



ATENA S.P.A. HAS A QUALITY  
MANAGEMENT SYSTEM  
CERTIFICATED BY RINA  
IN COMPLIANCE WITH ISO 9001



## Metal Baffle Standard Series

### ELEMENTS DIMENSION

<b>20 x 60</b> <b>25 x 50</b>	<b>base 20 carrier</b> <b>base 25 carrier</b>		
<b>30 x 64</b>   100   150   200   300 <b>40 x 100</b>   140   180 <b>50 x 100</b>   150   200   300	<b>TRB</b> carrier with predefined variable distances	<b>TS</b> carrier for distances and/or bases out of measure	

Baffle maximum lenght 4000 mm.  
Other heights on request up to 400 mm.

### MATERIALS

Aluminum and steel  
Thickness according to the project and product requirements

### STRUCTURE

Baffle interlocking carriers made up of black prepainted steel  
thickness 8/10 or with RAL/NCS post-painting on request  
Locking system

### ANTISEISMIC EQUIPMENTS

Atena Antiseismic kit for  $\leq 1,2$  m plenum  
Atena Antiseismic kit for  $> 1,2$  m high plenum

### HANGERS

Double hanger with spring or threaded bar  
Suspensions to evaluate according to the load at  $m^2$ , to the  
project features and antiseismic requirements.

### BAFFLE COLORS

Atena white, Atena silver pre-painted steel  
Atena white, Atena silver pre-painted aluminum  
RAL / NCS coatings

### FINISHING

Plain or perforated surface  
Wood effects | Sublimation and digital printing  
of images and effects

### PERFORATION

To choose among Atena perforation range

### ACCESSORIES

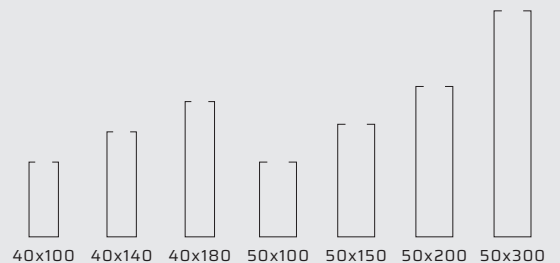
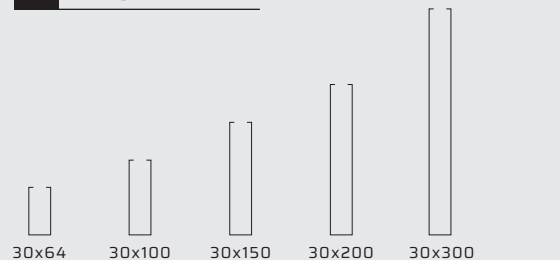
Smooth closing caps on request, Baffle and carriers joints,  
alignment clips, different heights kit with Tilt Spin system  
hook.



### SECTIONS

Baffle with 20/25/30/40/50 base, plain or perforated  
hooked on carriers with variable distance and gap.

#### TRB CARRIER BAFFLE









#### BASE 20/25 CARRIER BAFFLE



## TECHNICAL PERFORMANCES

	<b>FLEXION RESISTANCE</b>	Maximum span mm 1200 - <b>1 Class</b> EN13964
	<b>CORROSION RESISTANCE</b>	Galvanized steel products: <b>C2 Class</b> Pre-painted galvanized steel products: <b>C3 Class</b> Post-painted galvanized steel products: <b>C4 Class</b> Pre/post-painted aluminium products: <b>C5 Class</b>
	<b>(RH%) RELATIVE HUMIDITY RESISTANCE</b>	Galvanized steel products: <b>≤ 90%</b> Pre/post-painted galvanized steel products: <b>&gt; 90%</b> Stainless steel and aluminium products: <b>&gt; 90%</b>
	<b>FIRE REACTION</b> UNI EN 13501-1	Structure, suspensions and wall angles: <b>A1 Class</b> Smooth or perforated Baffle with Plus acoustic fleece: <b>A1 Class</b> Perforated Baffle with Standard acoustic fleece: <b>A2s1d0 Class</b>
	<b>ACOUSTICS</b>	Information in "Acoustic Performance"
	<b>CLEANING</b>	Wet cloth with warm water and neutral non-abrasive detergents.
	<b>COLOR STABILITY</b>	In compliance with technical tolerances standard. Test according to the ΔE - CIELab method. ISO 7724-2 (3)
	<b>DURABILITY OF PAINTED ITEMS</b>	C Class EN13964
	<b>GALVANIZED DURABILITY</b>	B Class EN13964

