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

# Metal Modular
## Enigma Domino “TDW”

**PANELS DIMENSIONS**
600x600 | 600x1200 mm
300x300 | 300x1200 mm
TYPE
Clip-in panels
Right or bevelled edge

**PANELS MATERIALS AND WEIGHT**
Aluminum 5/10: 5,32 kg/sqm Steel 5/10: 15,18 kg/sqm
Aluminum 6/10: 6,38 kg/sqm Steel 6/10: 18,21 kg/sqm
Aluminum 7/10: 7,44 kg/sqm

**STRUCTURE WEIGHT**
TDW: 1,26 kg/sqm
Hangers not included

**HIDDEN STRUCTURE**
“TDW” Double triangular structure with Winger

**ANTI-SEISMIC EQUIPMENTS**
Atena Antiseismic Kit for ≤ 1,2 m plenum
Atena Antiseismic Kit for > 1,2 m high plenum

**HANGERS**
Spring hook and hanger with eye
Suspensions to evaluate according to the load at m², to the project features and antiseismic requirements.

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

**FINISHING**
Plain or perforated surface
Sublimation of images and effects | Digital printing

**PERFORATION**
To choose among Atena perforation range

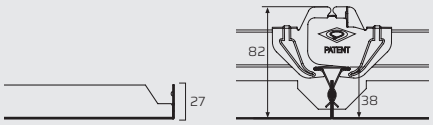
**WALL ANGLES**
To choose according project requirement, see page 3

**ACCESSORIES**
Air-flow panels on request

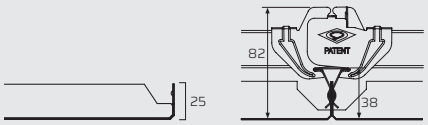
### SECTIONS

Metal ceiling made up of clip-in panels with hidden structure.

**Right edge**




**Bevelled edge**



## TECHNICAL PERFORMANCES

| | |
|---|---|
| **FLEXION RESISTANCE** | Maximum span mm 1200 - **1 Class**<br>EN13964 |
| **CORROSION RESISTANCE** | Galvanized steel products: **C2 Class**<br>Pre-painted galvanized steel products: **C3 Class**<br>Post-painted galvanized steel products: **C4 Class**<br>Pre/post-painted aluminum products: **C5 Class** |
| **(RH%) RELATIVE HUMIDITY RESISTANCE** | Galvanized steel products: ≤ **90%**<br>Pre/post-painted galvanized steel products: > **90%**<br>Stainless steel and aluminium products: > **90%** |
| **FIRE REACTION**<br>UNI EN 13501-1 | Structure, suspensions and wall angles: **A1 Class**<br>Smooth or perforated panels with Plus acoustic fleece: **A1 Class**<br>Perforated panels with Standard acoustic fleece: **A2s1d0 Class** |
| **ACOUSTICS** | Information in "Acoustic Performance" |
| **METAL CEILING MAXIMUM LOAD** | Double triangular structure with Winger 600x600 model: 8 kg/m²<br>Double triangular structure with Winger 300x1200 model: 10 kg/m² |
| **LIGHT REFLECTION** | Smooth glossy white: up to 85%<br>ISO 7724-2 (3) |
| **CLEANING** | Wet cloth with warm water and neutral non-abrasive detergents. |
| **COLOR STABILITY** | In compliance with technical tolerances standard.<br>Test according the ΔE - CIELab method.<br>ISO 7724-2 (3) |
| **PAINTED ITEMS DURABILITY** | C Class<br>EN13964 |
| **GALVANIZED ITEM DURABILITY** | B Class<br>EN13964 |

