



# METAL CELLS



atena®

FALSE CEILINGS AND COVERINGS



FALSE CEILINGS AND COVERINGS

**INNOVATIVE ARCHITECTURAL SOLUTIONS  
HIGH PERFORMANCE SYSTEMS  
NEW EXPRESSIVE POSSIBILITIES**

Atena has been conceiving and manufacturing false ceilings, external coverings and high quality marine fittings for over 30 years, producing in its factory in Italy and distributing in over fifty countries, through its dealers and partners.

Without any limit to the technical development, Atena offers innovative solutions to transform the designers vision into real works, all over the world. It stands out for the capability to make executive the most challenging projects by creating special metal bodies for interior and façade architecture.

In addition to the commercial synergies with different European realities, and not only, Atena cooperates with designers and construction companies, following customers at all levels from the idea to the installation; providing a qualified executive design service and specialized consultancy in acoustics, lighting and seismic engineering.

# METAL CELLS

FIND OUT THE ATENA  
METAL CELLS RANGE, AND CREATE  
THE MOST AMAZING OPEN CELL  
TECHNICAL PATTERN.

Always modern and in high demand, Atena METAL CELLS represent an effective technical solution to realize metal ceilings with original patterns, in environments such as shops, shopping centers and public areas, where a high percentage of open surface is required.

Light and versatile, the Atena METAL CELLS are available in different models and with various meshes: always a right choice to mask the plenum and enhance the ceiling.

The production includes both integrated solutions and installation with visible structures. In the first case, the open cell modules are perfectly coupled with the bearing elements to create a uniform and homogeneous pattern, while, when T profiles are used the modularity of the configuration stands out.

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METAL CELLS

# OPEN CELL PANELS



Open cell panels

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BASE 4 H30 SC DUALGRID | BASE 4 H18 | H30 | BASE 4 T15 | T24  
BASE 4 EASY LINE | BASE 20 H80 | BASE 15 | H40 | H50  
H40 | H50 T24 | DUALGRID

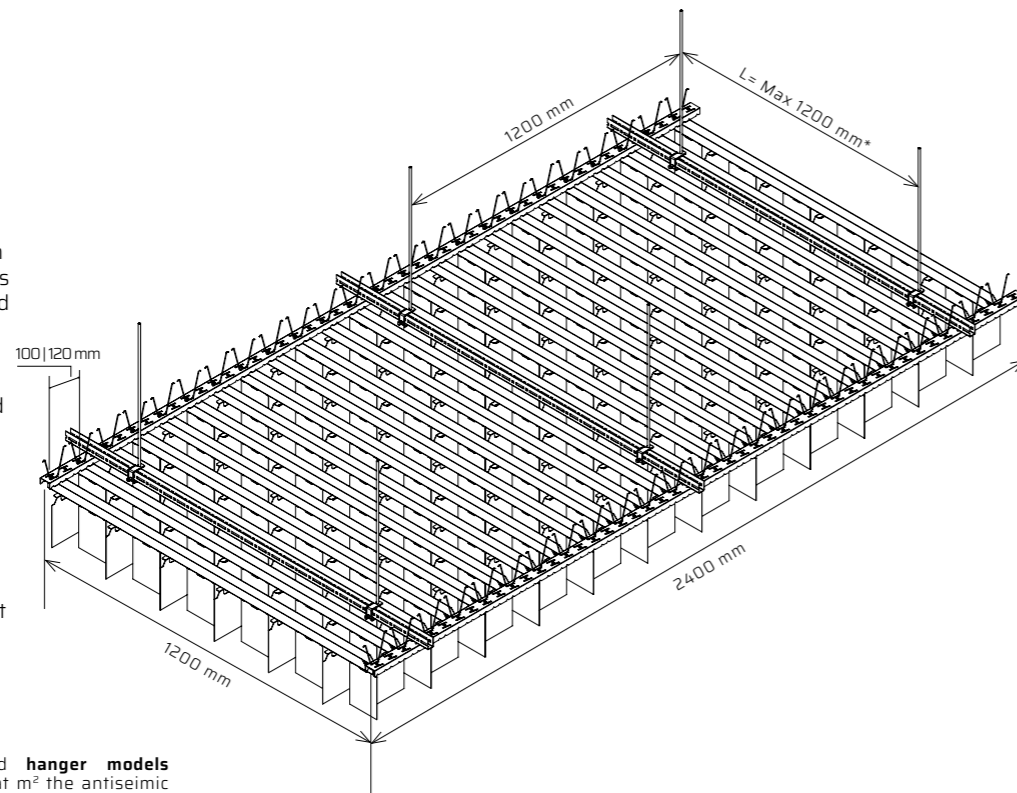
Picture: "Open cell panels" metal ceiling

METAL CELLS

LOGICO

The Atena LOGICO open cell is a clever spring system made up of individually adjustable blades, a nice option to create a smart design especially with blades of different colors and heights.

LOGICO blades are mechanically coupled with a special profile, 1200 mm long properly shaped to house the wire steel springs: an easy way to hang up the modules to the main carriers and dismount the system for fast plenum access.



\*verify interaxes and hanger models according to the load at m² the antiseismic report and particular conditions when required.

FEATURES

PRODUCT TYPE

Open cell spring system adjustable blades at 90° mechanical coupling without any tools.

OPEN CELL ELEMENTS

Interlocking blades base 100 H100 | 120 | 150 mm pitch 100/120 mm

BLADES MATERIALS

8/10 Steel | Aluminum

INTEGRATED STRUCTURE

"U" shaped and punched profile L=4050 in 15/10 galvanised steel  
 Carriers in 8/10 black pre-painted steel  
 Main carriers for module coupling L= 2400 mm  
 Secondary carriers for blades hanging L= 1200 mm  
 Wire steel springs for carriers hanging

HANGERS\*

Threaded bars and brackets for "U" profiles

COLORS | FINISHING

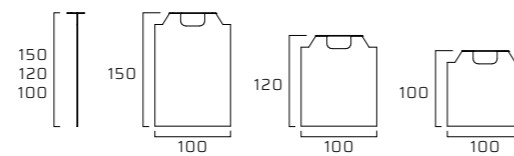
Atena standard white and silver pre-painted steel  
 Atena standard white and silver pre-painted aluminium  
 RAL / NCS post-painting

ACCESSORIES

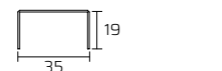
Joints both for carriers and "U" profiles.

OPEN CELL SECTIONS

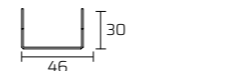
LOGICO



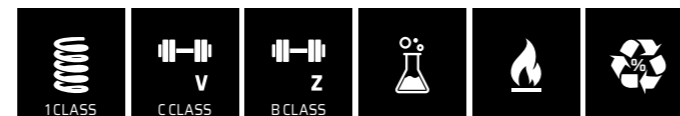
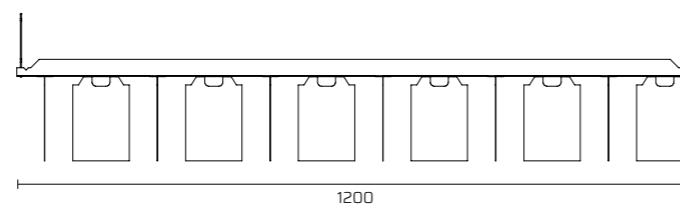
PRIMARY CARRIER



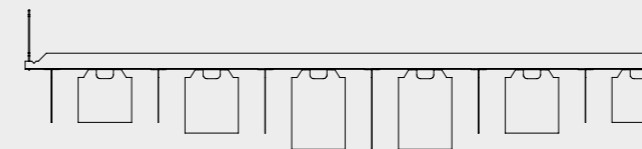
SECONDARY CARRIER



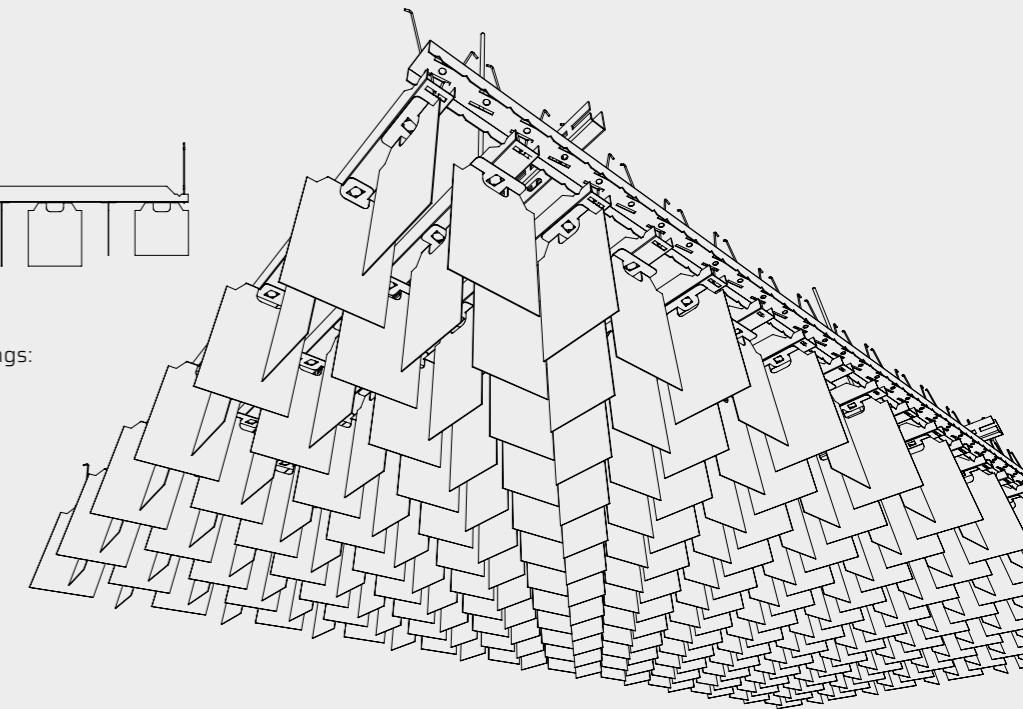
ELEMENTS SECTION



PANELS



Module hooking and unhooking system through special high-performance wire springs: for frequent system dismantling and easy plenum access.



