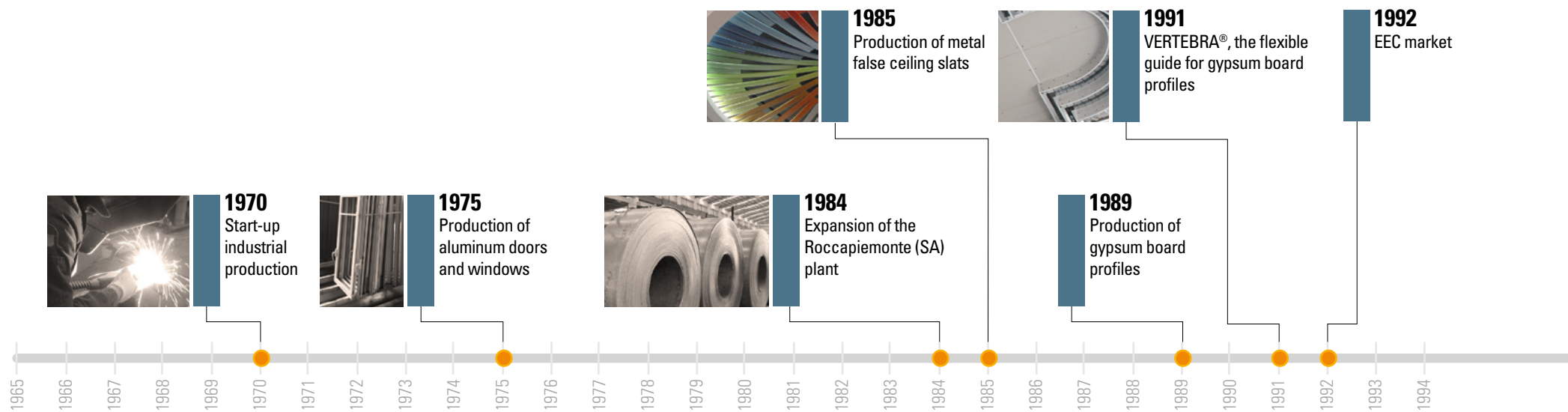
Thanks to the new patents and the prizes won over time, today the solid reputation acquired over the years ensures the presence of Guerrasio products in the most important architectural works, such as in the Guggenheim Museum in Bilbao of the architect Frank O. Gehry, symbol of contemporary architecture.

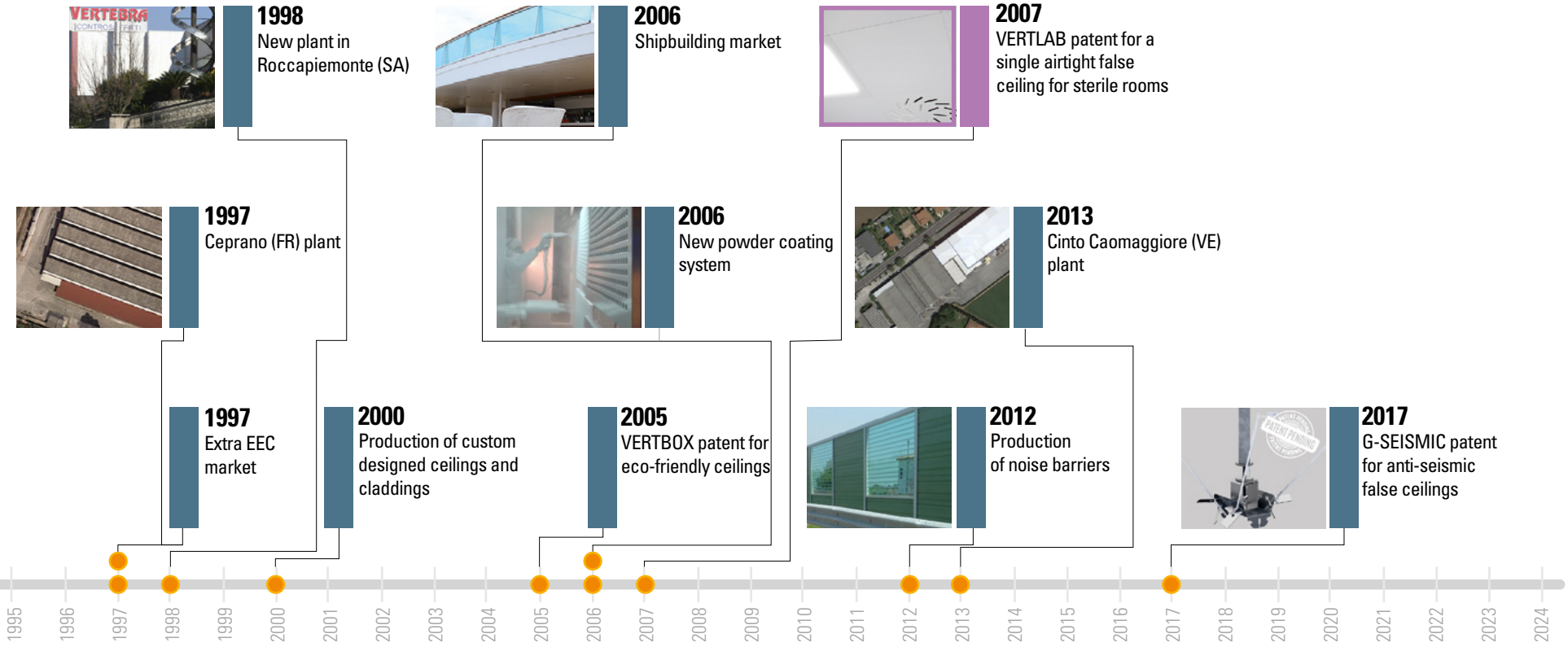


VERTILAB
AIRTIGHT INTEGRATED CEILING SYSTEM

TIMELINE

OUR HISTORY





QUALITY

The continuous search for quality, respect for the environment, customer and staff satisfaction, are witnessed by the certifications obtained, both for products and services and for production processes.

QUALITY MANAGEMENT

ENVIRONMENTAL SYSTEM MANAGEMENT

HEALTH AND SAFETY MANAGEMENT FOR EMPLOYEES

ISO 9001

ISO 14001 ECOEM

OHSAS 18001



VERTLAB

THE AIRTIGHT INTEGRATED METAL CEILING SYSTEM

Integrated airtight metal false ceiling (airTight patent) inspectable, composed of metal panels mounted on a hidden supporting structure made up of "inverted T" profiles. The load-bearing structure is made up of an orthogonal mesh made of galvanized steel profiles suspended from the ceiling at a distance of 120 cm by means of hanging with a 4 mm diameter galvanized steel rod, with double spring for micrometric adjustment of the perfect flatness of the false ceiling. 1200 mm and 600 mm intermediate profiles. At each intersection of the structure are inserted supports (patented Joker) with slots that have the function of accommodating the springs placed in the four corners of the metal panel.

The boxed panels are equipped with a CNC extruded polyurethane seal seamlessly along on the entire perimeter directly in production.

The special composition and cross-section of the sealing gasket on all four sides of each panel ensures perfect sealing of the system (airTight guaranteed). The special springs in harmonic steel (patented) facilitate an easy opening and the possibility of intervention on the ceiling keeping the panels hanging.

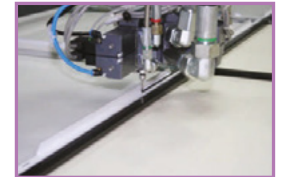
Material: pre-painted steel (stainless steel or optional antibacterial paint)
Thickness: 0,5mm (other optional thicknesses on request)
Dimensions: 600x600mm module (other optional dimensions on request)
Colour: RAL 9003 or RAL9010



**SMART
INSTALLATION**



**AIRTIGHT
CERTIFICATED**



**AIRTIGHT
PATENTED**



VERTLAB
AIRTIGHT INTEGRATED CEILING SYSTEM



Using all the elements of the Ceiling, Lamps & Plenum airTight system by Guerrasio, a Class 2 (airtight) according to UNI EN1026:20 and an IP 66 according to EN60529 – CEI 70-1 of the entire ceiling are guaranteed with EC certification.

Classified "class A1" fire reaction class for construction products, artt. 2-3; DM 10.03.2005-DM 15.03.2005 European Regulation 305/2011 on construction products with EC marking concerning the directives on building products EN 13964, EN 14195.