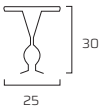
## SUSTAINABILITY

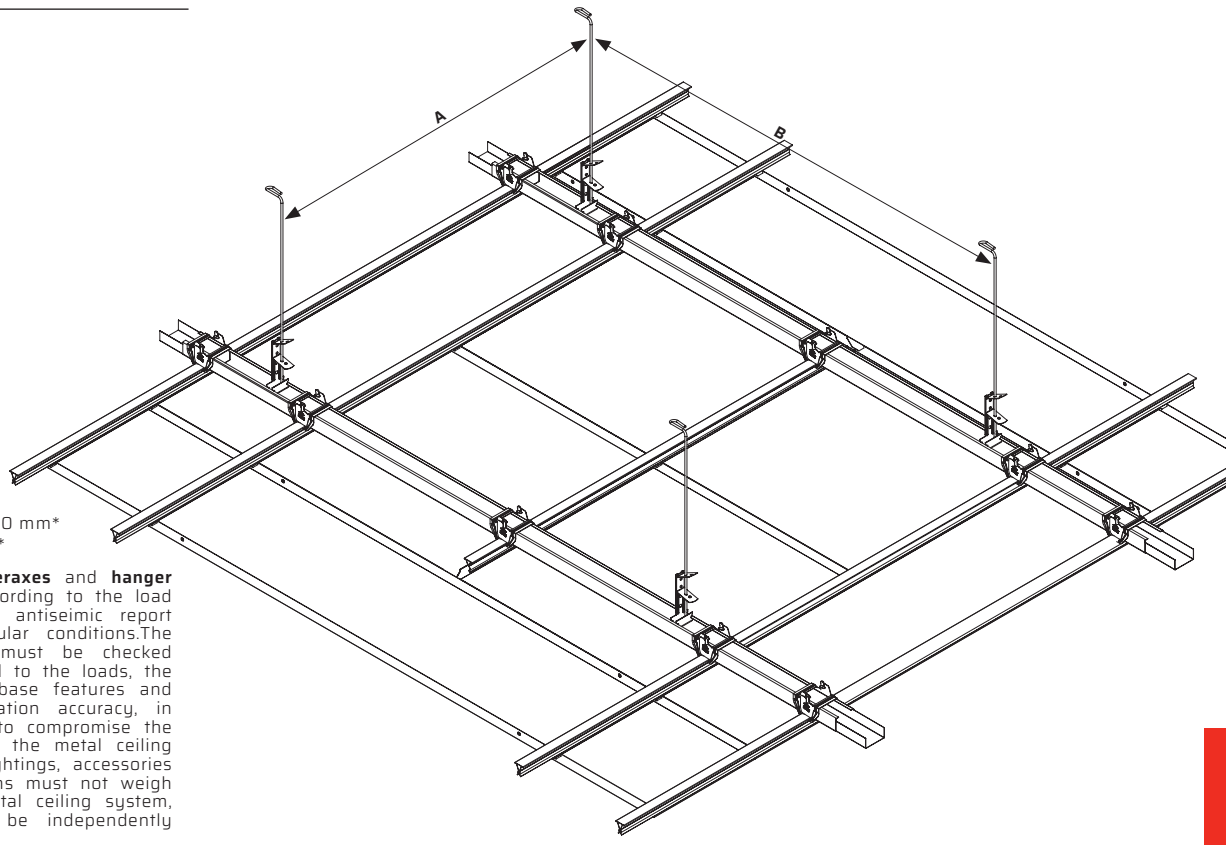
Data declared according to ISO 14021 standard and validated during the EPD verification. Type III environmental labelling.

| | | | |
|---|---|---|---|
| **RECYCLED PRODUCT CONTENT** | Compliance<br>CAM 2.5.8 | **GREEN BUILDING** | Requirements compliance:<br>**LEED® \| BREEAM® \| WELL™**<br>CAM 1.3.4 |
| **MATERIAL DEMOLITION AND REMOVAL** | Non hazardous waste in compliance with CAM 2.6.2. | **GREEN ENERGY** | Renewables prevalent use<br>CAM 1.2 |
| **DISASSEMBLY** | Steel \| Aluminium<br>100% recyclable<br>CAM 2.6.2 \| 2.4.14 | **WASTE MANAGEMENT** | Compliance<br>CAM 2.6.2. |
| **ACOUSTIC PERFORMANCE** | CAM 2.4.11 | **BIM DESIGN AND MAINTEINANCE PLAN OF THE WORK** | CAM 2.7.3 \| 2.4.13 |
| **SVHC PRESENCE** | Compliance<br>CAM 2.5.7 | **FORMALDEHYDE** | Absent<br>E1 Class<br>CAM 2.5.1. \| 3.2.8 |
| **RELEASE OF DANGEROUS SUBSTANCES** | None<br>CAM 2.5.1. \| 3.2.8<br>EN13964 | Requirement 2.5.1 - Compliance on all products.<br>Rewarding requirement 3.2.8 - Compliance for post painted products with "Gold Leaf" high performance coating. | |