TECHNICAL FEATURES

| MODEL  | STRUCTURE                 | LENGHT (mm) | INCIDENCE (pcs/mq) |      | WEIGHT Kg/m² | BLADES    | PITCH | BLADES INCIDENCES |          | BLADES WEIGHTS  |                 | SYSTEM WEIGHT     |                   |
|--------|---------------------------|-------------|--------------------|------|--------------|-----------|-------|-------------------|----------|-----------------|-----------------|-------------------|-------------------|
|        |                           |             | 100                | 120  |              |           |       | (pcs/car.)        | (pcs/mq) | Ste. 8/10 Kg/m² | All. 8/10 Kg/m² | Ste. Blades Kg/m² | All. Blades Kg/m² |
|        |                           |             |                    |      |              |           |       |                   |          |                 |                 |                   |                   |
| LOGICO | Secondary carrier         | 1200        | 8,33               | 6,94 | 5,46   4,55  | B100 H100 | 100   | 12                | 100      | 7,22            | 2,53            | 13,87             | 9,17              |
|        | Main carrier              | 2400        | 0,35               | 0,35 | 0,37         | B100 H120 | 100   | 12                | 100      | 8,48            | 2,97            | 15,12             | 9,61              |
|        | Main carrier joint        | 200         | 0,35               | 0,35 | 0,31         | B100 H150 | 100   | 12                | 100      | 10,36           | 3,63            | 17,01             | 10,27             |
|        | "U" punched profile       | 4050        | 0,21               | 0,21 | 0,75         | B100 H100 | 120   | 10                | 69,44    | 5,02            | 1,76            | 10,75             | 7,49              |
|        | "U" punched profile joint | 200         | 0,21               | 0,21 | 0,04         | B100 H120 | 120   | 10                | 69,44    | 5,89            | 2,06            | 11,62             | 7,79              |
|        | Structure total weight    |             |                    |      |              | B100 H150 | 120   | 10                | 69,44    | 7,20            | 2,52            | 12,93             | 8,25              |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.

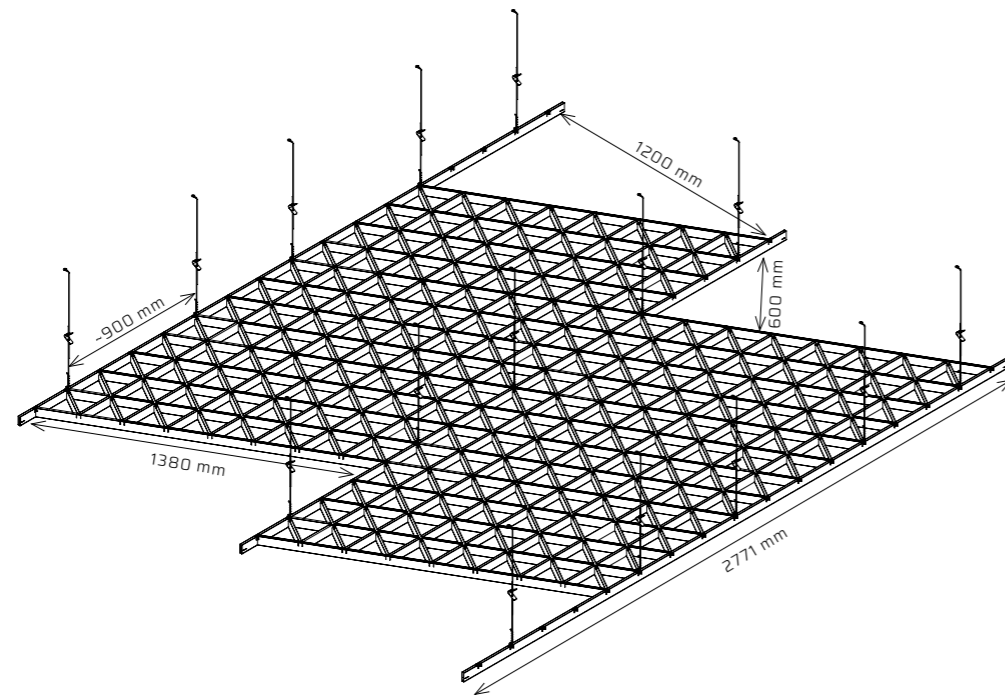


# ATENA METAL CELLS | OPEN CELL PANELS

## TRIGON

Atena TRIGON ceiling stands out for the distinctive triangular open cell pattern, which creates a peculiar visual effect that changes triangle in exagon, rhombus or rectangle, giving rise to amazing optical symmetries.

Atena Trigon is made up of rhomboidal panels equipped with a proper supporting structure which, combined with the construction elements, creates a continuous aesthetic effect, without joints between panel and panel.



## FEATURES

### PRODUCT TYPE

-693x1386 mm open cell panels with rhomboid shape

### OPEN CELL ELEMENTS

Base 10 H41 interlocking profiles

### MATERIALS

5/10 Aluminum

### INTEGRATED STRUCTURE

2771 mm main profiles  
1380 mm spacer

### HANGERS

Standard double hanger Ø4 mm with spring

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

### WALL ANGLES

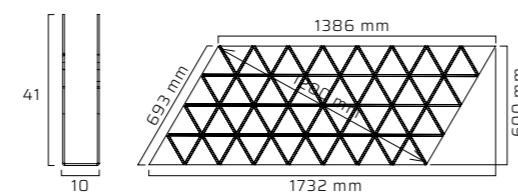
"C" 25x42x10 mm  
With the same material and finishing of the open cell

### ACCESSORIES

Triangle shaped recessed spotlights

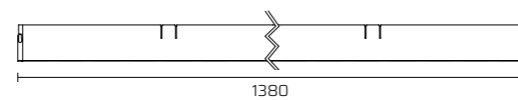
## OPEN CELL SECTIONS

### TRIGON

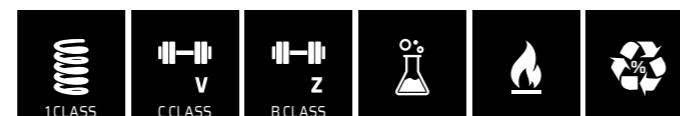
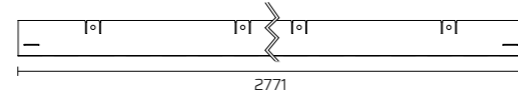


## ELEMENTS SECTION

### TF SPACER



### TM MAIN PROFILE

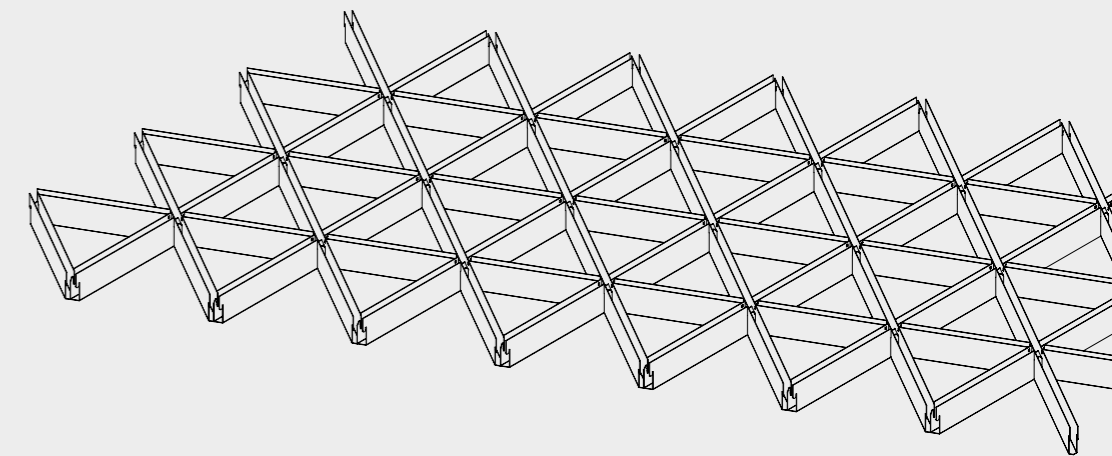


Trigon: Product not available in France.  
Produit non disponible en France.



## PANELS

The distinctive triangular texture of Atena TRIGON is available in three different meshes: 120x120, 150x150 and 200x200 mm.



## TECHNICAL FEATURES

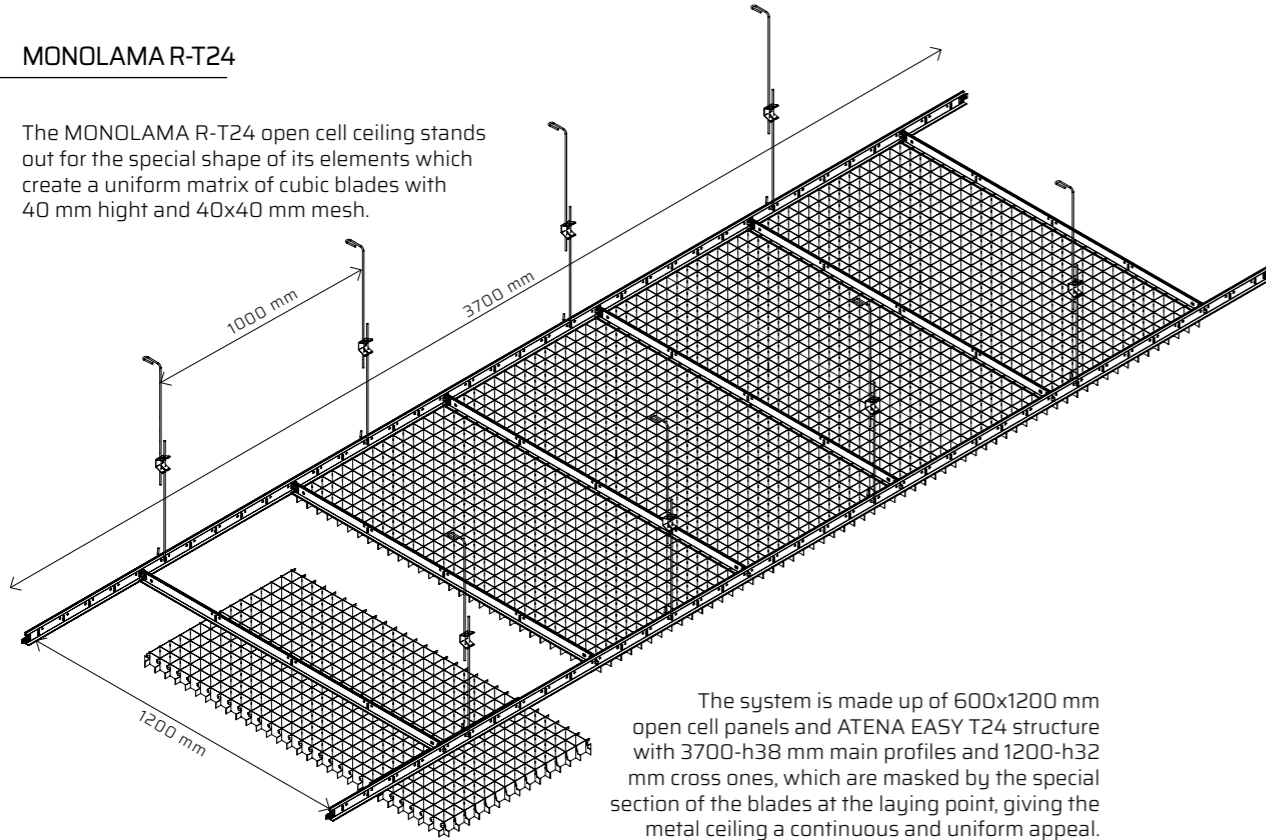
| MODEL  | MESHERS | OPEN AREA | ELEMENTS QUALITY FOR ONE PANEL* |                       |                | PIECES/SQM      |                 | LM/SQM | KG/SQM |
|--------|---------|-----------|---------------------------------|-----------------------|----------------|-----------------|-----------------|--------|--------|
|        |         |           | LOWER ELEMENTS                  | INTERMEDIATE ELEMENTS | UPPER ELEMENTS | 2771 mm PROFILE | 1380 mm PROFILE |        |        |
| TRIGON | 120x120 | 76,6%     | 4                               | 9                     | 14             | 0,252           | 1,20            | 25     | 3,07   |
|        | 150x150 | 81%       | 3                               | 7                     | 11             | 0,252           | 1,20            | 20     | 2,45   |
|        | 200x200 | 85,6%     | 2                               | 5                     | 7              | 0,252           | 1,20            | 15     | 1,84   |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.  
\* System supplied only with assembled panels.