VERT LAB

MAIN CHARACTERISTICS

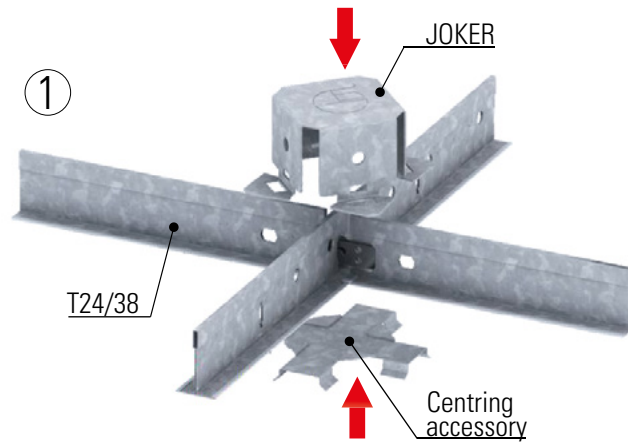
Easy installation, lightness and quick serviceability

Refined aesthetic effect;

Wide range of sizes, colors and finishing touches;

Assembly opportunity in different times of structural section and visible section;

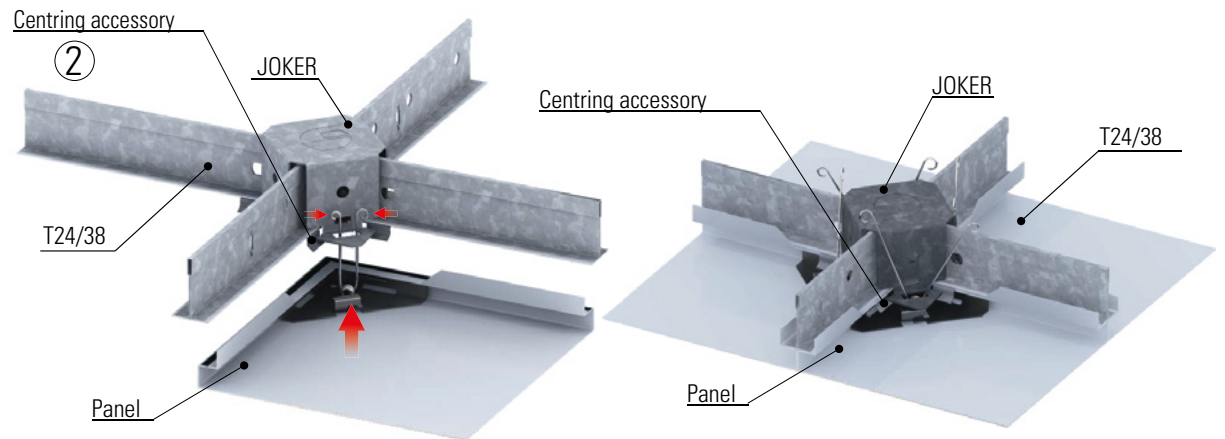
False ceilings with hermetic seal and with profiles of the preexisting supporting structure.



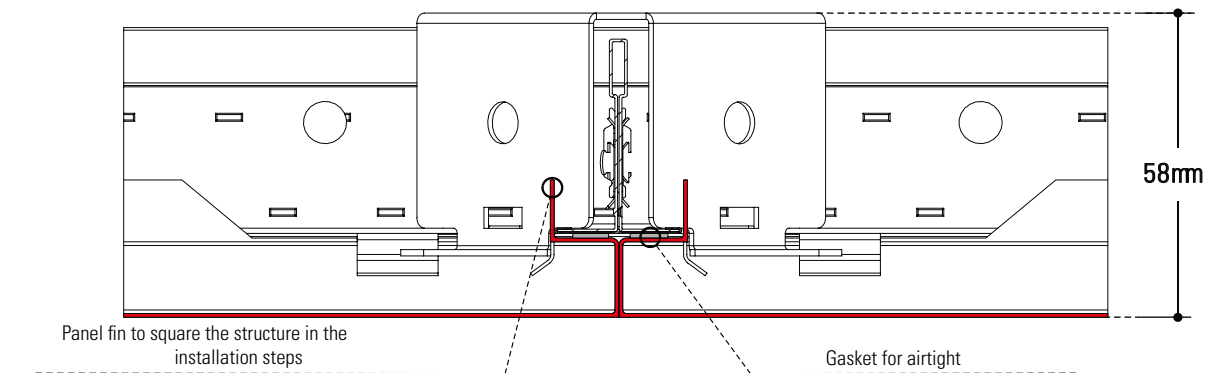
After the installation of reverse "T" structure, the joint "Joker" must be inserted on each intersection from above and the centring accessory from below (see fig.1).

If fibres or gypsum panels of preexisting false ceilings have to be restored, the four corners must be cut in advance, in order to replace them in their former position.

Finally install the new air and dust tight panel, by inserting the springs of the corners in the slots of the Joker joint (see fig. 2) and push the panel upwards. For disassembly use a suction cup for plates or panels lifting.



Section view of two panels placed side by side



As you can see from this section, the panels fit perfectly with the flat part of the T-structure and thanks to the gasket, they are perfectly airtight. The characteristics of the system ensure that, even after an inspection, the removed panel will fit again to the supporting structure without necessarily having to remove other panels.



Perimeter



PPC with gasket for the tight

EL.PDL with gasket for the tight

EL.PPF for perimeter locking of panels

Supporting structure



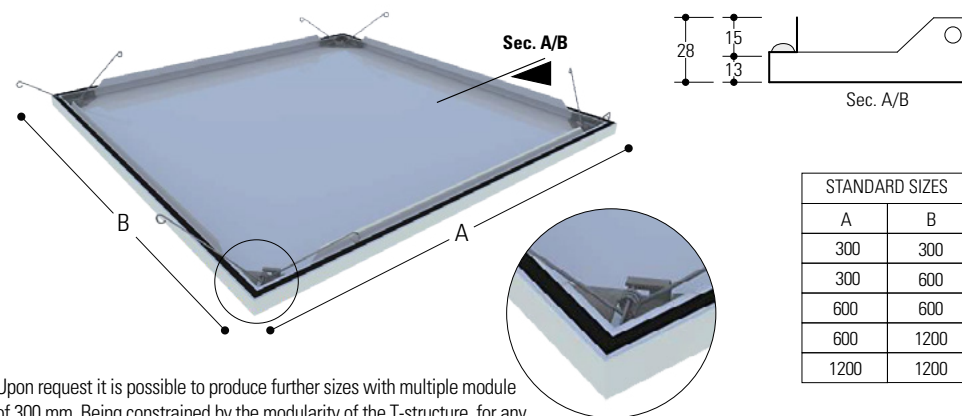
Reverse "T" structure

Joker

Joker 3/4

Centring accessory

Air and dust tight panel



Upon request it is possible to produce further sizes with multiple module of 300 mm. Being constrained by the modularity of the T-structure, for any further size we suggest you to contact our Technical Department.

STANDARD SIZES	
A	B
300	300
300	600
600	600
600	1200
1200	1200

VertLAB is a metal false ceiling especially suitable and recommended for places where air and dust tightness is required.

This kind of service is required especially when it is necessary to realize: operating suites, cleanrooms or sterile rooms, chemical-biological analysis laboratories or rooms where food, cosmetic, pharmaceutical, electronic processings are carried out.

The airtight penetration is obtained thanks to the perfect adherence of the upper part of the panels to the lower ones of the supporting structure through a bi-component polyurethane gasket applied in plant, which avoids the use of additional sealants.



The entire VertLAB false ceiling system can be made earthquake-proof with the G-SEISMIC kit patented by GUERRASIO

MATERIALS AND FINISHINGS, DESCRIPTION OF EMPLOYED MATERIALS AND POTENTIAL FINISHINGS

The materials used to realize the different parts of the system are:

- Supporting structure: galvanized steel covered at the bottom by a tape of galvanized pre-painted white steel (in compliance with regulation: UNI EN 10346 and EN 10169);
- Panels: stainless steel with polished or satin finishing (in compliance with regulations: UNI EN 10088); pre-painted or post-painted galvanized steel (in compliance with regulations: UNI EN 10346 UNI EN 10169 UNI EN 10147) with antibacterial paints; plastic steel; pre-painted aluminium (in compliance with regulations: EN 573-3, EN 1396 and 13523);
- Springs: steel spring;
- Bi-component polyurethane gasket applied in plant.

LAB LIGHT

Light led technology

AirTight system integrated

Seal and flush guaranteed with ceiling

Body built totally in light aluminum alloy

Minimum height (55 mm)

High IP 66 protection certificated

Colour rendering index Ra >90

Plexiglass led high transmittance

Direct RECESSED LED LIGHT airTight integrated suitable for installation on VertLAB false ceiling with high IP 66 protection.