All dimensions are nominal and expressed in millimeters.
All technical specification data and information can be changed without advise.
For further information please contact sales department:
tel. + 39 0421 75526 export@atena-it.com

## DOUBLE TRIANGULAR STRUCTURE WITH WINGER SYSTEM




**A**: MAX 1200 mm*
**B**: 900 mm*

*verify **interaxes** and **hanger models** according to the load at m² the antiseimic report and particular conditions.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.

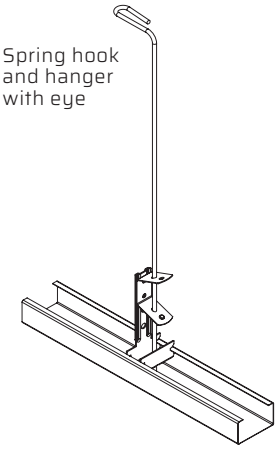
## COMPONENT INCIDENCES

| ID | DESCRIPTION | INCIDENCE* |
|---|---|---|
| 1 | ENIGMA DOMINO PANELS | - pcs/sqm |
| 2 | WALL ANGLE | 1 lm/sqm |
| 3 | HANGERS | 1 pcs/sqm |
| 4 | TRIANGULAR PROFILE | 1,70 lm/sqm |
| 5 | TRIANGULAR PROFILE JOINT | 0,45 pcs/sqm |
| 6 | WINGER HOOK | 2 pcs/sqm |
| 7 | 49x27 "C" CARRIER | 0,85 lm/sqm |
| 8 | CARRIER JOINT | 0,22 pcs/sqm |
| 9 | CLIPS | 3 pcs/sqm |

* Component incidences 600x600mm model

## HANGERS

Spring hook and hanger with eye

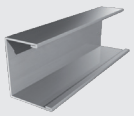
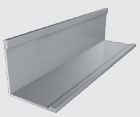
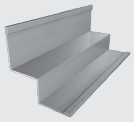
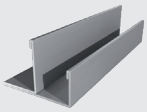


## ANTISEISMIC EQUIPMENTS

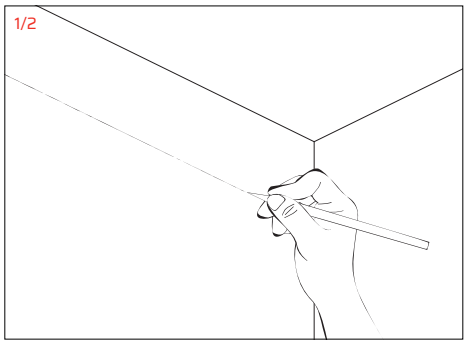
According to the NTC 2018, when the non-structural element is assembled on site: structure designer is in charge of identifying the request, the supplier and / or installer is in charge of providing elements and connection systems of adequate capacity, the project manager is in charge of verifying the 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).