# ATENA METAL CELLS | OPEN CELL PANELS

## MONOLAMA R-T24

The MONOLAMA R-T24 open cell ceiling stands out for the special shape of its elements which create a uniform matrix of cubic blades with 40 mm height and 40x40 mm mesh.



The system is made up of 600x1200 mm open cell panels and ATENA EASY T24 structure with 3700-h38 mm main profiles and 1200-h32 mm cross ones, which are masked by the special section of the blades at the laying point, giving the metal ceiling a continuous and uniform appeal.



## FEATURES

### PRODUCT TYPE

600x1200 mm open cell panels with regular blades

### OPEN CELL ELEMENTS

Interlocking TM-TF profiles

### MATERIALS

8/10 Aluminum

### INTEGRATED STRUCTURE

Steel Strong Easy T24  
T24 main profiles: 3700 mm H38  
T24 cross profiles: 1200 mm H38 | H32

### HANGERS

Twister, Nonius, Standard with spring, 90° hanger

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting on both sides  
also available with different colored blades  
Wood finishing on request (see page 40)

### WALL ANGLES

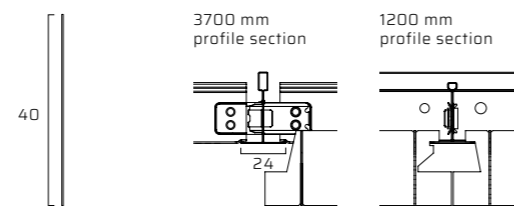
"L" 55x20 mm  
8/10 aluminum with the same material and finishing of the open cell

### ACCESSORIES

Lighting adapters

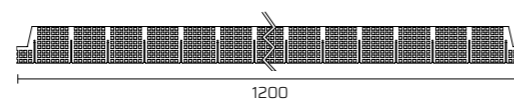
## OPEN CELL SECTIONS

### MONOLAMA R-T24

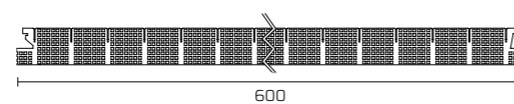


## ELEMENTS SECTION

### TM CROSS PROFILE



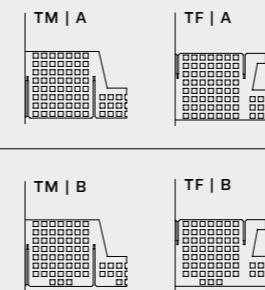
### TF MAIN PROFILE



## PANELS

The cubic cells qualify the MONOLAMA R-T24 style, which can be realized both with monochrome blades or with polychrome elements. The blades moreover can be made both with smooth and perforated surface choosing among two different perforation patterns.

## PERFORATION PATTERN



## TECHNICAL FEATURES

| MODEL          | MESH  | OPEN AREA | 600x1200 PANEL ELEMENTS QUANTITY |            | ml/m <sup>2</sup> | kg/m <sup>2</sup> | INCIDENCE                 |                        |                        |
|----------------|-------|-----------|----------------------------------|------------|-------------------|-------------------|---------------------------|------------------------|------------------------|
|                |       |           | TF 600 mm                        | TM 1200 mm |                   |                   | PANNEL pcs/m <sup>2</sup> | 3700 ml/m <sup>2</sup> | 1200 ml/m <sup>2</sup> |
| MONOLAMA R-T24 | 40x40 | 96%       | 30                               | 15         | 50,00             | 4,40*             | 1,39                      | 0,85                   | 1,70                   |

\*To the open cell weight add the structure weight 3700 h38 - 1200 h32: kg/m<sup>2</sup> 0,77 | 3700 h38 - 1200 h38: kg/m<sup>2</sup> 0,81  
Weight calculated for Easy Base 24 module 600x1200

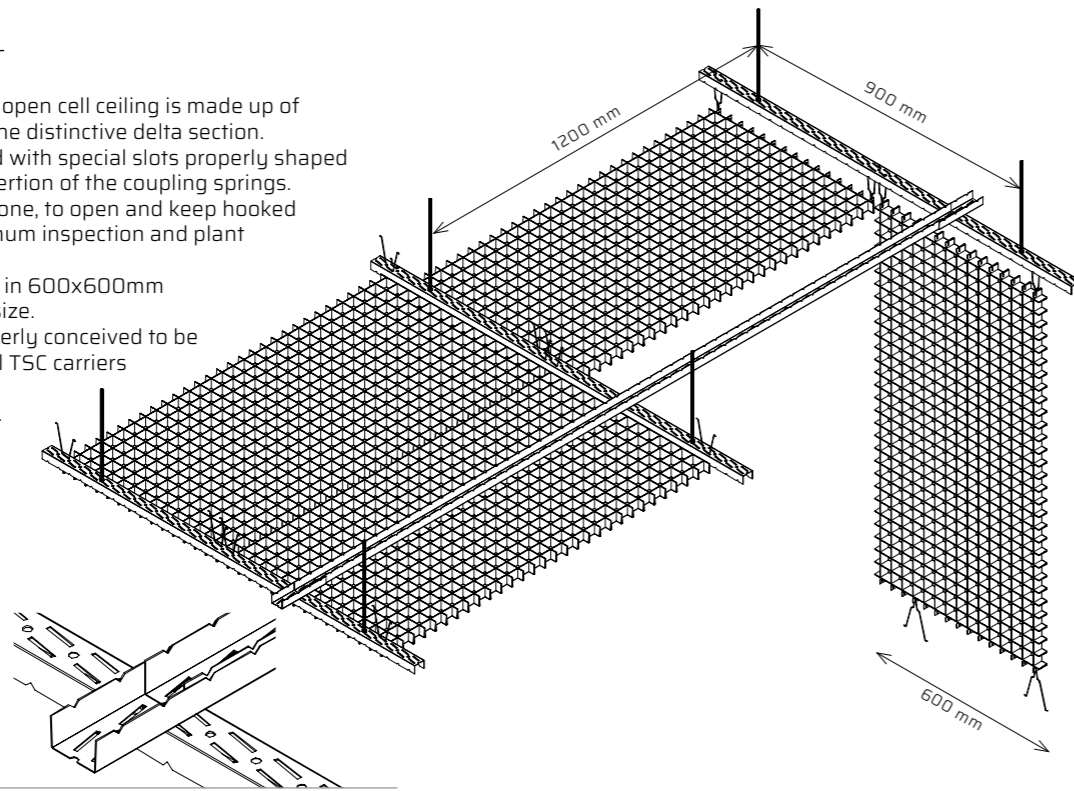
For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.



**BASE 4 H30 SC**

The BASE 4 H30 SC open cell ceiling is made up of closed blades with the distinctive delta section. Blades are equipped with special slots properly shaped to allow an easy insertion of the coupling springs. A great system for this one, to open and keep hooked the modules for plenum inspection and plant maintenance. Panels are available in 600x600mm and 600x1200mm size. Each module is properly conceived to be hooked up to special TSC carriers with pitched cuts with pitched cuts for blades centering.

To assure a correct alignment of the carriers, they will be used as spacers to be installed orthogonally at an interaxe of 2400 mm.