AIRTIGHT
PATENTED

AIRTIGHT
CERTIFICATED

SMART
INSTALLATION

IP66

Body:

Aluminium sheet, thickness 8/10 post-painted.
The apparatus is equipped with fixing accessories.
Weight 4 Kg.

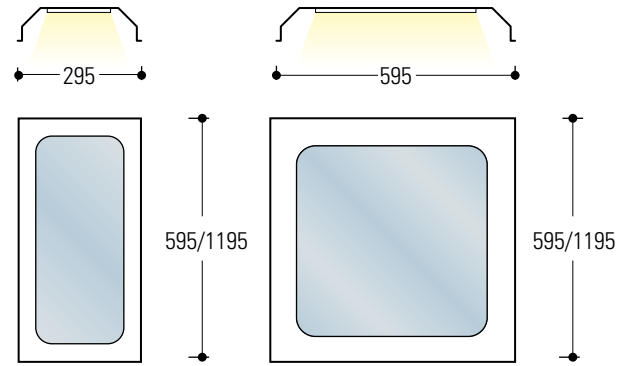
Optical group:

Colour rendering index Ra>90 Plexiglass LED high light transmittance.

Wiring:

Power supply 230/50 Hz with rigid cable (section 0.75 mm²) and PVC-HT flame retardant sheath according to CEI 20-35 and CEI CENELEC HD 21. Terminal Board 2P+T with fuse holder, and with maximum wire section allowed 2,5 mm², PBT lamp holder and copper contacts, Insulation class I. It is suitable to be installed on normally inflammable surfaces. Electronic Ballast EEI= A2 220-240, 0/50-60 Hz, power factor 0.98.

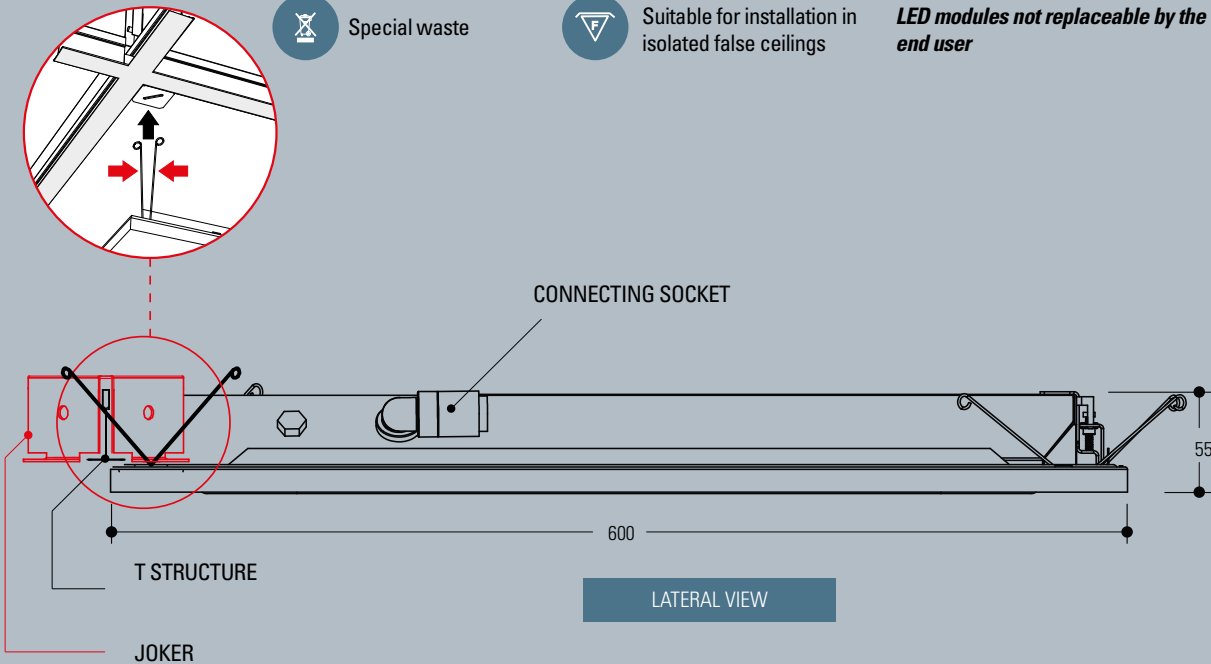




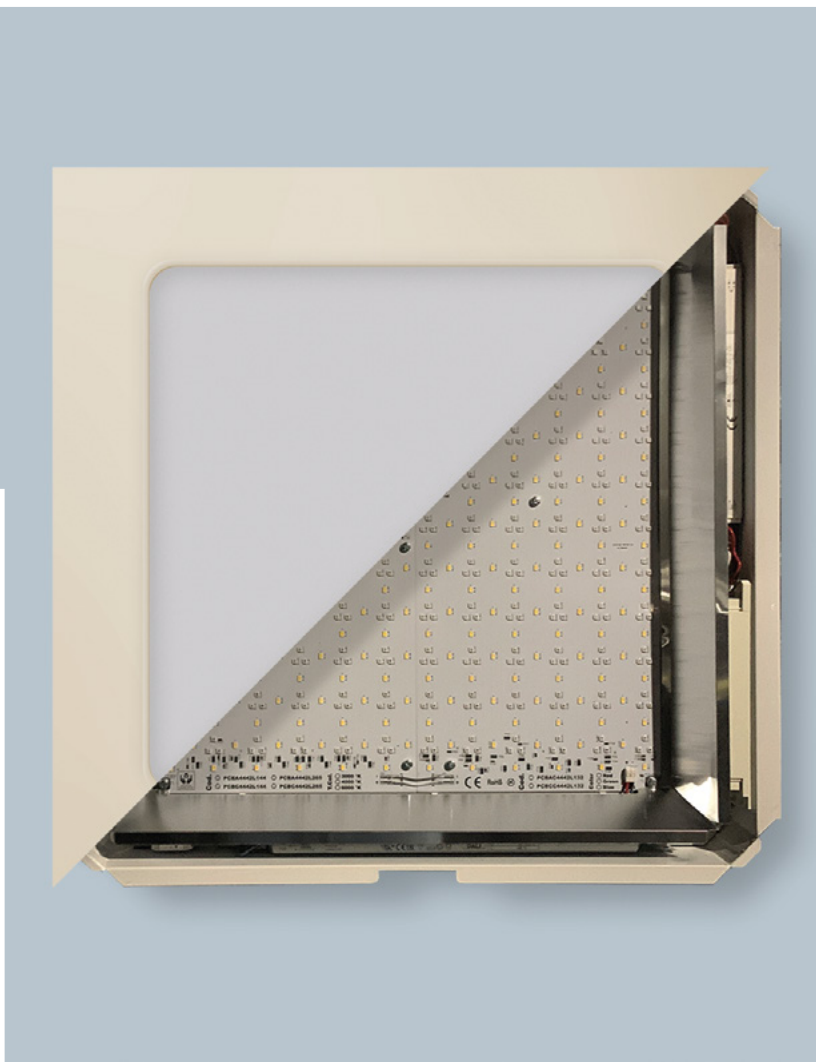
50.000 HOURS DURATION

3 YEARS LED WARRANTY

- EC marked product
 - Recycling and Raee management
 - Installation from below
 - Special waste
 - Power supply 230v – 50hz
 - LED lighting
 - Dimmability
 - Suitable for installation in isolated false ceilings
 - IP66 Protection degree
 - RGB
 - Emergency 3h
- LED modules not replaceable by the end user**



VERTILAB
AIRTIGHT INTEGRATED CEILING SYSTEM

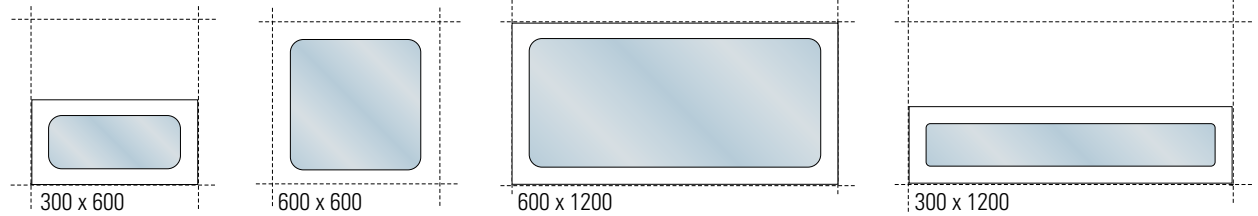


LABLIGHT**LED84**

LABLIGHT**LED100**
LABLIGHT**LED144**
LABLIGHT**LED200**
LABLIGHT**LED265**

LABLIGHT**LED288**

LABLIGHT**LED144**



Typology	Sizes	Power(W)	Luminous flux Led** (l/W)	Luminous flux Lamp** (lm)
LABLIGHT LED 84 ^(A)	300x 600	38	89	4000
LABLIGHT LED 100 ^(A)	600x 600	40	85	3400
LABLIGHT LED 144 ^{(A)(B)}	600x 600	50	106	5300
LABLIGHT LED 192 ^(A)	300x 1200	76	-	-
LABLIGHT LED 200 ^{(A)(C)}	600x 600	80	85	6813
LABLIGHT LED 265 ^{(A)(B)(C)}		92	106	9721
LABLIGHT LED 288 ^(A)	600x 1200	-	-	-
Emergency Module				
Autonomy	Capacity	Regulations		
3h <i>(tranne configurazioni RGB)</i>	4,2 Ah	CEI EN 61547	CEI EN 61000-6-3	CE 2004/108
IEC 60598-2-22			CEI EN 61000-4-8	CEI EN 55015
				EN 60529