## SUSTAINABILITY

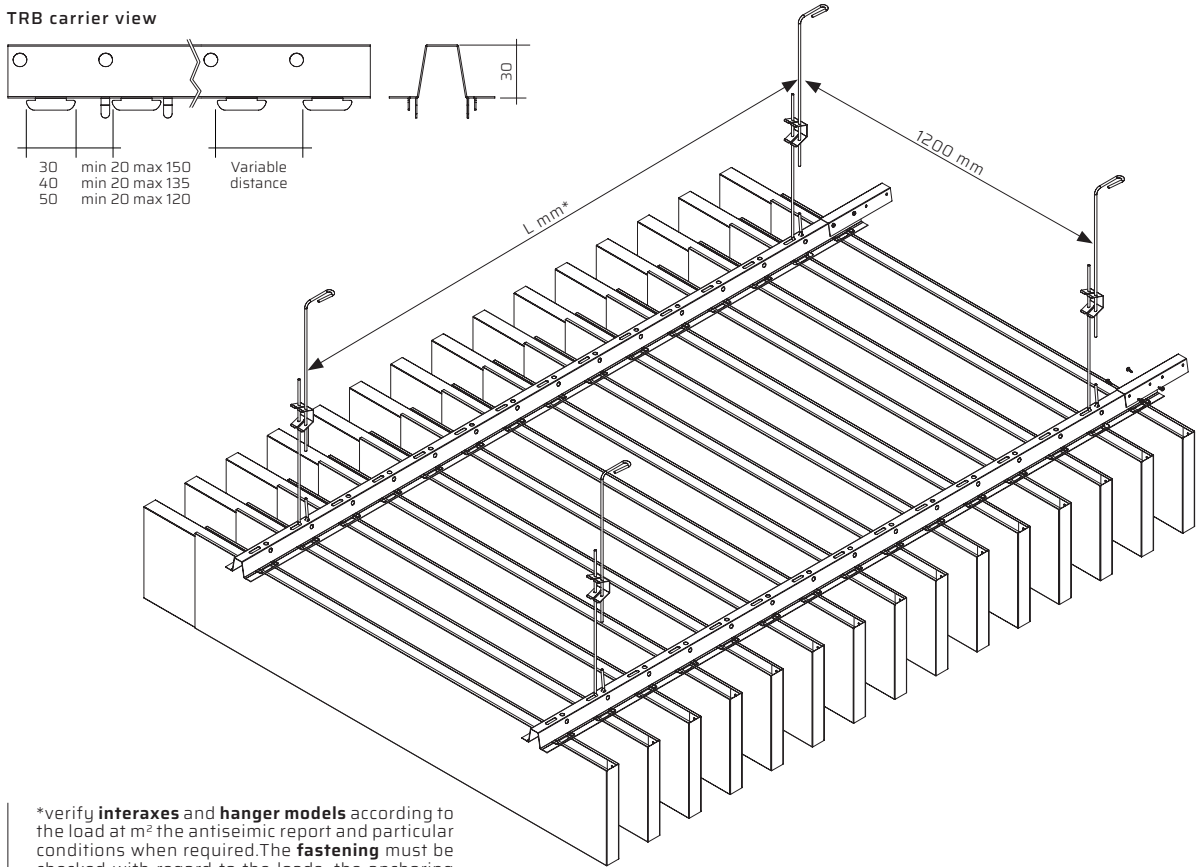
	<b>RELEASE OF DANGEROUS SUBSTANCES*</b>	None CAM 2.4.13 EN13964		<b>FORMALDEHYDE*</b>	E1 Class CAM 2.3.5.5
	<b>DISASSEMBLY*</b>	Steel   Aluminium 100% recyclable CAM 2.4.11		<b>MATERIAL DEMOLITION AND REMOVAL*</b>	Non hazardous waste in compliance with CAM 2.5.1.
	<b>RECYCLED PRODUCT CONTENT*</b>	CAM 2.4.18 compliance		<b>GREEN BUILDING</b>	Requirements: <b>LEED</b> (BREEAM and ITACA for cross-section aspects)

\* Data declaration as required by the ISO 14021 standard

## AXONOMERTY AND SECTION OF TRB CARRIER SYSTEM

30x64 | 100 | 150 | 200 | 300  
 40x100 | 140 | 180  
 50x100 | 150 | 200 | 300

TRB carrier view

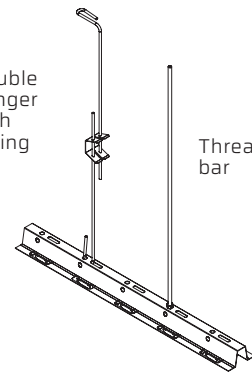


\*verify **interaxes** and **hanger models** according to the load at m<sup>2</sup> the antiseismic report and particular conditions when required. The **fastening** must be checked with regard to the loads, the anchoring base features and the installation accuracy, in order not to compromise the stability of the metal ceiling system. Lightings, accessories and systems must not weigh on the metal ceiling system, but must be independently suspended.

## HANGERS

Double hanger with spring

Threaded bar



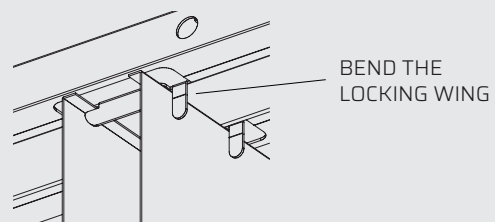
## COMPONENT INCIDENCES

ID	DESCRIPTION	INCIDENCE*
1	BAFFLE SERIE 30   40   50	-
2	HANGERS	1 pz/sqm
3	TRB CARRIER 30   40   50	1 ml/sqm

## ANTISEISMIC EQUIPPMENTS

According to the NTC 2018, when the non-structural element is assembled on site: structure designer is in charge of identifying the request, the supplier and / or installer is in charge of providing elements and connection systems of adequate capacity, the project manager is in charge of verifying the accuracy of installation". Therefore it is necessary to communicate to Atena the stresses acting on the false ceiling (seismic acceleration, wind load,..) in order to allow a proper calculation of the single elements. For more information on Atena's anti-seismic systems, contact the reference sales offices. The documentation on the site is for example only. (NTC 2018 § 7.2.3-7.2.4).