**FEATURES**

**PRODUCT TYPE**

600x600 | 600x1200 mm open cell panels  
other modules on request

**OPEN CELL ELEMENTS**

Base 4 H30 interlocking TM-TF profiles

**MATERIALS**

4/10 Aluminum

**INTEGRATED STRUCTURE**

Carriers/spacers 27x33x27 L=2400 mm  
in 8/10 black prepainted steel  
Wire steel hooking springs

**HANGERS**

Threaded bar

**COLORS | FINISHING**

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

**WALL ANGLES**

"C" 18x33x25 mm  
5/10 aluminum with the same material and finishing of the open cell

**ACCESSORIES**

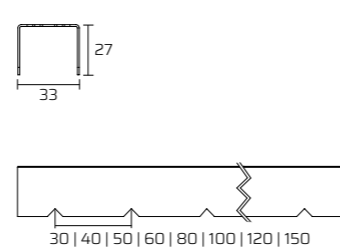
Lighting adapters, carriers and spacers joints

**OPEN CELL SECTIONS**

BASE 4 H30 SC

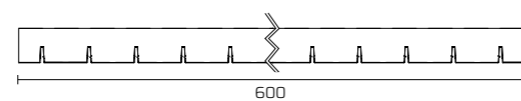


TSC CARRIER/SPACER

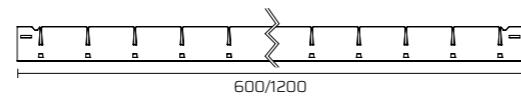


**ELEMENTS SECTION**

TF ELEMENTS

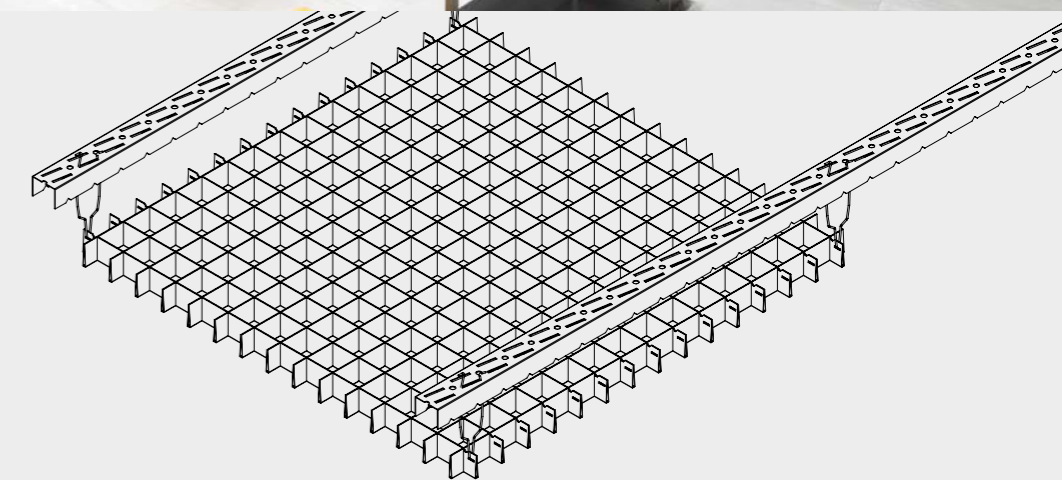


TM ELEMENTS



**PANELS**

The BASE 4 H30 SC open cell ceiling with continuous design and swinging modules is available with both standardized meshes and custom made cells, on request.



**TECHNICAL FEATURES**

| MODEL*                       | SQUARE MESHES | OPEN AREA | 600x600 PANEL ELEMENT QUANTITY  |           |        |               | CARRIER       |          |          |          |          | SYSTEM   |        |
|------------------------------|---------------|-----------|---------------------------------|-----------|--------|---------------|---------------|----------|----------|----------|----------|----------|--------|
|                              |               |           | TM 600 mm                       | TF 600 mm | LM/SQM | KG/SQM        | MODEL         | PITCH mm | 600 mm   |          | 2400 mm  |          |        |
|                              |               |           |                                 |           |        |               |               | LM/SQM   | KG/SQM** | LM/SQM   | KG/SQM** | KG/SQM   |        |
| BASE 4 H30 SC<br>600x600 mm  | 40x40         | 81%       | 15                              | 15        | 50,00  | 3,41          | TSC40         | 40       | 1,70     | 0,88     | 0,42     | 0,22     | 4,80   |
|                              | 50x50         | 85%       | 12                              | 12        | 40,00  | 2,73          | TSC50         | 50       | 1,70     | 0,88     | 0,42     | 0,22     | 4,12   |
|                              | 60x60         | 87%       | 10                              | 10        | 33,33  | 2,27          | TSC30         | 60       | 1,70     | 0,88     | 0,42     | 0,22     | 3,67   |
|                              | 100x100       | 92%       | 6                               | 6         | 20,00  | 1,36          | TSC50         | 100      | 1,70     | 0,88     | 0,42     | 0,22     | 2,76   |
|                              | 120x120       | 93%       | 5                               | 5         | 16,67  | 1,14          | TSC30   TSC40 | 120      | 1,70     | 0,88     | 0,42     | 0,22     | 2,53   |
| 150x150                      | 95%           | 4         | 4                               | 13,33     | 0,91   | TSC30   TSC50 | 150           | 1,70     | 0,88     | 0,42     | 0,22     | 2,30     |        |
| MODEL*                       | SQUARE MESHES | OPEN AREA | 600x1200 PANEL ELEMENT QUANTITY |           |        |               | CARRIER       |          |          |          |          | SYSTEM   |        |
|                              |               |           | TM 1200 mm                      | TF 600 mm | LM/SQM | KG/SQM        | MODEL         | PITCH mm | 1200 mm  |          | 2400 mm  |          |        |
|                              |               |           |                                 |           |        |               |               |          | LM/SQM   | KG/SQM** | LM/SQM   | KG/SQM** | KG/SQM |
| BASE 4 H30 SC<br>600x1200 mm | 40x40         | 81%       | 15                              | 30        | 50,00  | 3,41          | TSC40         | 40       | 0,85     | 0,44     | 0,42     | 0,22     | 4,22   |
|                              | 50x50         | 85%       | 12                              | 24        | 40,00  | 2,73          | TSC50         | 50       | 0,85     | 0,44     | 0,42     | 0,22     | 3,53   |
|                              | 60x60         | 87%       | 10                              | 20        | 33,33  | 2,27          | TSC30         | 60       | 0,85     | 0,44     | 0,42     | 0,22     | 3,08   |
|                              | 100x100       | 92%       | 6                               | 12        | 20,00  | 1,36          | TSC50         | 100      | 0,85     | 0,44     | 0,42     | 0,22     | 2,17   |
|                              | 120x120       | 93%       | 5                               | 10        | 16,67  | 1,14          | TSC30   TSC40 | 120      | 0,85     | 0,44     | 0,42     | 0,22     | 1,94   |
| 150x150                      | 95%           | 4         | 8                               | 13,33     | 0,91   | TSC30   TSC50 | 150           | 0,85     | 0,44     | 0,42     | 0,22     | 1,72     |        |

\* Swinging side at 600 mm only. | For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.  
\*\* The weight includes the joints and the carriers used both as profile with 600 or 1200 mm pitch (in relation to the panel size), and as spacer with 2400 mm pitch.

# ATENA METAL CELLS | OPEN CELL PANELS

## BASE4 H30 SC | 600x600mm

| MODEL*                      | RECTANG. MESHES | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           |        |               | CARRIER       |          |        |          |         |          | SYSTEM |        |
|-----------------------------|-----------------|-----------|---------------------------------|-----------|--------|---------------|---------------|----------|--------|----------|---------|----------|--------|--------|
|                             |                 |           | TM 600 mm                       | TF 600 mm | LM/SQM | KG/SQM        | MODEL         | PITCH mm | 600 mm |          | 2400 mm |          |        | KG/SQM |
|                             |                 |           |                                 |           |        |               |               |          | LM/SQM | KG/SQM** | LM/SQM  | KG/SQM** |        |        |
| BASE 4 H30 SC<br>600x600 mm | 30x60           | 81%       | 20                              | 10        | 50,00  | 3,41          | TSC30         | 30       | 1,70   | 0,88     | 0,42    | 0,22     | 4,80   |        |
|                             | 30x100          | 83%       | 20                              | 6         | 43,33  | 2,96          | TSC30         | 30       | 1,70   | 0,88     | 0,42    | 0,22     | 4,35   |        |
|                             | 30x120          | 84%       | 20                              | 5         | 41,67  | 2,84          | TSC30         | 30       | 1,70   | 0,88     | 0,42    | 0,22     | 4,23   |        |
|                             | 30x150          | 84%       | 20                              | 4         | 40,00  | 2,73          | TSC30         | 30       | 1,70   | 0,88     | 0,42    | 0,22     | 4,12   |        |
|                             | 40x100          | 86%       | 15                              | 6         | 35,00  | 2,39          | TSC40         | 40       | 1,70   | 0,88     | 0,42    | 0,22     | 3,78   |        |
|                             | 40x120          | 87%       | 15                              | 5         | 33,33  | 2,27          | TSC40         | 40       | 1,70   | 0,88     | 0,42    | 0,22     | 3,67   |        |
|                             | 40x150          | 88%       | 15                              | 4         | 31,67  | 2,16          | TSC40         | 40       | 1,70   | 0,88     | 0,42    | 0,22     | 3,55   |        |
|                             | 50x100          | 88%       | 12                              | 6         | 30,00  | 2,05          | TSC50         | 50       | 1,70   | 0,88     | 0,42    | 0,22     | 3,44   |        |
|                             | 50x120          | 89%       | 12                              | 5         | 28,33  | 1,93          | TSC50         | 50       | 1,70   | 0,88     | 0,42    | 0,22     | 3,32   |        |
|                             | 50x150          | 90%       | 12                              | 4         | 26,67  | 1,82          | TSC50         | 50       | 1,70   | 0,88     | 0,42    | 0,22     | 3,21   |        |
|                             | 60x40           | 86%       | 10                              | 15        | 36,67  | 2,50          | TSC30         | 60       | 1,70   | 0,88     | 0,42    | 0,22     | 3,89   |        |
|                             | 60x100          | 90%       | 10                              | 6         | 26,67  | 1,82          | TSC30         | 60       | 1,70   | 0,88     | 0,42    | 0,22     | 3,21   |        |
|                             | 60x120          | 90%       | 10                              | 5         | 25,00  | 1,71          | TSC30         | 60       | 1,70   | 0,88     | 0,42    | 0,22     | 3,10   |        |
|                             | 60x150          | 91%       | 10                              | 4         | 23,33  | 1,59          | TSC30         | 60       | 1,70   | 0,88     | 0,42    | 0,22     | 2,98   |        |
|                             | 100x40          | 86%       | 6                               | 15        | 35,00  | 2,39          | TSC50         | 100      | 1,70   | 0,88     | 0,42    | 0,22     | 3,78   |        |
|                             | 100x50          | 88%       | 6                               | 12        | 30,00  | 2,05          | TSC50         | 100      | 1,70   | 0,88     | 0,42    | 0,22     | 3,44   |        |
|                             | 100x60          | 90%       | 6                               | 10        | 26,67  | 1,82          | TSC50         | 100      | 1,70   | 0,88     | 0,42    | 0,22     | 3,21   |        |
|                             | 100x150         | 93%       | 6                               | 4         | 16,67  | 1,14          | TSC50         | 100      | 1,70   | 0,88     | 0,42    | 0,22     | 2,53   |        |
|                             | 120x40          | 87%       | 5                               | 15        | 33,33  | 2,27          | TSC30   TSC40 | 120      | 1,70   | 0,88     | 0,42    | 0,22     | 3,67   |        |
|                             | 120x50          | 89%       | 5                               | 12        | 28,33  | 1,93          | TSC30   TSC40 | 120      | 1,70   | 0,88     | 0,42    | 0,22     | 3,32   |        |
| 120x60                      | 90%             | 5         | 10                              | 25,00     | 1,71   | TSC30   TSC40 | 120           | 1,70     | 0,88   | 0,42     | 0,22    | 3,10     |        |        |
| 150x40                      | 88%             | 4         | 15                              | 31,67     | 2,16   | TSC30   TSC50 | 150           | 1,70     | 0,88   | 0,42     | 0,22    | 3,55     |        |        |
| 150x50                      | 90%             | 4         | 12                              | 26,67     | 1,82   | TSC30   TSC50 | 150           | 1,70     | 0,88   | 0,42     | 0,22    | 3,21     |        |        |
| 150x60                      | 91%             | 4         | 10                              | 23,33     | 1,59   | TSC30   TSC50 | 150           | 1,70     | 0,88   | 0,42     | 0,22    | 2,98     |        |        |

\* Swinging side at 600 mm only. | For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.  
 \*\* The weight includes the joints and the carriers used both as profile with 600 or 1200 mm pitch (in relation to the panel size), and as spacer with 2400 mm pitch.