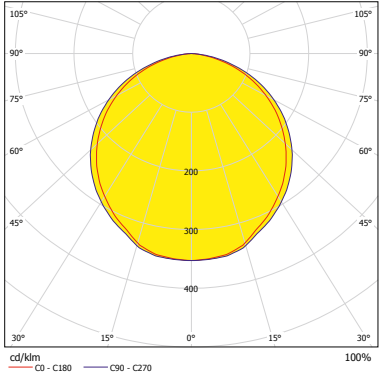
^(A) Equipment option of self-test microprocessor module with: Function test, Duration test, Routine test, Occupancy sensor, DALI 2 system supported

^(B) Night Light Supported (day/night), RGB - DMX / DALI supported with localized touch screen (144-132 RGBW and 265-132 W-RGB)

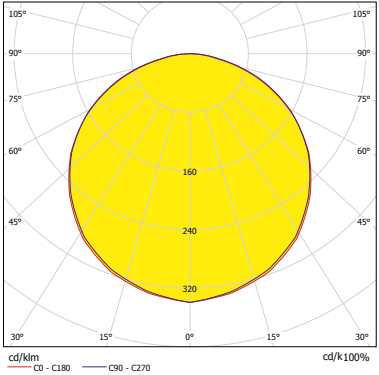
^(C) Dual Power supported

Luminous Flux tolerance ±10%

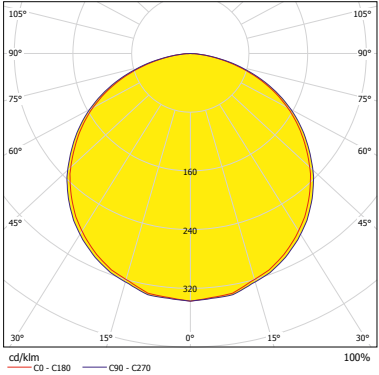
LABLIGHT LED TECHNOLOGY 84 38 W



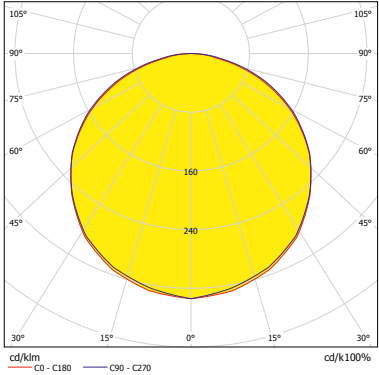
LABLIGHT LED TECHNOLOGY 100 40 W



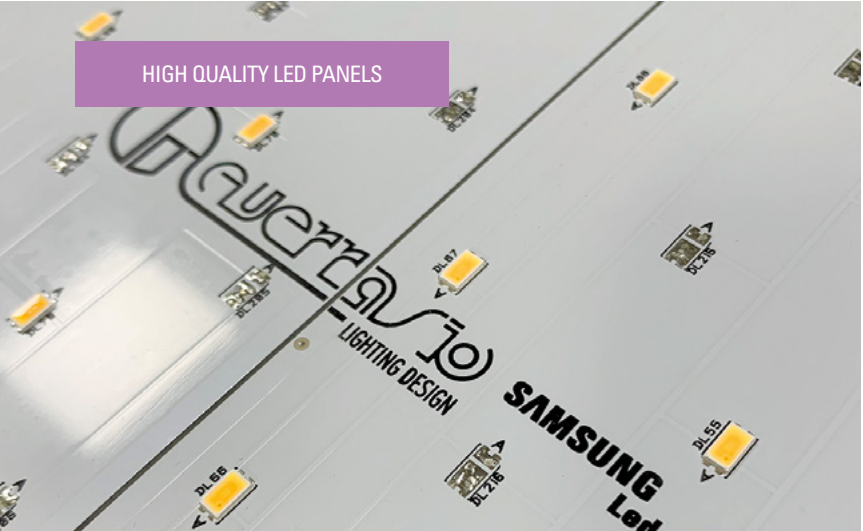
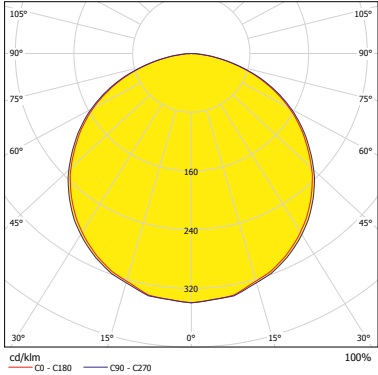
LABLIGHT LED TECHNOLOGY 144 50 W



LABLIGHT LED TECHNOLOGY 200 80 W



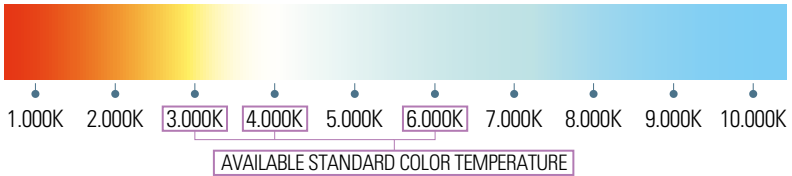
LABLIGHT LED TECHNOLOGY 265 92 W



HIGH QUALITY LED PANELS



INTERNAL TESTING LABORATORY



VERTILAB
AIRTIGHT INTEGRATED CEILING SYSTEM

LAB FLOW

DESCRIPTION

Made of sturdy 8/10 steel sheet, it guarantees the perfect airtightness for its complete integrability into the Eco-Lab false ceiling. It can be made of painted steel or stainless steel with side or top connection.

SPECIFICATIONS

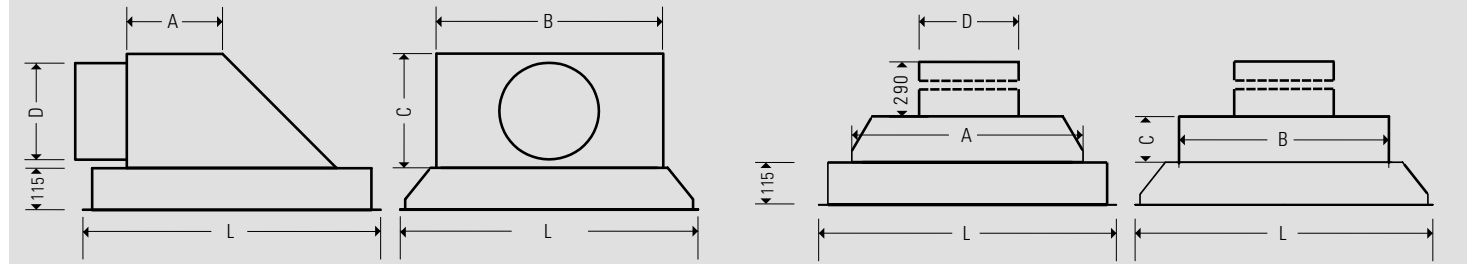
- High finish and perfect tight construction;
- Clinched circular connection with suitable high temperature resistant sealing;
- 4 brackets for ceiling fitting;
- Slots for the complete integration of the diffuser panel.

PLENUM FOR VENTILATION AND AIR CONDITIONING

As far as ventilation and air-conditioning systems are concerned, our system is equipped with plenum, diffusers and extract slots, made of panels with the same aesthetic and performance characteristics of the panels.