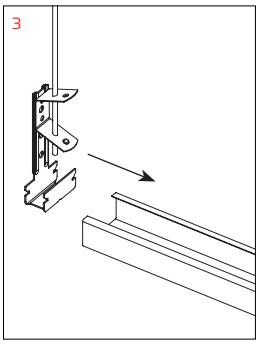
## WALL ANGLES

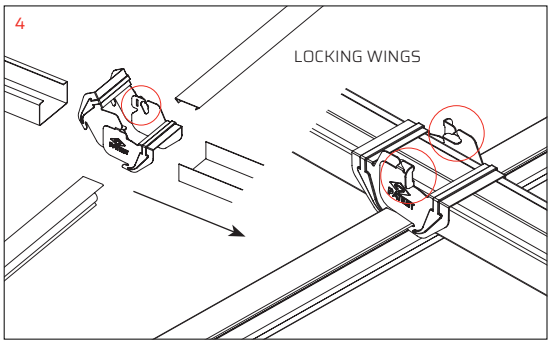
Omega spring H30 mm optional for "C" 18x33x25 mm

| "C" PROFILES | "L" PROFILES | DOUBLE "L" PROF. | "F" PROFILES |
|---|---|---|---|
|  |  |  |  |
| 18x42x25 mm<br>18x33x25 mm<br>L=4000 mm | 30x30 \| 25x25<br>20x25 \| 20x20<br>L=3050 mm | 25x8x15x15<br>L=3050 mm | F 13 L=3000 mm<br>F 15 L=3000 mm |

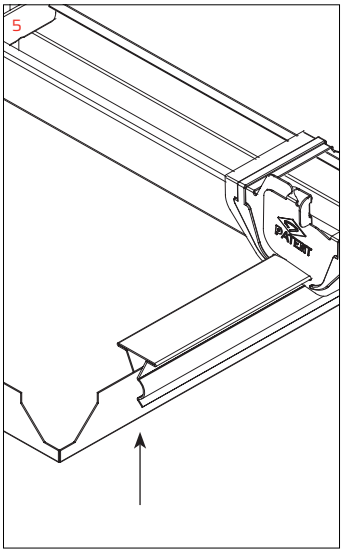
## INSTALLATION STEPS

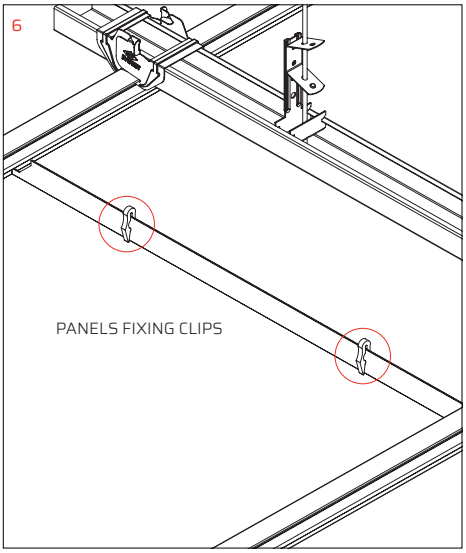



| | |
|---|---|
| 1/2 | Draw the lines of the primeter frame. Determine the height of the ceiling with a level and mark it with a string. Install the wall angles. |
| 3 | Insert the spring hook on the carrier. |
| 4 | Place the winger hook over the carrier and close it with the triangular profile. Close winger locking wings, to ensure the triangle profile. |
| 5 | Install the panels pushing them on triangular profiles. |
| 6 | Proceed with the installation pf the pvc fixing clips on panels. |