## BASE4 H30 SC | 600x1200mm

| MODEL*                       | RECTANG. MESHES | OPEN AREA | 600x1200 PANEL ELEMENTS QUANTITY |           |        |               | CARRIER       |          |         |          |         |          | SYSTEM |        |
|------------------------------|-----------------|-----------|----------------------------------|-----------|--------|---------------|---------------|----------|---------|----------|---------|----------|--------|--------|
|                              |                 |           | TM 1200 mm                       | TF 600 mm | LM/SQM | KG/SQM        | MODEL         | PITCH mm | 1200 mm |          | 2400 mm |          |        | KG/SQM |
|                              |                 |           |                                  |           |        |               |               |          | LM/SQM  | KG/SQM** | LM/SQM  | KG/SQM** |        |        |
| BASE 4 H30 SC<br>600x1200 mm | 30x60           | 81%       | 20                               | 20        | 50,00  | 3,41          | TSC30         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 4,22   |        |
|                              | 30x100          | 83%       | 20                               | 12        | 43,33  | 2,96          | TSC30         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 3,76   |        |
|                              | 30x120          | 84%       | 20                               | 10        | 41,67  | 2,84          | TSC30         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 3,65   |        |
|                              | 30x150          | 84%       | 20                               | 8         | 40,00  | 2,73          | TSC30         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 3,53   |        |
|                              | 40x100          | 86%       | 15                               | 12        | 35,00  | 2,39          | TSC40         | 40       | 0,85    | 0,44     | 0,42    | 0,22     | 3,19   |        |
|                              | 40x120          | 87%       | 15                               | 10        | 33,33  | 2,27          | TSC40         | 40       | 0,85    | 0,44     | 0,42    | 0,22     | 3,08   |        |
|                              | 40x150          | 88%       | 15                               | 8         | 31,67  | 2,16          | TSC40         | 40       | 0,85    | 0,44     | 0,42    | 0,22     | 2,97   |        |
|                              | 50x100          | 88%       | 12                               | 12        | 30,00  | 2,05          | TSC50         | 50       | 0,85    | 0,44     | 0,42    | 0,22     | 2,85   |        |
|                              | 50x120          | 89%       | 12                               | 10        | 28,33  | 1,93          | TSC50         | 50       | 0,85    | 0,44     | 0,42    | 0,22     | 2,74   |        |
|                              | 50x150          | 90%       | 12                               | 8         | 26,67  | 1,82          | TSC50         | 50       | 0,85    | 0,44     | 0,42    | 0,22     | 2,62   |        |
|                              | 60x40           | 84%       | 10                               | 30        | 41,67  | 2,84          | TSC30         | 60       | 0,85    | 0,44     | 0,42    | 0,22     | 3,65   |        |
|                              | 60x100          | 90%       | 10                               | 12        | 26,67  | 1,82          | TSC30         | 60       | 0,85    | 0,44     | 0,42    | 0,22     | 2,62   |        |
|                              | 60x120          | 90%       | 10                               | 10        | 25,00  | 1,71          | TSC30         | 60       | 0,85    | 0,44     | 0,42    | 0,22     | 2,51   |        |
|                              | 60x150          | 91%       | 10                               | 8         | 23,33  | 1,59          | TSC30         | 60       | 0,85    | 0,44     | 0,42    | 0,22     | 2,40   |        |
|                              | 100x40          | 86%       | 6                                | 30        | 35,00  | 2,39          | TSC50         | 100      | 0,85    | 0,44     | 0,42    | 0,22     | 3,19   |        |
|                              | 100x50          | 88%       | 6                                | 24        | 30,00  | 2,05          | TSC50         | 100      | 0,85    | 0,44     | 0,42    | 0,22     | 2,85   |        |
|                              | 100x60          | 90%       | 6                                | 20        | 26,67  | 1,82          | TSC50         | 100      | 0,85    | 0,44     | 0,42    | 0,22     | 2,62   |        |
|                              | 120x40          | 87%       | 5                                | 30        | 33,33  | 2,27          | TSC30   TSC40 | 120      | 0,85    | 0,44     | 0,42    | 0,22     | 3,08   |        |
|                              | 120x50          | 89%       | 5                                | 24        | 28,33  | 1,93          | TSC30   TSC40 | 120      | 0,85    | 0,44     | 0,42    | 0,22     | 2,74   |        |
|                              | 120x60          | 90%       | 5                                | 20        | 25,00  | 1,71          | TSC30   TSC40 | 120      | 0,85    | 0,44     | 0,42    | 0,22     | 2,51   |        |
| 150x40                       | 88%             | 4         | 30                               | 31,67     | 2,16   | TSC30   TSC50 | 150           | 0,85     | 0,44    | 0,42     | 0,22    | 2,97     |        |        |
| 150x50                       | 90%             | 4         | 24                               | 26,67     | 1,82   | TSC30   TSC50 | 150           | 0,85     | 0,44    | 0,42     | 0,22    | 2,62     |        |        |
| 150x60                       | 91%             | 4         | 20                               | 23,33     | 1,59   | TSC30   TSC50 | 150           | 0,85     | 0,44    | 0,42     | 0,22    | 2,40     |        |        |

\* Swinging side at 600 mm only. | For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.  
 \*\* The weight includes the joints and the carriers used both as profile with 600 or 1200 mm pitch (in relation to the panel size), and as spacer with 2400 mm pitch.



# ATENA METAL CELLS | OPEN CELL PANELS

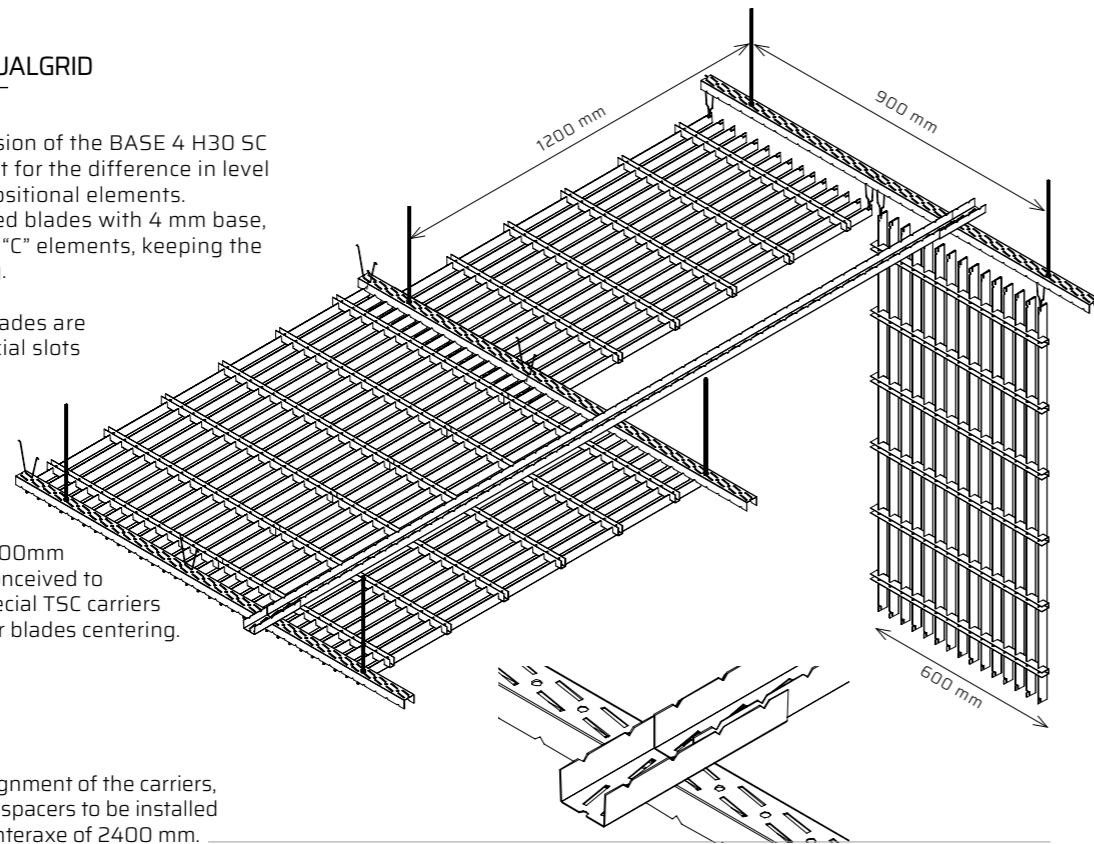
## BASE 4 H30 SC DUALGRID

The DUALGRID version of the BASE 4 H30 SC open cell stands out for the difference in level between the compositional elements. Therefore, the closed blades with 4 mm base, are inserted on the "C" elements, keeping the distinctive lowering.

At their ends the blades are equipped with special slots properly shaped to allow an easy insertion of the coupling springs.

Panels, in fact, available in 600x1200mm size, are properly conceived to be hooked up to special TSC carriers with pitched cuts for blades centering.

To assure correct alignment of the carriers, they will be used as spacers to be installed orthogonally at an interaxe of 2400 mm.