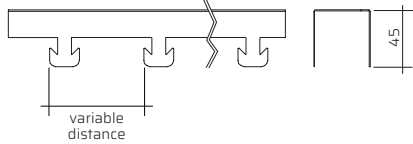
## LOCKING SYSTEM



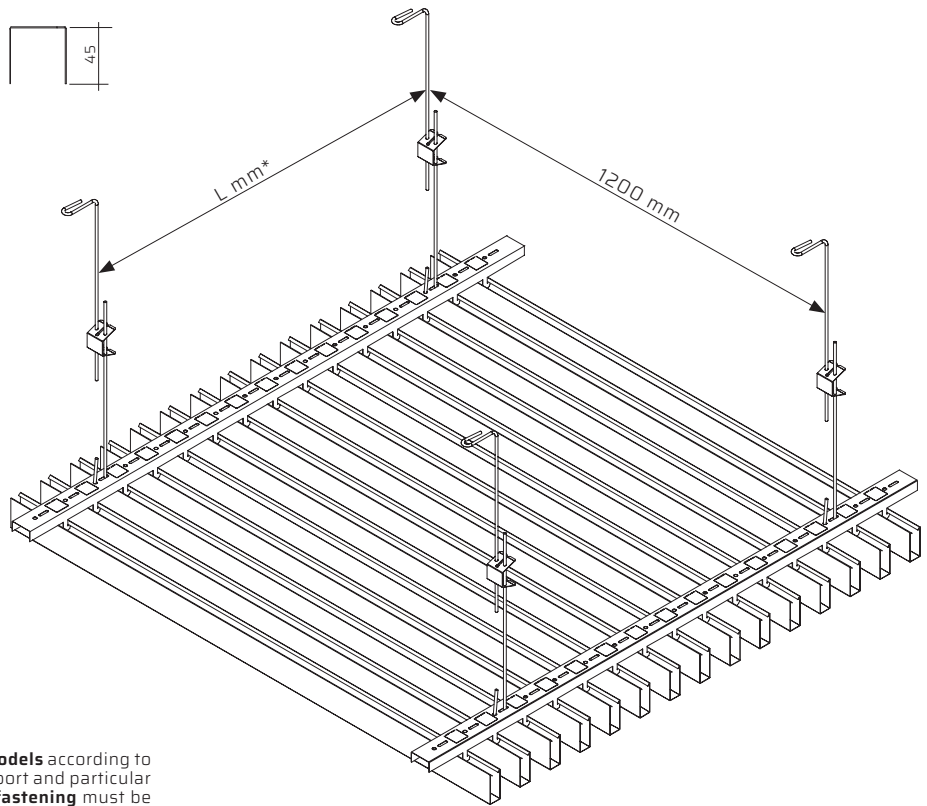
## AXONOMETRY AND SECTION BAFFLE BASE 20/25 WITH BASE 20/25 CARRIER SYSTEM

20 x 60  
 25 x 50

Base 20/25 carrier view



\*10 mm minimum gap



\*verify **interaxes** and **hanger models** according to the load at m<sup>2</sup> the antiseismic report and particular conditions when required. The **fastening** must be checked with regard to the loads, the anchoring base features and the installation accuracy, in order not to compromise the stability of the metal ceiling system. Lightings, accessories and systems must not weigh on the metal ceiling system, but must be independently suspended.

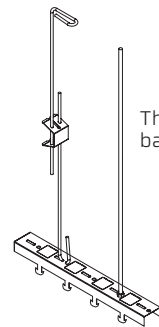
### PENDINATURE

### COMPONENT INCIDENCES

ID	DESCRIPTION	INCIDENCE*
1	BAFFLE SERIE 20   25	-
2	HANGERS	1 pz/sqm
3	BASE 20   25 CARRIER	1 ml/sqm

Double hanger with spring

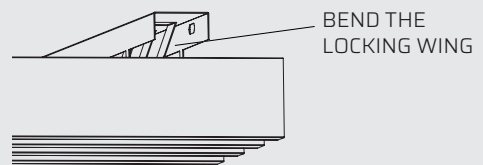
Threaded bar



### ANTISEISMIC EQUIPPMENTS

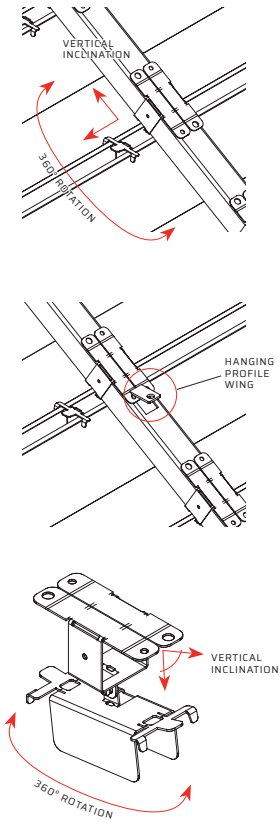
According to the NTC 2018, when the non-structural element is assembled on site: structure designer is in charge of identifying the request, the supplier and / or installer is in charge of providing elements and connection systems of adequate capacity, the project manager is in charge of verifying the accuracy of installation". Therefore it is necessary to communicate to Atena the stresses acting on the false ceiling (seismic acceleration, wind load,..) in order to allow a proper calculation of the single elements. For more information on Atena's anti-seismic systems, contact the reference sales offices. The documentation on the site is for example only. (NTC 2018 § 7.2.3-7.2.4).