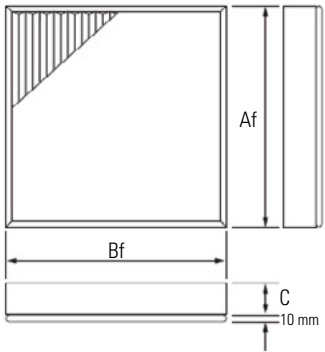


SIZES



Model	PLENUM SPECIFICATIONS							HEPA FILTER SPECIFICATIONS H14						
	Model	Nominal sizes	Sizes (mm)				L	Filter size (mm)			Q Nominal air flow		filtering surface	Initial pressure loss
			A	B	C	D**		Af	Bf	Cf	m³/h	m³/s X 10³		
EL.PSAL305	Side connection	600x600	176	254	243	198	595	305	305	68	150	42	2,5	120
EL.PSAL457			200	430	230			457	457		340	95	5,5	
EL.PSAL515			210	489	310	250		515	515		450	125	7	
EL.PSAL610	900x900	262	736	360	315	895	762	610	750		209	12		
EL.PSAL762							762	762	940		261	15		
EL.PSAS305							305	305	150		42	2,5		
EL.PSAS457	Top connection	600x600	176	254	100	198	595	457	457		340	95	5,5	
EL.PSAS515			200	430				250	515		515	450	125	
EL.PSAL610			210	489	310	250		515	515		450	125	7	
EL.PSAL610	900x900	262	736	360	315	895	762	610	750		209	12		
EL.PSAL762							762	762	940	261	15			

*1 m³/s x 10-3 = 1 l/s / **for pipe connection with different diameter, please inform the technical office

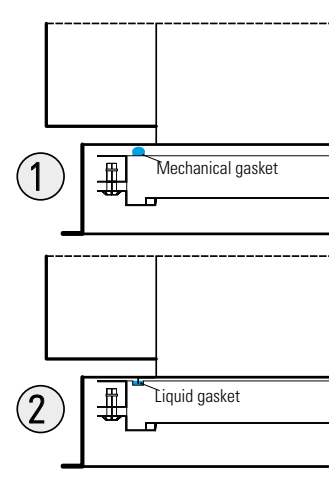


DESCRIPTION

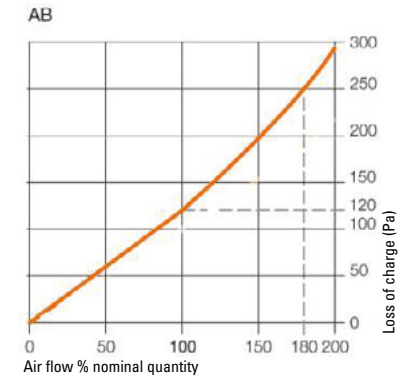
The filter is made by extruded anodized aluminium frame with depth of 69 mm, equipped with micro-expanded aluminium protection with white epoxy varnish. The filter septum is made of glass microfibres, water-repellent and fireproof; the small folds have continuous thermoplastic spacers while the sealer is made of polyurethane elastomer. The tightness of the filter to the plenum can be:

- Mechanical with bi-components gasket properly pressed to the plenum (1).
- Liquid gasket (gel) inserted in a specific cavity obtained in the frame in which a blade with rounded profile is introduced (2).

The low pressure loss of the filters permits to limit the fan consume of energy. The filter is tested and labelled in order to report the performances; it is moreover anchored to the plenum in such a way to have the perfect tightness between filter and plenum.



Filter characteristic curve

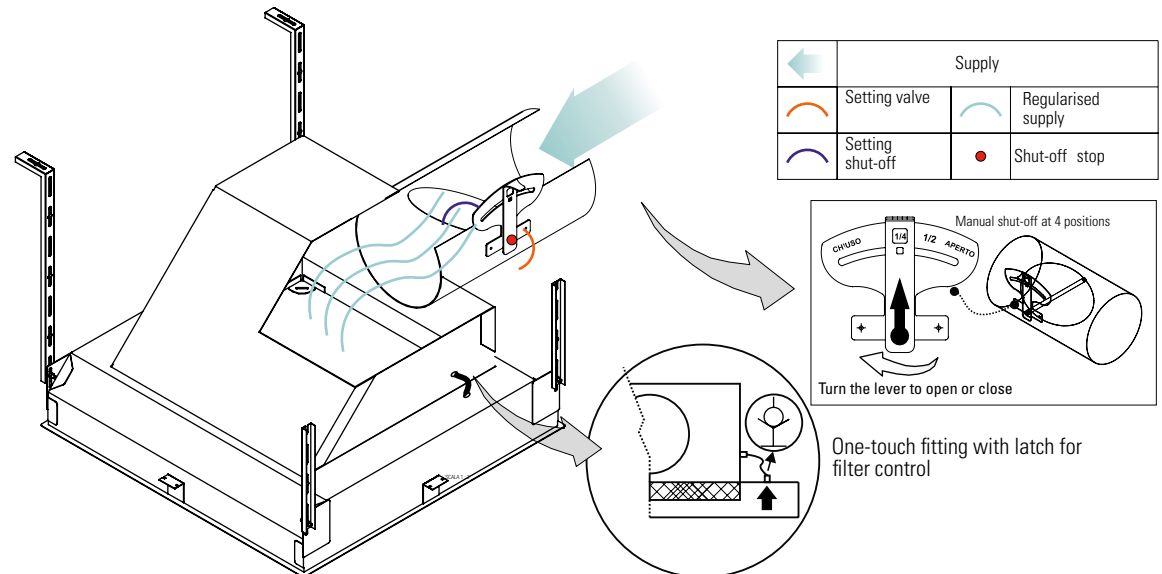


If filters are used in turbulent flows at maximum front speed the efficiency is penalized by one class.

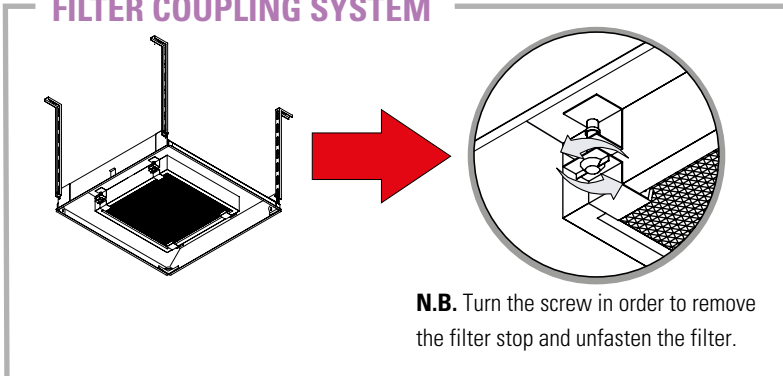
Technical data *	
MPPS efficiency	99,995%
EN 1822:2009 classification	H14
Recommended final loss of charge	400 Pa
Max. loss of charge	600 Pa
Operating temperature	70°C
Max. loss of charge	90%
Air flow nominal quantity	Table 1
Starting loss of charge	120 Pa
Filtering surface	Table 1
Filtering surface	•

OPTIONAL: MECHANICAL SHUT-OFF AND FILTER CONTROL VALVE

The Plenums in the version equipped by mechanical shut-off permit an accurate flow setting. The shut-off can be motorized upon request.



FILTER COUPLING SYSTEM



SWIRL EFFECT DIFFUSER

DESCRIPTION

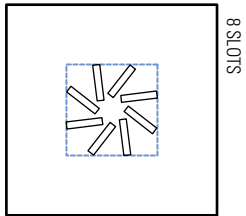
Air diffuser with or without adjustable slots (supply and extract), daisy positioned, particularly suitable for helical flows. It is used both for cooling and for heating with installation on ceilings of middle-lowheight (2.7-3.5m). Unidirectional flow diffusers upon request.

SPECIFICATIONS

- Suitable for systems with variable flow with fields between 100% and 40%.
- Suitable for installations on low and middle height spaces.

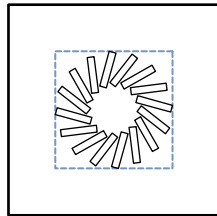
MATERIAL AND FINISHING

- Thermoplastic fins, black colour.