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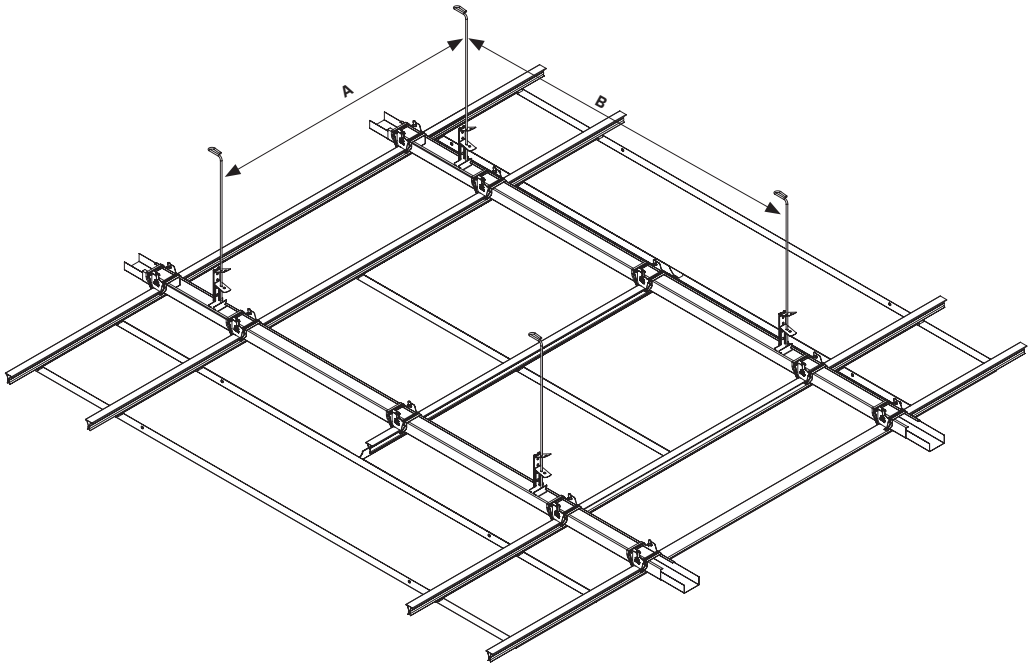


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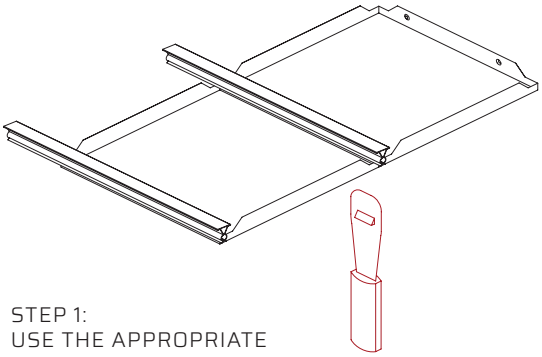
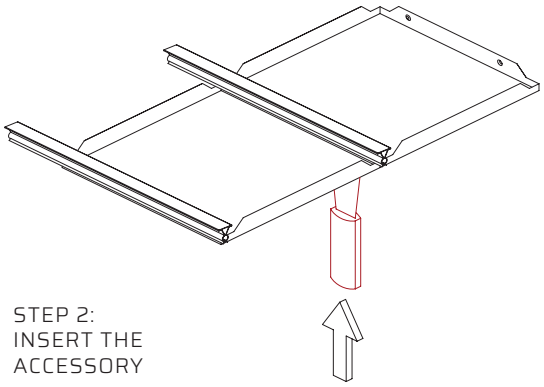
## PANELS REMOVAL

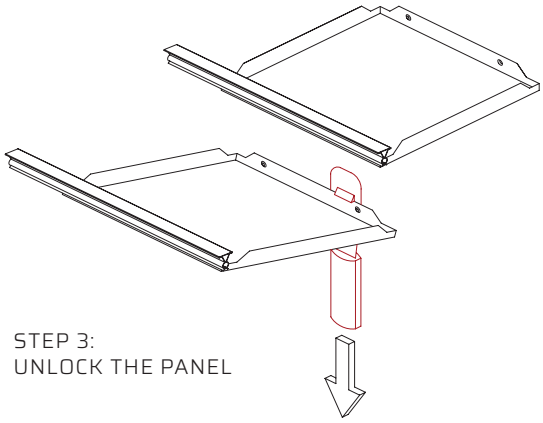
Panels can be removed by using suckers or specific tool supplied by Atena S.p.A.
Do not use any other tool which can damage the panels or the structure below. (see picture below).



STEP 1:
USE THE APPROPRIATE
ACCESSORY



STEP 2:
INSERT THE
ACCESSORY



STEP 3:
UNLOCK THE PANEL

## 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 maintenence 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.

Indipendently 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.

 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.