### LOCKING SYSTEM

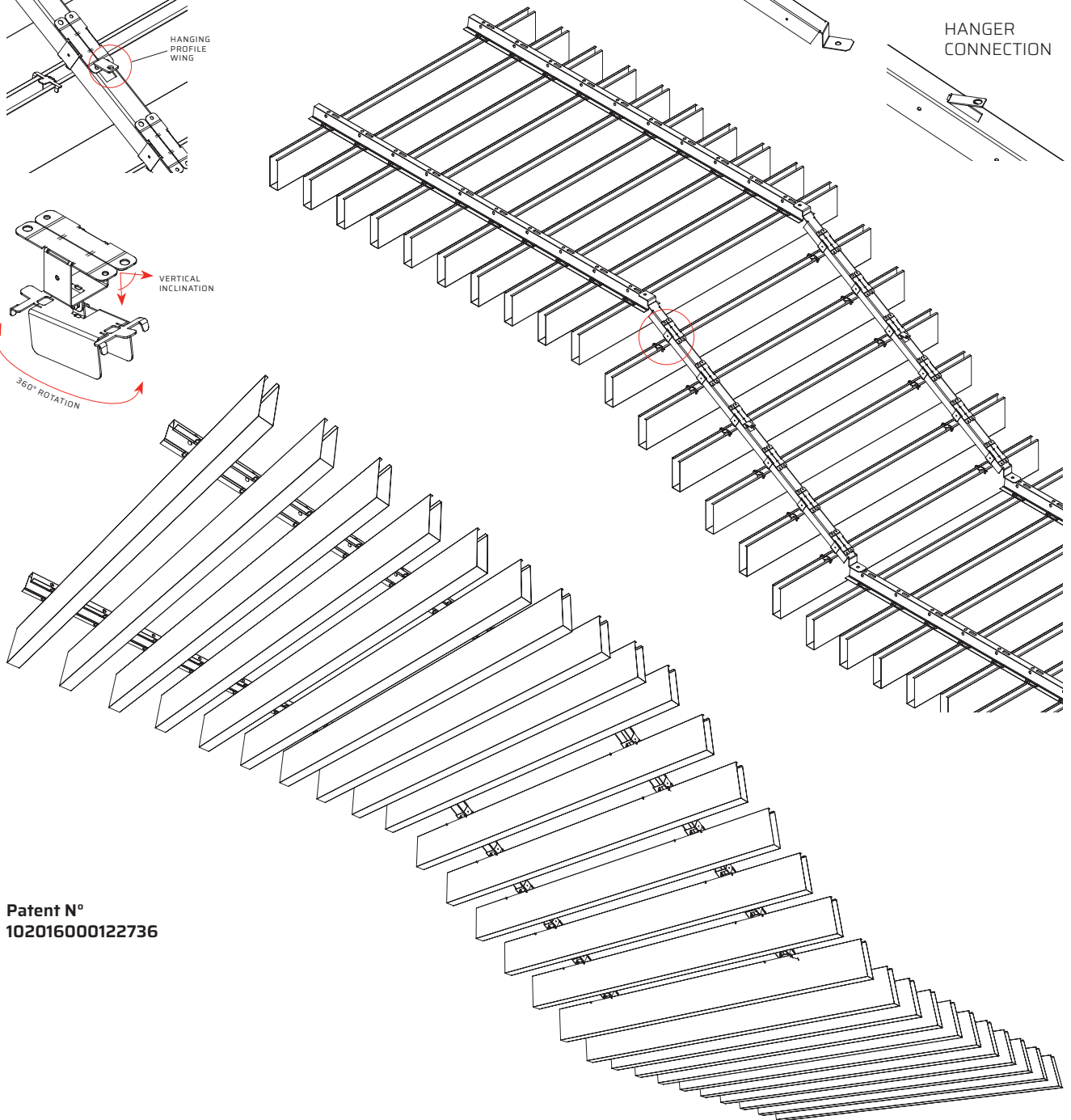
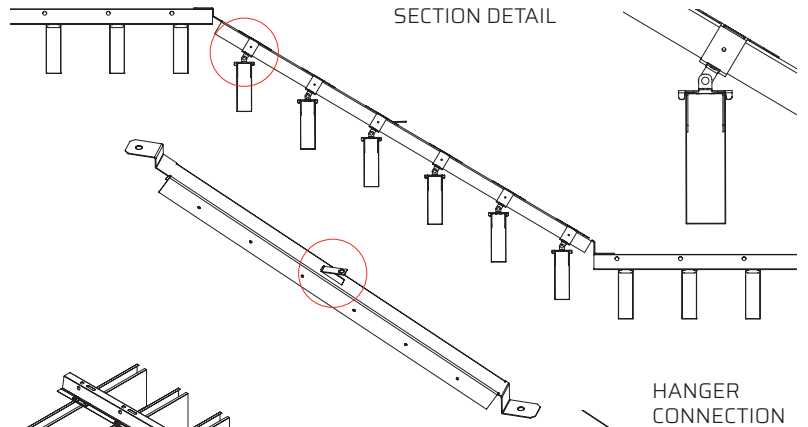