## FEATURES

### PRODUCT TYPE

600x1200 mm open cell panels  
other modules on request

### OPEN CELL ELEMENTS

Base 4 H30 TM-TF interlocking profiles

### MATERIALS

4/10 Aluminum

### INTEGRATED STRUCTURE

Carriers/spacers 27x33x27 L=2400 mm  
in 8/10 black prepainted steel  
Wire steel hooking springs

### HANGERS

M6 threaded bar

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

### WALL ANGLES

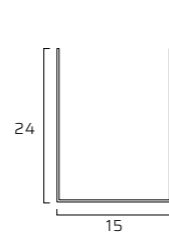
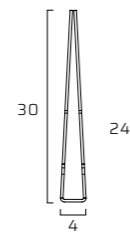
"C" 18x33x25 mm  
5/10 aluminum with the same material and finishing of the open cell

### ACCESSORIES

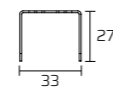
Lighting adapters, carriers and spacers joints

## OPEN CELL SECTIONS

### BASE 4 H30 SC DUALGRID

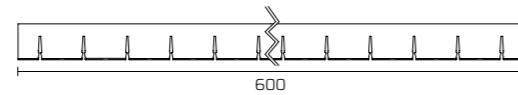


### TSC CARRIER/SPACER

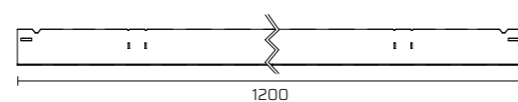


## ELEMENTS SECTION

### TF ELEMENTS

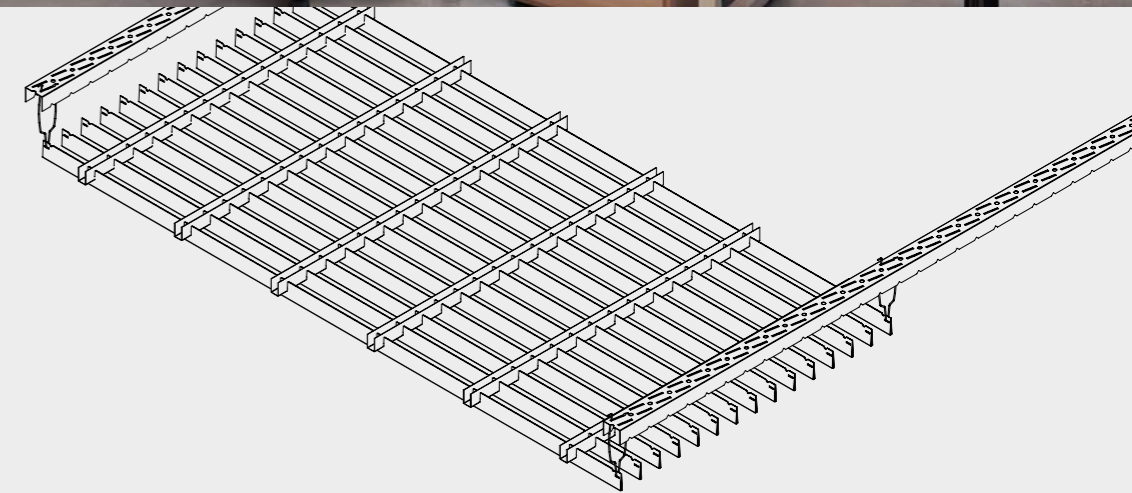


### TM ELEMENTS



## PANELS

The BASE 4 H30 SC DUALGRID open cell ceiling with continuous design and swinging modules is available with both standardized meshes and custom made cells, on request.



## TECHNICAL FEATURES

| MODEL*                 | RECTANG. MESHES | OPEN AREA | 600x1200 PANEL ELEMENTS QUANTITY |           |        |        | CARRIER       |          |         |          |         |          | SYSTEM |
|------------------------|-----------------|-----------|----------------------------------|-----------|--------|--------|---------------|----------|---------|----------|---------|----------|--------|
|                        |                 |           | TM 1200 mm                       | TF 600 mm | LM/SQM | KG/SQM | MODEL         | PITCH mm | 1200 mm |          | 2400 mm |          |        |
|                        |                 |           |                                  |           |        |        |               |          | LM/SQM  | KG/SQM** | LM/SQM  | KG/SQM** |        |
| BASE 4 H30 SC DUALGRID | 30x200          | 79,44%    | 20                               | 6         | 76,67  | 5,81   | TSC30         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 6,62   |
|                        | 30x300          | 81,85%    | 20                               | 4         | 73,33  | 5,59   | TSC30         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 6,39   |
|                        | 40x200          | 82,50%    | 15                               | 6         | 60,00  | 4,68   | TSC40         | 40       | 0,85    | 0,44     | 0,42    | 0,22     | 5,48   |
|                        | 40x300          | 85,00%    | 15                               | 4         | 56,67  | 4,45   | TSC40         | 30       | 0,85    | 0,44     | 0,42    | 0,22     | 5,26   |
|                        | 50x200          | 84,33%    | 12                               | 6         | 50,00  | 4,00   | TSC50         | 50       | 0,85    | 0,44     | 0,42    | 0,22     | 4,80   |
|                        | 50x300          | 86,89%    | 12                               | 4         | 46,67  | 3,77   | TSC50         | 50       | 0,85    | 0,44     | 0,42    | 0,22     | 4,57   |
|                        | 60x200          | 85,56%    | 10                               | 6         | 43,33  | 3,54   | TSC30         | 60       | 0,85    | 0,44     | 0,42    | 0,22     | 4,35   |
|                        | 60x300          | 88,15%    | 10                               | 4         | 40,00  | 3,31   | TSC30         | 60       | 0,85    | 0,44     | 0,42    | 0,22     | 4,12   |
|                        | 100x200         | 88,00%    | 6                                | 6         | 30,00  | 2,63   | TSC50         | 100      | 0,85    | 0,44     | 0,42    | 0,22     | 3,44   |
|                        | 100x300         | 90,67%    | 6                                | 4         | 26,67  | 2,40   | TSC50         | 100      | 0,85    | 0,44     | 0,42    | 0,22     | 3,21   |
|                        | 120x200         | 88,61%    | 5                                | 6         | 26,67  | 2,40   | TSC30   TSC40 | 120      | 0,85    | 0,44     | 0,42    | 0,22     | 3,21   |
|                        | 120x300         | 91,30%    | 5                                | 4         | 23,33  | 2,18   | TSC30   TSC40 | 120      | 0,85    | 0,44     | 0,42    | 0,22     | 2,98   |
|                        | 150x200         | 89,22%    | 4                                | 6         | 23,33  | 2,18   | TSC30   TSC50 | 150      | 0,85    | 0,44     | 0,42    | 0,22     | 2,98   |
|                        | 150x300         | 91,93%    | 4                                | 4         | 20,00  | 1,95   | TSC30   TSC50 | 150      | 0,85    | 0,44     | 0,42    | 0,22     | 2,76   |

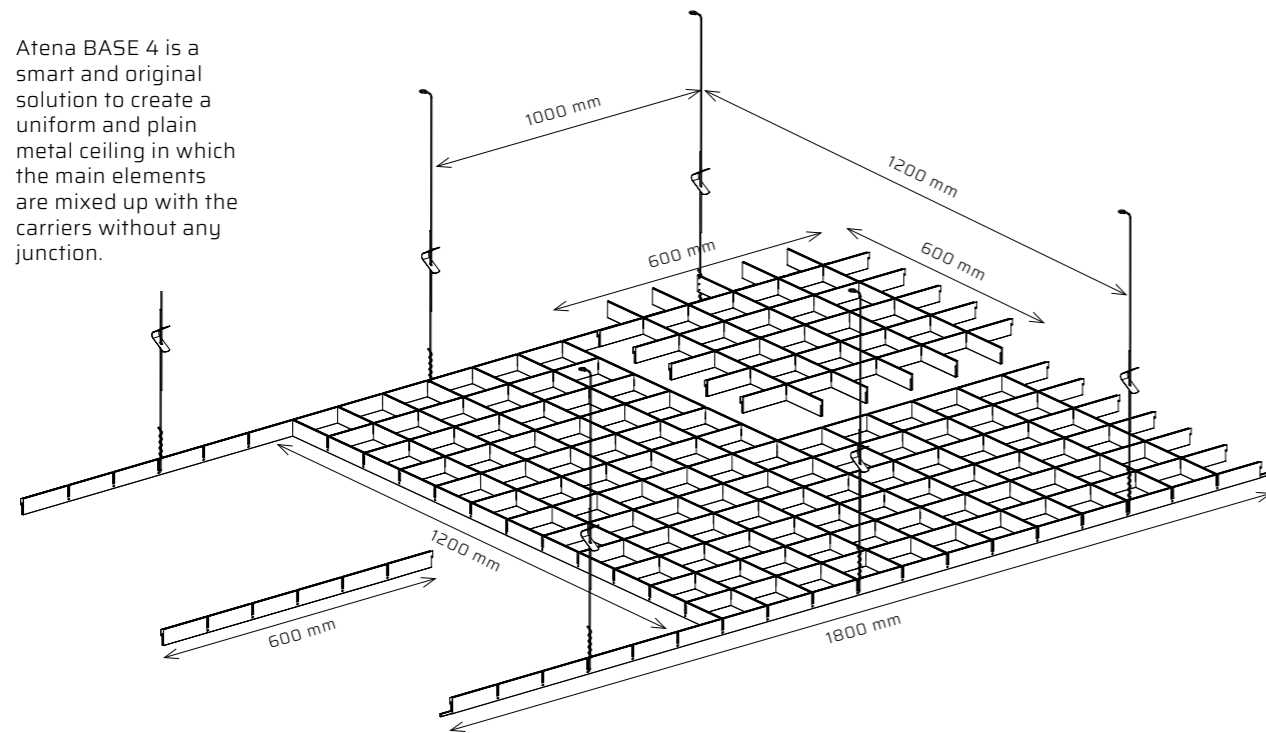
\* Swinging side at 600 mm only. | For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.  
\*\* The weight includes the joints and the carriers used both as profile with 600 or 1200 mm pitch (in relation to the panel size), and as spacer with 2400 mm pitch.



# ATENA METAL CELLS | OPEN CELL PANELS

## BASE 4 H18 | H30

Atena BASE 4 is a smart and original solution to create a uniform and plain metal ceiling in which the main elements are mixed up with the carriers without any junction.