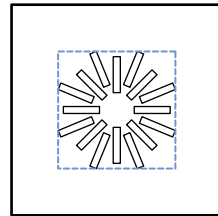
8 SLOTS

DEM60F8F305
DER60F8F305



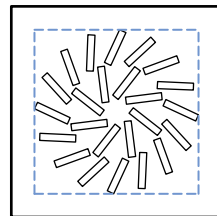
16 SLOTS

DEM60F16F305
DER60F16F305



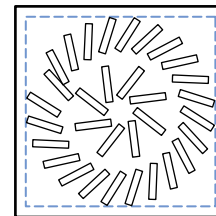
16 SLOTS

DEM60F16F305M
DER60F16F305M



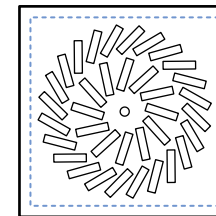
24 SLOTS

DEM60F24F457
DER60F24F457



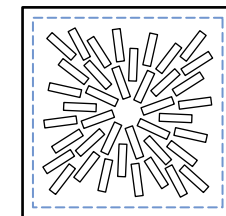
32 SLOTS

DEM60F32F515
DER60F32F515



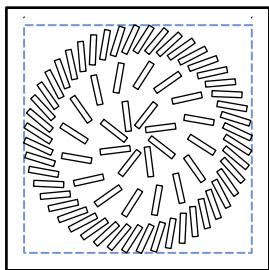
36 SLOTS

DEM60F36F515
DER60F36F515



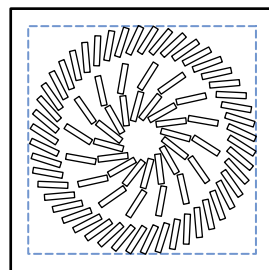
40 SLOTS

DEM60F40F515
DEM60F40F515



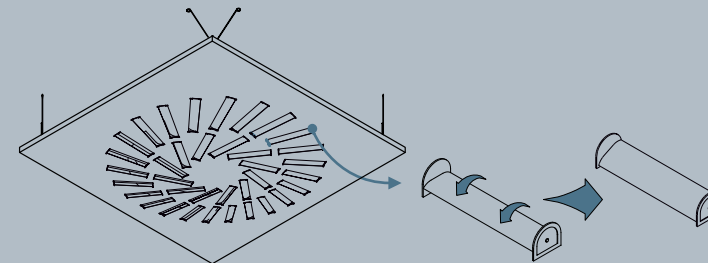
72 SLOTS

DEM90F72F762
DER90F72F762

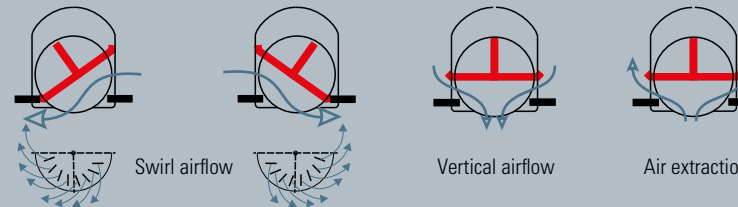


80 SLOTS

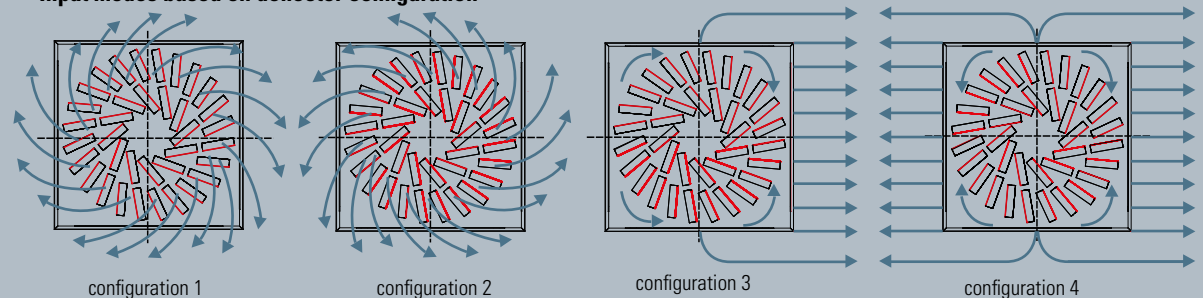
DEM90F80F762
DER90F80F762



Airflow based on the configuration of the deflectors



Input modes based on deflector configuration



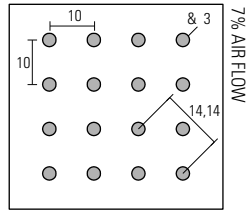
EXTRACT AIR PANELS

DESCRIPTION

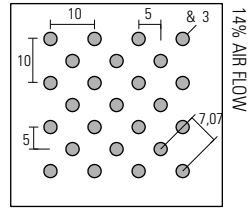
Drilled diffuser* suitable for single-direction flows. It is used both for cooling and for heating with installation on low- medium height ceilings (2.7 -3.5 mt).

SPECIFICATIONS

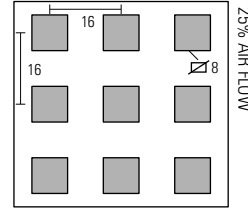
- Suitable for variable flow systems with levels between 100% and 40%.
- Suitable for installation in places with low and medium height.