## AXONOMETRY AND SECTION DIFFERENT HEIGHTS SYSTEM

TILT-SPIN SYSTEM DETAIL



SECTION DETAIL

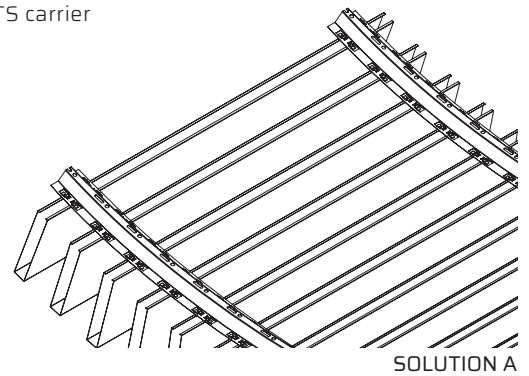


Patent N°  
102016000122736

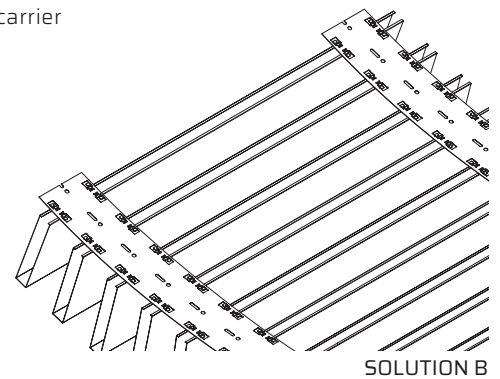
## POSSIBILITY OF CONCAVE AND CONVEX ARRANGEMENTS THANKS TO SHAPEABLE TS CARRIERS



TS carrier



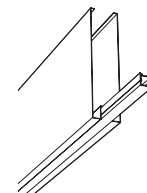
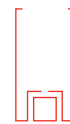
TS carrier



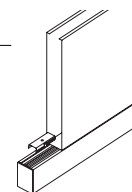
## LIGHTING BAFFLE

To create a lighting false ceiling without any interruption between luminous element and Baffle body, Atena S.p.A. has developed the "Lighting Baffle"; this special element is properly shaped to lodge LED bars, with opal or microprismatic screen, for an effect of diffuse or punctual light.

LIGHTING BAFFLE  
 BASE 50

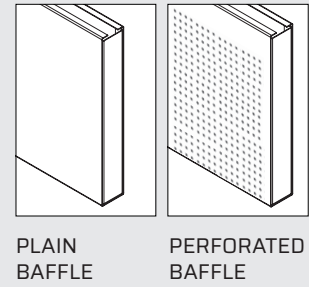


LIGHTING BAFFLE  
 BASE 30



## FORATURE

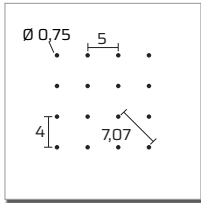
Baffles are widely used to improve the acoustic comfort. They can be used alone or in addition to the existing false ceiling. As well as for the acoustic function Baffles help to preserve the natural lighting and the air flow coming from windows and roof. From the acoustic point of view, Baffles can be used as absorbers or deflectors of the sound wave. According to project requirements, vertical elements may be totally plain to promote sound reflection or perforated and filled with acoustic pad to absorb noises. To choose the right vertical elements to apply, the acoustic material, the number of Baffles and their disposition, it is necessary to carry out a preliminary analysis of the environment and its functions. To do this, Atena S.p.A. cooperates with specialized companies to provide a specific service for acoustic treatment.



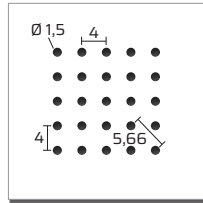
### Ø = 0,75 ≤ 1,5 mm PERFORATIONS

#### PARALLEL

AP 0,75 / 2% P

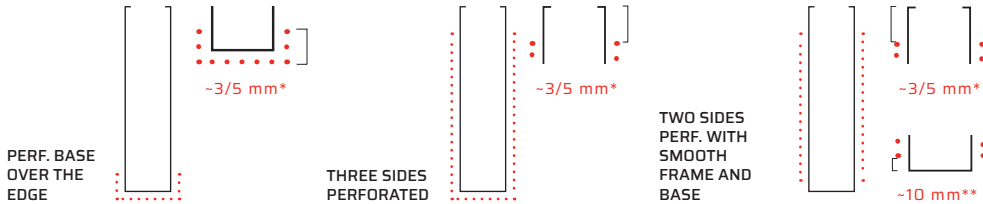
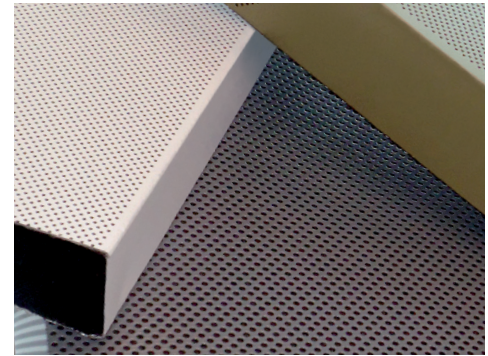
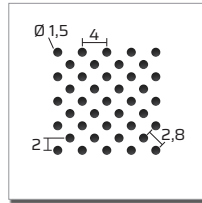