## FEATURES

### PRODUCT TYPE

600x600 mm open cell panels  
other modules on request

### OPEN CELL ELEMENTS

Base 4 H18 | base 4 H30 TM-TF interlocking profiles

### MATERIALS

4/10 Aluminum

### INTEGRATED STRUCTURE

1800 mm main profiles  
1200 mm cross profiles  
600 mm cross profiles

### HANGERS

Ø2 standard hanger with spring

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

### WALL ANGLES

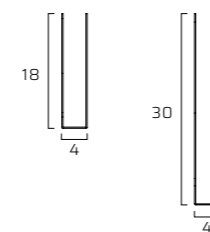
"C" 10x20x25 mm for H18 | 18x33x25 mm for H30  
with the same material and finishing of the open cell

### ACCESSORIES

Lighting adapters

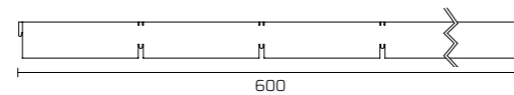
## OPEN CELL SECTIONS

### BASE 4 H18 | H30

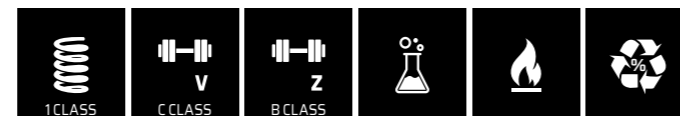
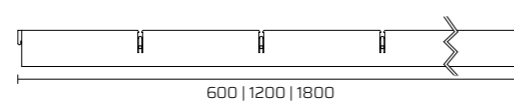


## ELEMENTS SECTION

### TF ELEMENTS

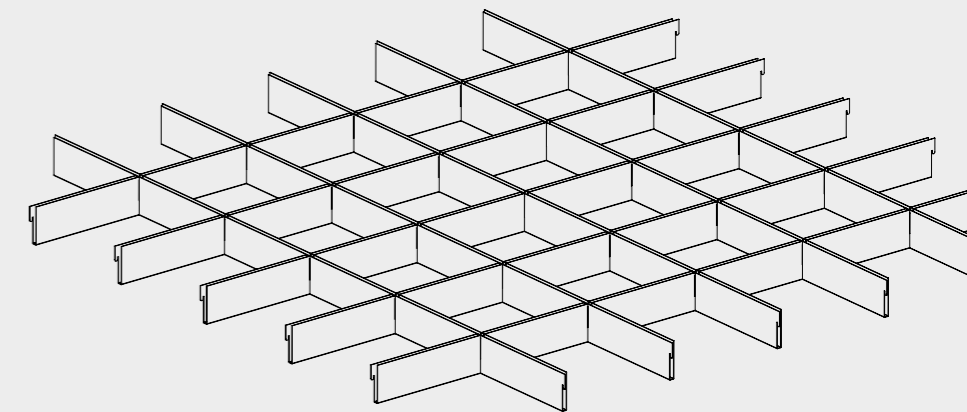


### TM AND MAIN ELEMENTS



## PANELS

BASE 4 open cell is made up of 600x600 mm panels composed of TM and TF elements having an "U-shaped" section with a height of 18 or 30 mm and a base of 4 mm. These elements cross each other to realize the desired mesh and they are installed with an integrated bearing structure made of the same material.



## TECHNICAL FEATURES

| MODEL      | MESHES | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           | PIECES/SQM      |                 |                | LM/SQM | KG/SQM |     |
|------------|--------|-----------|---------------------------------|-----------|-----------------|-----------------|----------------|--------|--------|-----|
|            |        |           | TM 600 mm                       | TF 600 mm | 1800 mm PROFILE | 1200 mm PROFILE | 600 mm PROFILE |        | H18    | H30 |
| BASE 4 H18 | 20x20  | 64%       | 29                              | 29        | 0,93            | -               | 2,78           | 100,00 | 4,3    | 6,8 |
|            | 30x30  | 75,1%     | 19                              | 19        | 0,93            | -               | 2,78           | 66,66  | 2,9    | 4,7 |
|            | 40x40  | 81%       | 14                              | 14        | 0,93            | -               | 2,78           | 50,00  | 2,2    | 3,6 |
| BASE 4 H30 | 50x50  | 84,6%     | 11                              | 11        | 0,93            | -               | 2,78           | 40,00  | 1,7    | 2,7 |
|            | 60x60  | 87,1%     | 9                               | 9         | 0,93            | -               | 2,78           | 33,33  | 1,4    | 2,3 |
|            | 75x75  | 89,6%     | 7                               | 7         | 0,46            | 1,38            | 1,38           | 26,66  | 1,1    | 1,8 |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.

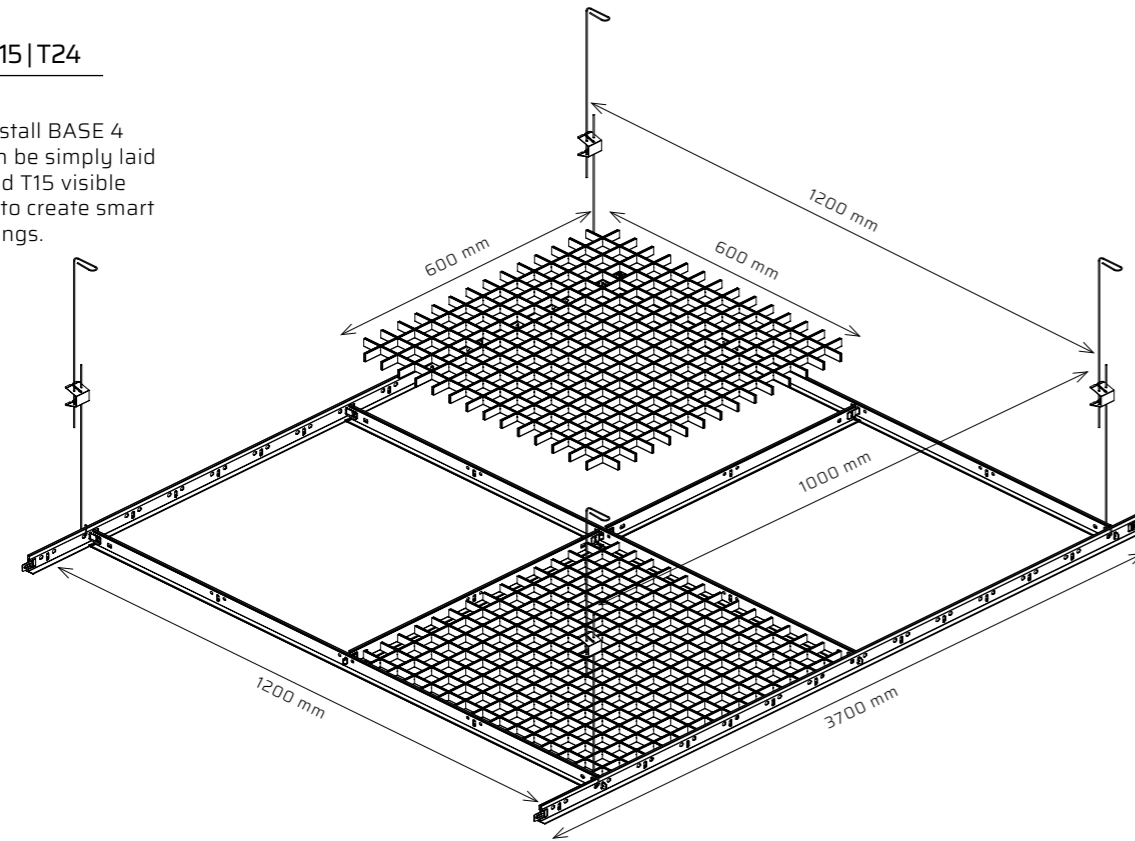


ph: Kristina Hraběťová

# ATENA METAL CELLS | OPEN CELL PANELS

## BASE 4 T15 | T24

Easy to install BASE 4 panels can be simply laid on T24 and T15 visible structure, to create smart metal ceilings.



## FEATURES

### PRODUCT TYPE

600x600 | 600x1200 mm open cell panels  
other modules on request

### OPEN CELL ELEMENTS

Base 4 H18 | base 4 H30 TM-TF interlocking profiles

### MATERIALS

4/10 Aluminum

### INTEGRATED STRUCTURE ATENA STEEL STRONG

Main T15 | T24 da 3700 mm Easy T15  
Cross T15 | T24 da 1200 mm Easy T24 | Easy Fox  
Cross T15 | T24 da 600 mm Easy T24 Antiseismic

### HANGERS

Twister, Nonius, Standard with spring, 90° hanger

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

### WALL ANGLES

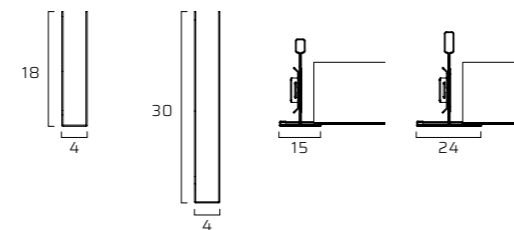
"C" 25x42x10 mm  
with the same material and finishing of the open cell