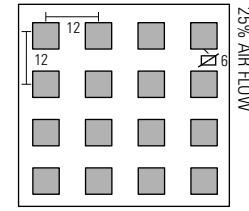
DEM60FL3P7
DER60FL3P7



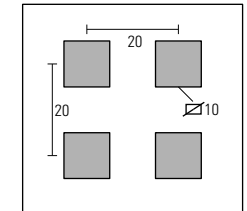
DEM60FD3P14
DER60FD3P14



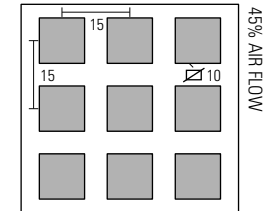
DEM60FQ8P25
DER60FQ8P25



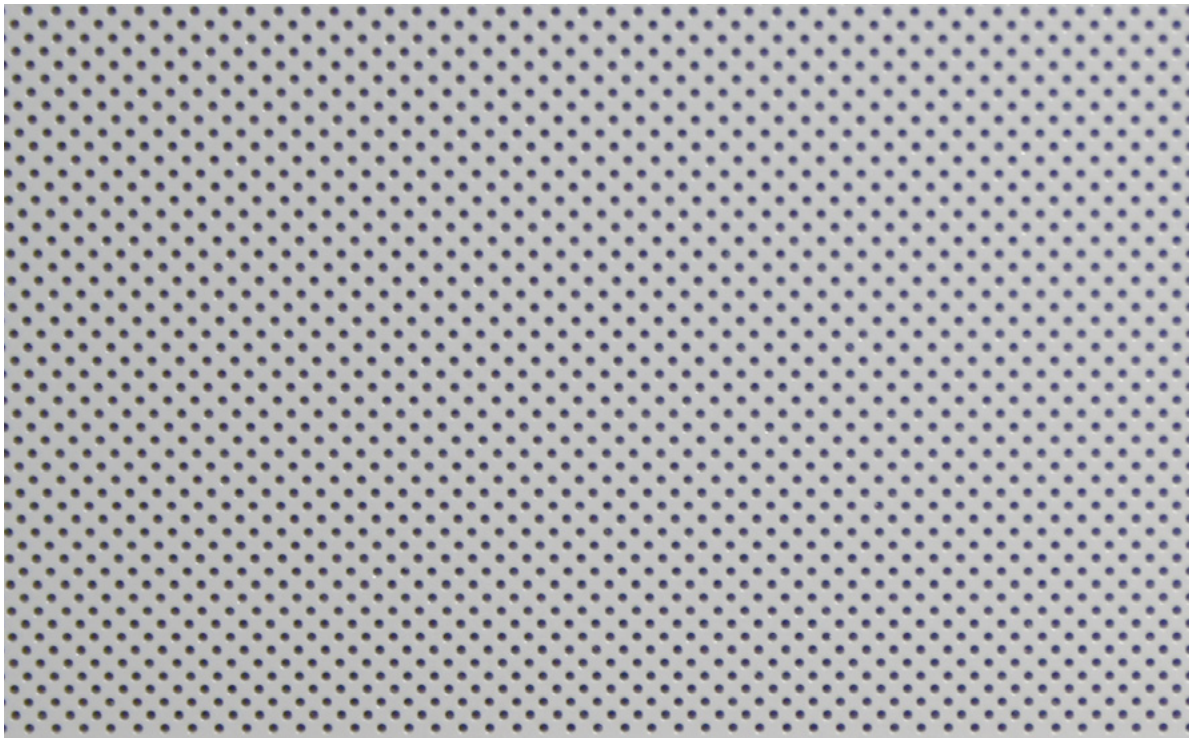
DEM60FQ6P25
DER60FQ6P25



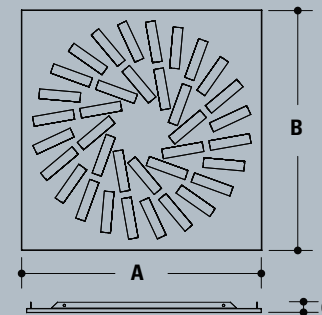
DEM60FQ10P25
DER60FQ10P25



DEM60FQ10P45
DER60FQ10P45

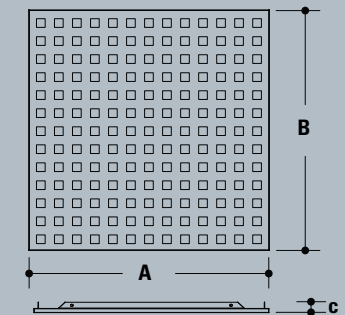


SWIRL EFFECT DIFFUSEERS SIZES



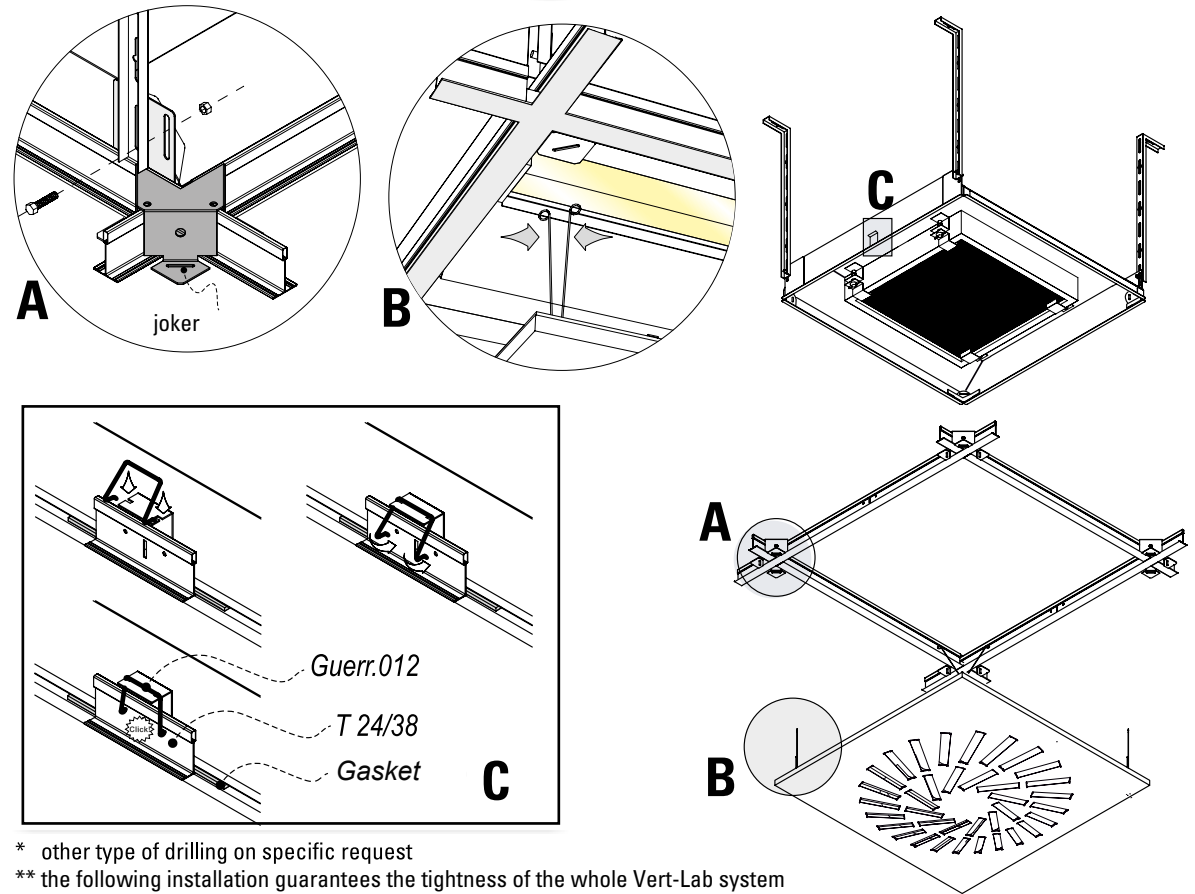
SIZES TABLE (mm)		
A	B	c
595	595	12
895	895	12

EXTRACT AIR PANELS SIZES



SIZES TABLE (mm)		
A	B	c
595	595	12

PLENUM INSTALLATION** and VertLAB System Diffuser Panels



* other type of drilling on specific request

** the following installation guarantees the tightness of the whole Vert-Lab system



VERTLAB
AIRTIGHT INTEGRATED CEILING SYSTEM

LAB

LAMINAR FLOW

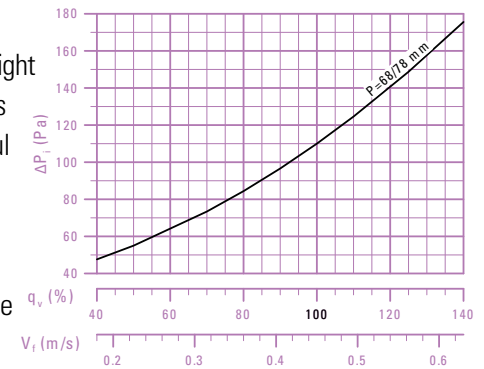
SPECIFICATIONS

- AirTight Patented system integrated
- Seal and flush guaranteed with lights and ceiling
- Completely built with ultralight aluminum alloy
- Antibacterial powder coating to guarantee sterile air
- Grill opening without screw (patented system)
- Easy maintenance filters hepa 14
- Optional: pressure control with digital panel

UNIDIRECTIONAL AIR FLOW PLENUM



Unidirectional Air Flow Ceiling for Operating Theatres assembled totally with aluminum light alloy and sealed in the factory. Airtight joints are created mechanically between the modul and the ceiling with special patent gasket. The filtration unit with vertical laminar flow is especially studied for Operating Rooms applications, with ceiling installation over the operating table for uniform velocity on the whole exhaust section. Construction Air tight, welded, pickled and Aluminum light alloy oven-baked RAL 9003/9010 antibacterial epoxy coating both inside and out. Test connector accessible from the operating theatre to measure the loss of pressure.



Lateral air entry (rectangular with threaded inserts).

Central sealed hole for the fitting of the scialitic lamp. Plane structure without projections for an effective cleaning with hospital detergents and disinfectant products. Pressure drop connection to check the pressure drop of filter elements, upon request. The module is built in a single piece but it can also be supplied in more parts for any particular transport or yard needs. Filter: Absolute filters Hepa H14 for laminar flow.

The use of our model, allows to reach the air purity class ISO 5 according to the rule ISO 14644-1. "Healthcare Division" by GUERRASIO offers a complete range of air diffusion systems to satisfy every technical and environmental request of the operating theater.

PLENUM SPECIFICATIONS

Model	q _v (m ³ /h)	Dimensions mm	Connections mm	OT Lamp passage	Loss of Head	Filters H14 EN1822 MPPS 99,995%
UAF 6000	4.400	2400x3000x350	(4x) 600x160	600x700	120 Pa (0.45 m/s)	(4x) 1220x610x68 (2x) 915x610x68

AIR FLOW:	0.45 m/s	6.600 m ³ /h	120 Pa
	0.35 m/s	5.130 m ³ /h	100 Pa
	0.30 m/s	4.400 m ³ /h	90 Pa
	0.25 m/s	3.670 m ³ /h	75 Pa

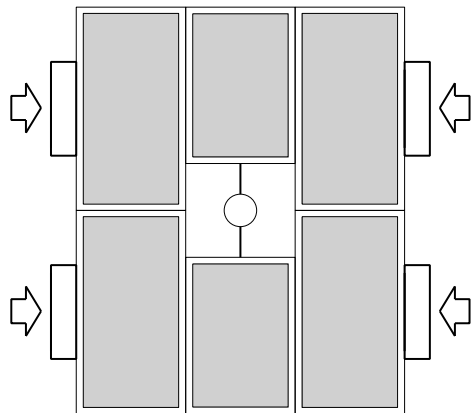
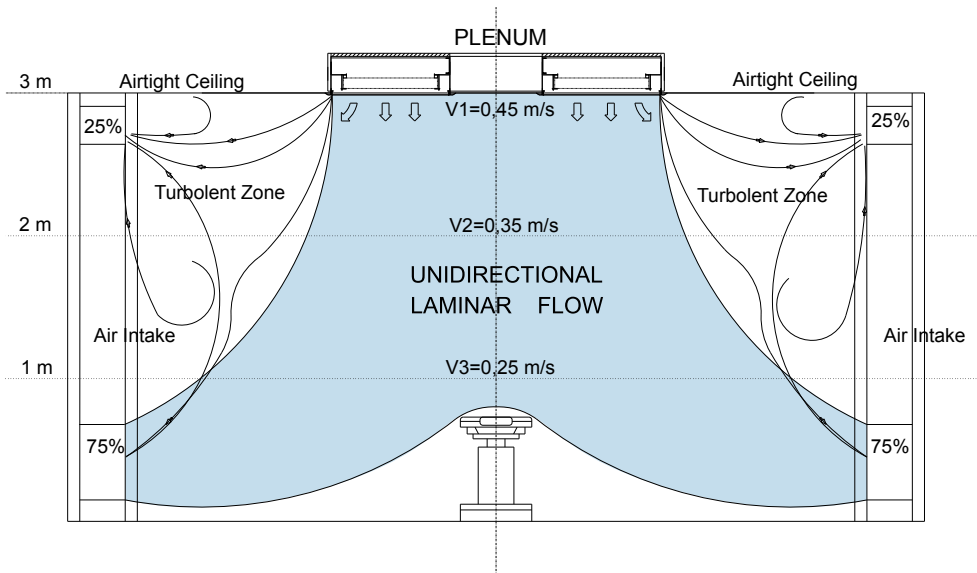
Approximately PLENUM wight to mount: 60 kg