AP 1,5 / 11% P



#### DIAGONAL

AP 1,5 / 22% D

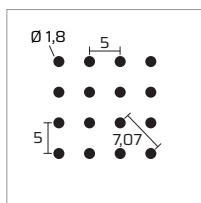


- Perforated area
- \* According to holes interaxe
- \*\* According to holes interaxe; not available for base 30 mm

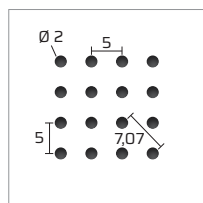
### Ø = 1,8 ≤ 2 mm PERFORATIONS

#### PARALLEL

AP 1,8 / 9,5% P

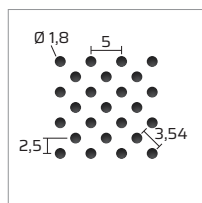


AP 2 / 12,5% P

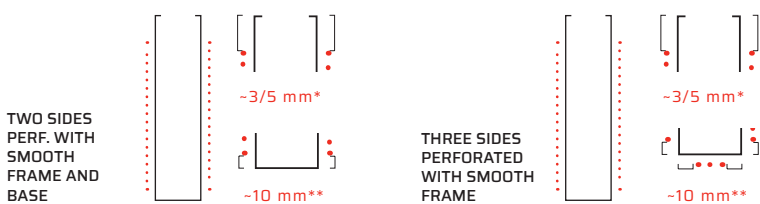
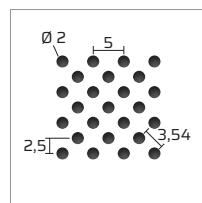


#### DIAGONAL

AP 1,8 / 19% D



AP 2 / 25% D

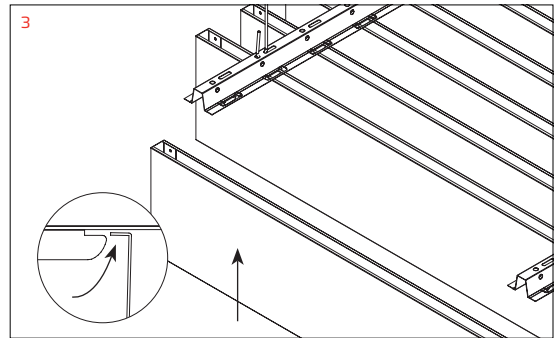
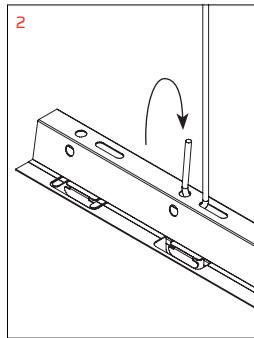
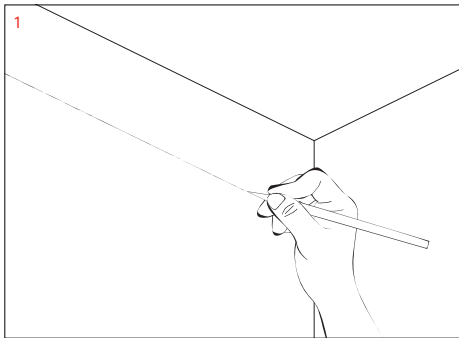


#### MATERIALS Drillable steel-aluminum thickness

PERFORATION	THICKNESS			CL	PW
	0,5	0,6	0,7		
AP 0,75/2% P	•	•	NA	1000	850
AP 1,5/11% P	•	•	•	1300	1300
AP 1,8/9,5% P	•	•	•	900	800
AP 2/12,5% P	•	•	•	1250	1200
AP 1,5/22% D	•	•	•	1300	1300
AP 1,8/19% D	•	•	•	900	800
AP 2/25% D	•	•	•	1250	1200

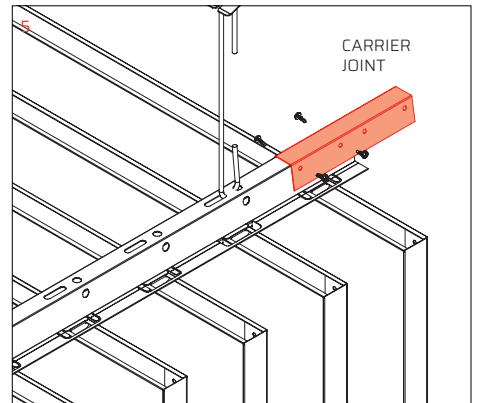
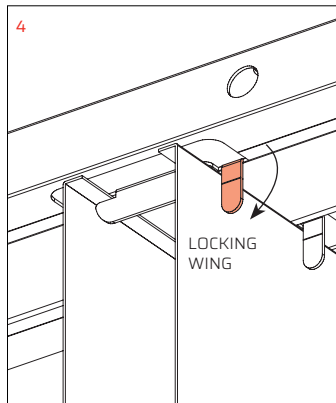
NA= Not available  
 CW= Maximum coil lenght  
 PW= Maximum perforation width  
 6/10 only for 30 H100 and 50 H100 models.

## INSTALLATION STEPS\*



\* Example with TRB carrier

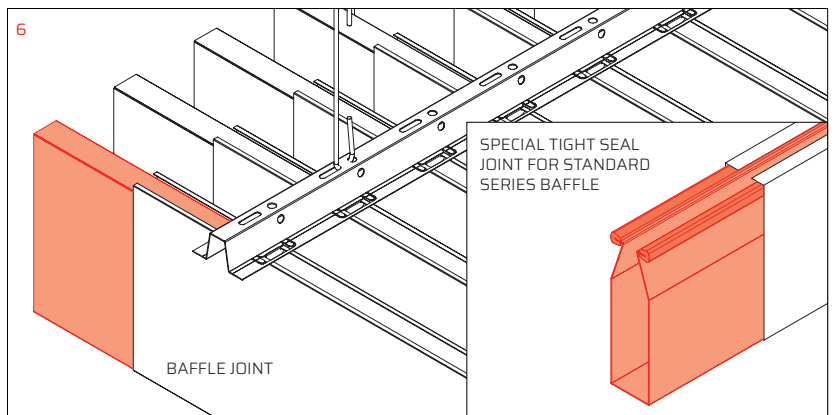
- 1 Determine the height of the ceiling with a level and mark it with a string.
- 2 Install the hangers and hook the carriers according to the interaxe required by the project.\*



- 3 Hook the Baffle on the carriers' reed through the locking wing.

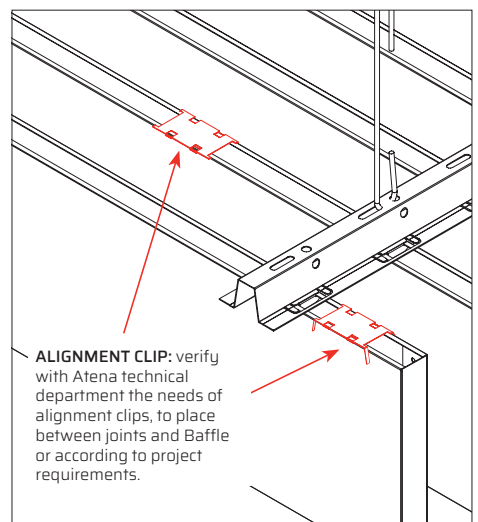
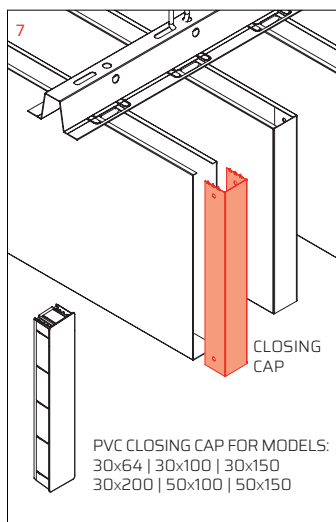
- 4 Bend down the carrier locking wings to ensure the system.

- 5 Install the joints to ensure the right alignment of the carriers.



- 6 Install the Baffle joints to guarantee the continuity of the elements.

- 7 If required, install the closing caps.



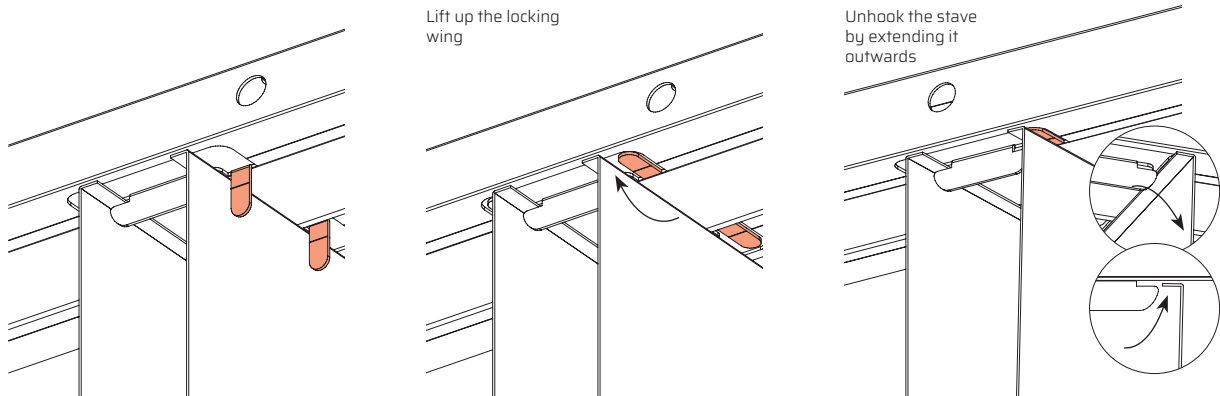
\*verify **interaxes** and **hanger models** according to the load at m<sup>2</sup> the antiseismic report and particular conditions when required. The **fastening** must be checked with regard to the loads, the anchoring base features and the installation accuracy, in order not to compromise the stability of the metal ceiling system. Lightings, accessories and systems must not weigh on the metal ceiling system, but must be independently suspended.