Approximately Total wight with filter: 110 kg

Supply Air Flow Max. 6.600 cu.m/h

Recommended for Operating Rooms of 50-64 sq. mt. (air volume of 25 Volumes / hour)

VERTLAB LAMINAR FLOW



Description

Modular filtration unit with vertical laminar flow, with uniform velocity on the whole exhaust section. It has been especially studied for hospital applications, with ceiling installation over the operating table.

Construction

Air tight, welded, pickled and satin stainless steel AISI 304 box. Lateral air entry (rectangular with threaded inserts). Central sealed hole for the fitting of the scialitic lamp. Plane structure without projections for an effective cleaning with hospital detergents and disinfectant products.

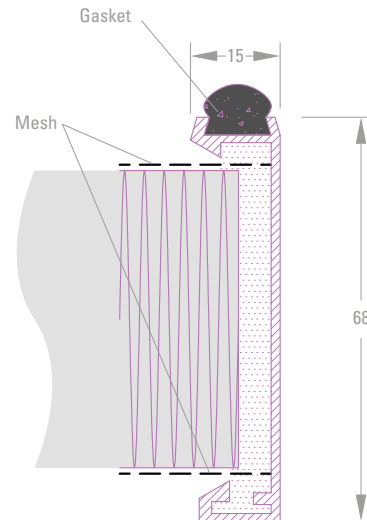
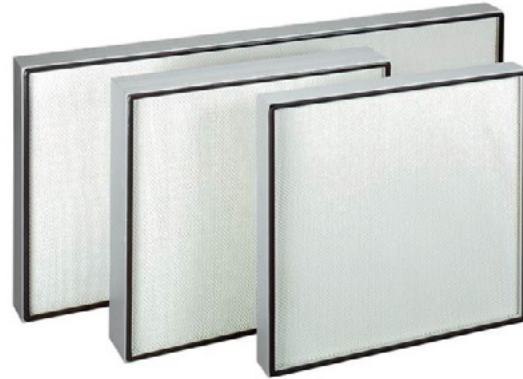
Pressure drop connection to check the pressure drop of filter elements, upon request. The module is built in a single piece but it can also be supplied in more parts for any particular transport or yard needs.

Screen Grid

Aluminum perforated with antibacterial powder coating with holes of suitable dimensions to make the flow homogeneous and unidirectional: air passage 40% (open area).

The cover grids are locked with patented spring system without visible screws and perfectly flush with the rest of the ceiling.

VERTLAB LAMINAR FLOW



Filter

Absolute filters for laminar flow with mechanical or fluid seal gasket (gel) can be housed. The use of models allows to reach the air purity class ISO 4/5 according to the rule ISO 14644-1.

The fixing of the filter elements is done through easily to be assembled mounting brackets with Allen screws.

Plane filter HEPA class H14 according to EN 1822:2009 (Eintegral $\geq 99,995\%$ - Elocal $\geq 99,975\%$ MPPS).

The accurate construction and the strict controls make it suitable for the laminar flow applications.

From the operating room the filters can be quickly clamped in place using captive pre-positioned tabs.

Filter media

Water repellent glass fibre paper folded with constantly calibrated spacing.

Continuous thermoplastic thread separators. Extruded anodised aluminium frame, equipped with protection screens composed of painted expanded steel meshes on both sides (clean and dirty). Polyurethane sealant. One piece endless gasket, on dirty side.

Disposal

Filter not regenerable (CER 15 02 03 / CER 15 02 02* depending on usage).

Operating range

Maximum temperature: 80 °C (continuous operation)

Maximum relative humidity : 100%

Recommended final pressure drop : 250 Pa

Applications

Airborne solid particles filtration in air conditioning systems for air controlled contamination environments up to ISO 5 class. Laminar flow systems.

FIRE BEHAVIOUR

All materials used for the building of the VertLAB false ceiling are classified as "A1 class" (ex class 0) according to the following directives:

- D.M. 10 March 2005: class of reaction to fire for construction products, artt 2-3;
- D.M. 15 March 2005: reaction to fire requirements for construction products, artt. 2 G.U. no. 73 of 30 March 2005 with exception of the gasket and the fibre panel (in the case of restoration of an old false ceiling).

European Regulation 305/2011 on construction products with EC marking relating to the directives on construction products (EN 13964, EN 14195) and its DOP.

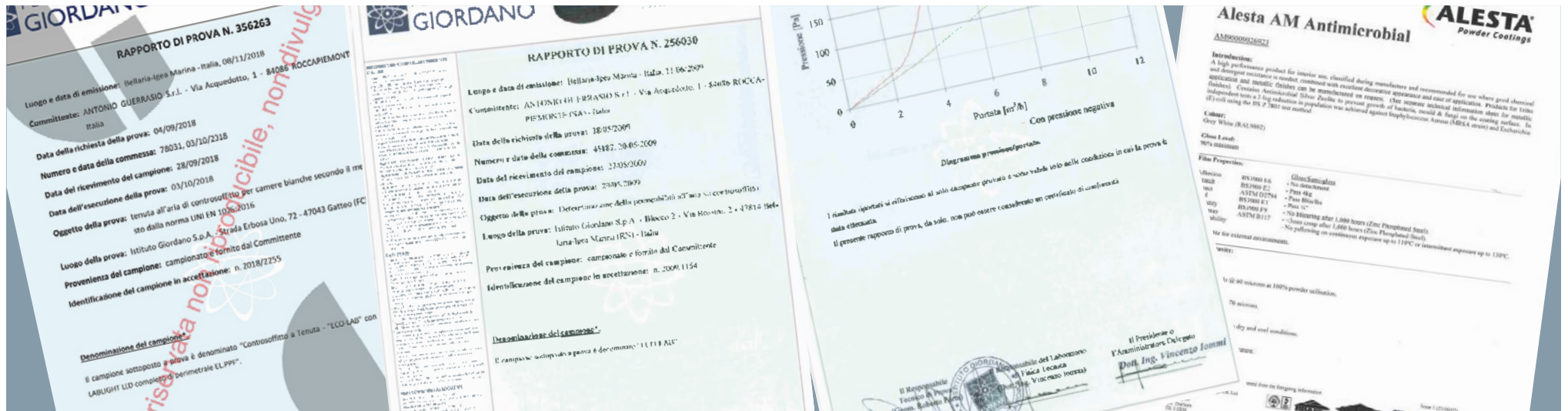
AIR AND DUST TIGHTNESS

VertLAB is an exclusive system to guarantee airtight (overpressure) and dust tightness in all those rooms that must pass the strict technical and regulatory requirements in order to meet the criteria of controlled atmosphere environment.

For this reason the VertLAB system is subject to continuous tests and certifications, constantly updated by Guerrasio according to the most recent reference standards.

The entire ceiling system has been tested for airtightness according to the method prescribed by the UNI EN 1026: 2016 standard and has obtained permeability values in CLASS 2 according to the UNI EN 14351-1 standard (test report No. 356263 dated 8.11.2018)

The LED Lights (All body) have obtained an IP 66 protection degree (International Protection) according to the EN 60529 standard.



TEST REPORT FOR **CLEANROOMS AIR TIGHTNESS**
(ISO 1026:2016)

TEST REPORT FOR **AIR TIGHTNESS**

ANTIMICROBIAL PAINT CERTIFICATION



TECHNOLOGIES & IDEAS

VERT LAB

AIRTIGHT INTEGRATED
METAL CEILING SYSTEM

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VLAB2022 • R 05 EN • 17/05/2022

EDITION MAY 2022 • Technical data contained in this data sheet are those corresponding to the products as realised at the time of writing. In order to improve the technical-functional characteristics and to obtain always the best quality/price ratio, we reserve the right to make changes to the products, even without notice.