PVC CLOSING CAP FOR MODELS:  
 30x64 | 30x100 | 30x150  
 30x200 | 50x100 | 50x150

**ALIGNMENT CLIP:** verify with Atena technical department the needs of alignment clips, to place between joints and Baffle or according to project requirements.



TRB CARRIER REMOVAL DETAIL



## CLEANING, MAINTENANCE AND REMOVAL INSTRUCTIONS

Cleaning and maintenance require some attention and care even though are easy to make and don't take much time. It is necessary to use warm water and neutral and non-abrasive detergents. Metal ceilings maintenance usually refers to: placement, alignment or replacement of damaged or broken modules (panels, staves, baffles, open cells) which can be also removed for restoration or maintenance of the system below.

In order to ensure an excellent results, the maintenance work must be carried out by specialised workers trained with technical data sheets about setting, removal and maintenance of the metal ceilings. Using inadequate tools can damage the bearing structure, causing adherence loss or even accidental modules fall. All the maintenance intervention must follow the technical data sheet instructions or specific information when provided and every diversity has to be promptly reported. Each worker charged with maintenance operation must carefully remove the modules, perform the intervention and do not alter the metal ceiling structure, the hanging system and the connection between these elements.

When the maintenance is over, modules must be installed again, checking that these are well hooked or positioned if they are lay-in/on on a visible structure and that the flatness of the assembly is guaranteed. Any difference in level is caused by wrong installation and, for this reason, the system must be quickly controlled.

## STORAGE MODE

Materials supplied by Atena S.p.A. shall be maintained in good condition from purchase to installation. Materials must be stored in a closed, clean and dry site, not under direct light. Atena S.p.A. protects its products with resistant packaging under normal handling. Please handle packages with care to avoid shocks and inappropriate handling that might damage what is provided. The manual handling must be carried out with caution and in compliance with safety regulations at work. For carriage of packaged products on pallets, provide a mechanical transport to avoid damages or risks resulting from inadequate transport.

## SUSTANABILITY AND SAFETY

All Atena metal ceilings are made with products that do not release dangerous substances into the environment including formaldehyde. Coating and / or sublimation are free from Volatile Organic Compounds (VOC). The products will be recyclable and as a whole manufactured using recycling processes materials, the recycled material percentage is calculated for each type of product, in compliance with CAM requirements and declared according to the ISO 14021 standard. The metal ceiling systems contribute to getting credits for the certification of building design, construction and sustainable and efficient management according to the LEED protocol and to the BREEAM and ITACA cross-cutting aspects.

## FASTENERS

Atena supplies the hangers and accessories such as screws, washers and nuts to connect the elements of its own supply only. Lightings, accessories and systems must not weigh on the metal ceiling system, but must be independently suspended. The fastening must be checked with regard to the loads, the anchoring base features and the installation accuracy, in order not to compromise the stability of the metal ceiling system.

## **NORMATIVE REQUIREMENTS**

Atena S.p.A. has adopted a quality management system in compliance with the UNI EN ISO 9001 standard.

All Atena metal ceilings are produced for indoor applications, in compliance with Technical Standards for Construction NTC 2018 and relative circular requirements, the Minimum Environmental Criteria CAM (Ministerial Decree 11 October 2017), the specific technical standards applicable UNI EN 13964 and 14195. Each Atena S.p.A. product has its own DOP (CE Declaration of Performance) according to the European Law for construction products 305/2011.

The performance properties declared in D.o.P. Declarations of Performance provided by Atena S.p.A. are guarantees, if the metal ceiling is installed in the environment conditions for which it has been conceived and the recommended maintenance is executed.

Precisely, metal ceilings are non-structural construction elements therefore they must be properly sized in order to withstand with adequate safety against all actions that can stress the building, such as, but not limited to, earthquakes, winds, thermal expansion, humidity, etc., in relation to the installation site, the building use and the project technical features. Check with Atena technical department the specific environmental conditions to which the product will be subjected, in order to choose the most suitable materials for the installation site.

In the case of outdoor installation, the metal ceilings are not covered by an harmonized technical standard, therefore they are not subject to the regulation 305/2011. They are in any case subjected to the NTC 2018 and to the safety checks of civil constructions, and must be properly sized according to the installation site environmental conditions, to the structural features and to the project specifications.

Independently by information, suggestions, advices and technical opinions exchanged between the parts, during pre-agreement negotiations Atena S.p.A. will manufacture the products only according to the orders received and the technical drawings/projects attached, having no responsibility on what is not indicated in the order, in the technical drawings or in the project.

All rights are reserved and subject to industrial protection. Changes to the illustrated products, even if partial, can be carried out only if explicitly authorized by the company Atena S.p.A. All data provided and illustrated are indicative and Atena S.p.A. reserves the right to make changes at any time according the business needs and the production processes.

The information contained in this following sheet must to be considered updated at the date of writing. Changes in product performance occurred after that date may affect the accuracy of the data sheet: it is compulsory for users to make sure to have the latest version of this sheet.

## **WARRANTY**

Atena S.p.A. as a manufacturer, covers the manufacturing defects of its products; Except as provided in the specific warranty extensions, the warranty period is one year from delivery of goods. Any complaints must be communicated in accordance with the sales terms and conditions.

The Atena metal celings system components have been conceived for this purpose only, any other use is considered improper.