### ACCESSORIES

Lighting adapters | Antiseismic Kit on request

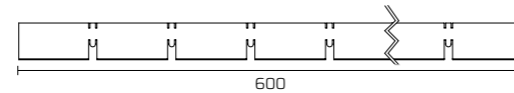
## OPEN CELL SECTIONS

BASE 4 T15 | T24

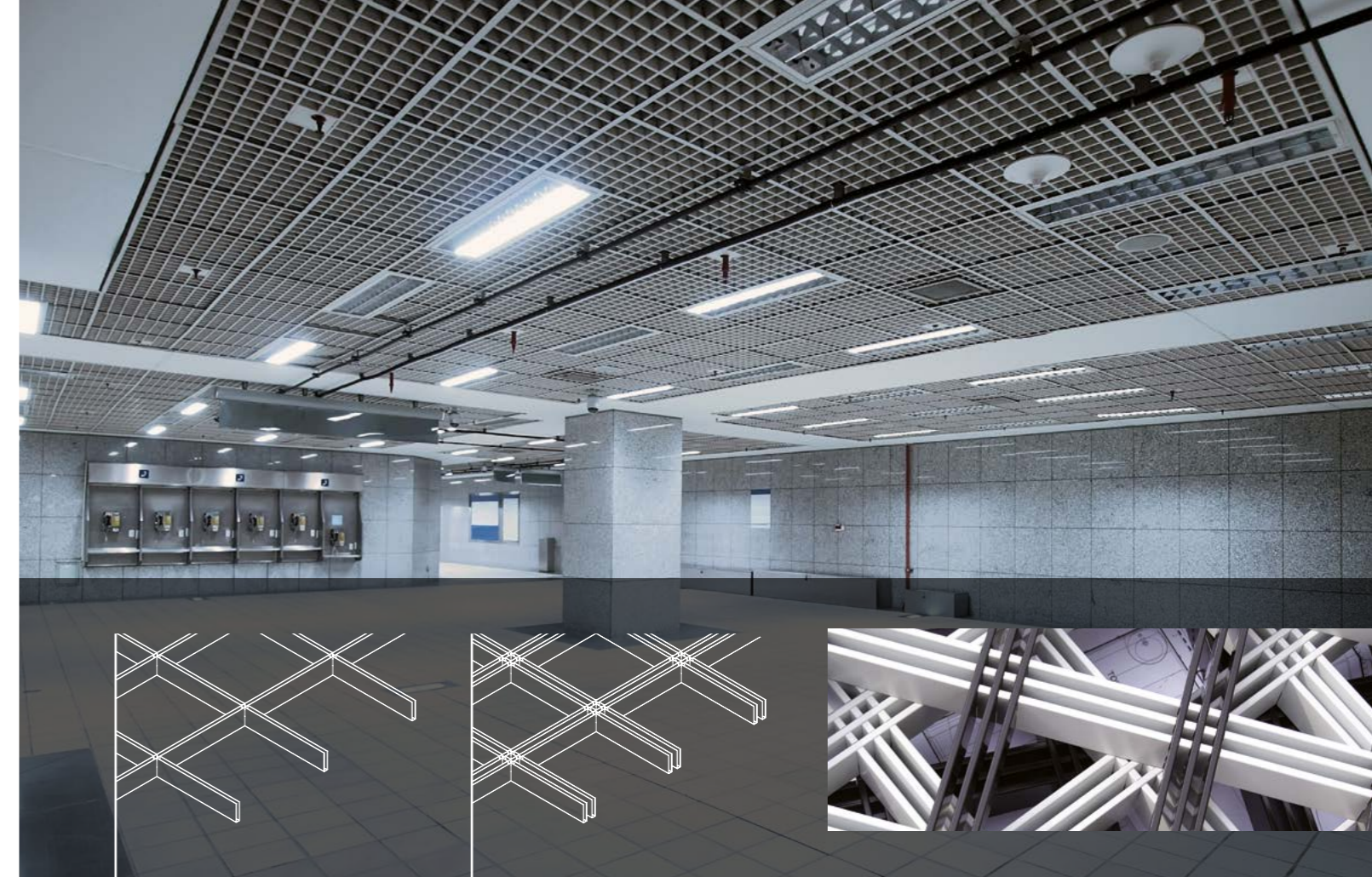
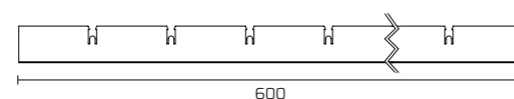


## ELEMENTS SECTION

TF ELEMENTS



TM ELEMENTS

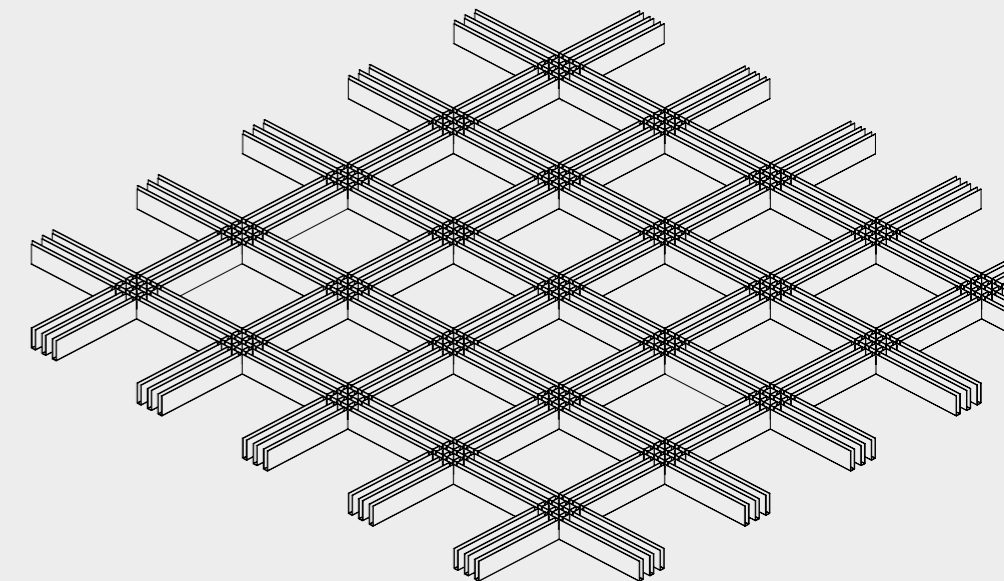


## PANELS

BASE 4 open cell can be also realized installing the panels on Atena Steel Strong visible structures T24 and T15.

### ORIGINAL MIX!

Base 4 is available in different models made up of one or more elements on request.



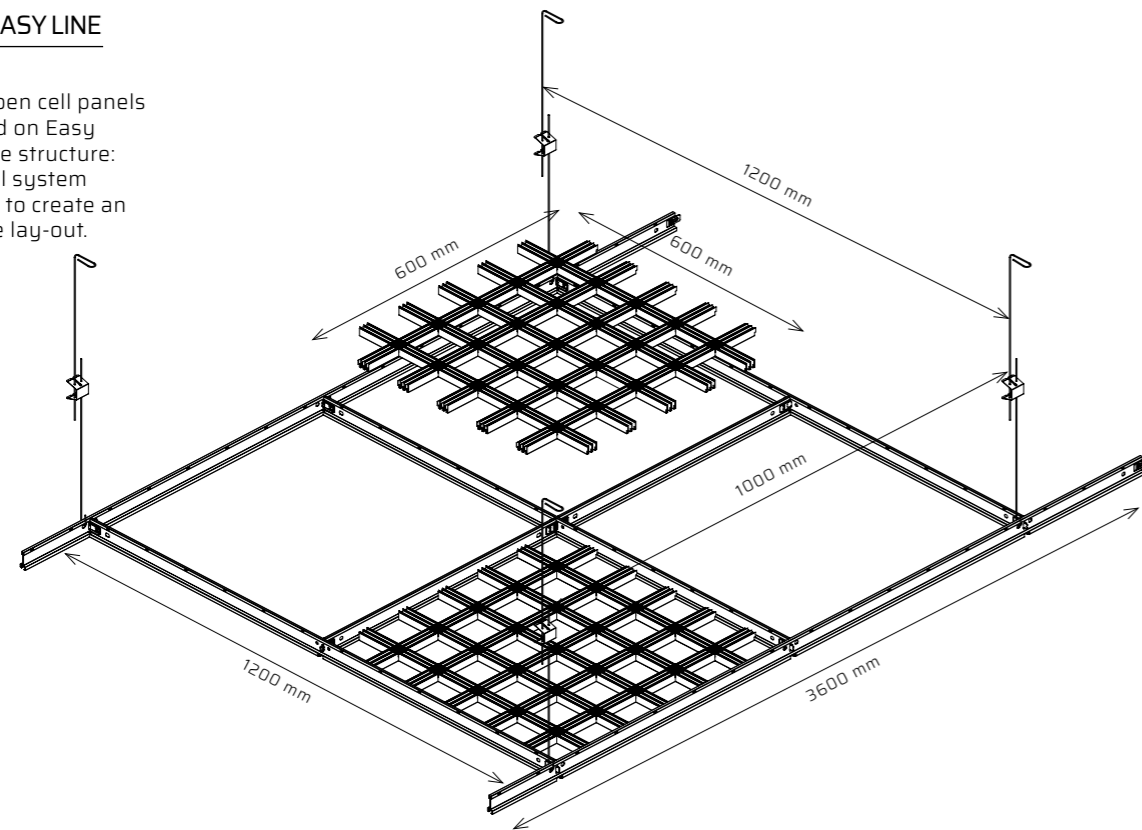
## TECHNICAL FEATURES

| MODEL               | MESHES | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           | LM/SQM | KG/SQM |     |
|---------------------|--------|-----------|---------------------------------|-----------|--------|--------|-----|
|                     |        |           | TM 600 mm                       | TF 600 mm |        | H18    | H30 |
| BASE 4<br>T15   T24 | 20x20  | 64%       | 29                              | 29        | 96,67  | 4,1    | 6,6 |
|                     | 30x30  | 75,1%     | 19                              | 19        | 63,33  | 2,7    | 4,4 |
|                     | 40x40  | 81%       | 14                              | 14        | 46,67  | 2,0    | 3,2 |
|                     | 50x50  | 84,6%     | 11                              | 11        | 36,67  | 1,6    | 2,6 |
|                     | 60x60  | 87,1%     | 9                               | 9         | 30,00  | 1,3    | 2,1 |
|                     | 75x75  | 89,6%     | 7                               | 7         | 23,33  | 1,0    | 1,6 |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.

**BASE 4 EASY LINE**

BASE 4 open cell panels can be laid on Easy Line visible structure: an original system conceived to create an innovative lay-out.



**FEATURES**

**PRODUCT TYPE**

600x600 | 600x1200 mm open cell panels  
other modules on request

**OPEN CELL ELEMENTS**

Base 4 H18 | base 4 H30 TM-TF interlocking profiles

**MATERIALS**

4/10 Aluminum

**INTEGRATED STRUCTURE ATENA STEEL STRONG**

Main profile 3600 mm  
Cross profile 1200 mm  
Cross profile 600 mm

Easy Line

**HANGERS**

Twister, Nonius, Standard with spring, 90° hanger

**COLORS | FINISHING**

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

**WALL ANGLES**

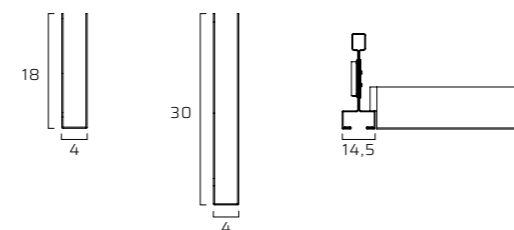
"C" 25x52x10 mm  
with the same material and finishing of the open cell

**ACCESSORIES**

Lighting adapters | Antiseismic Kit on request

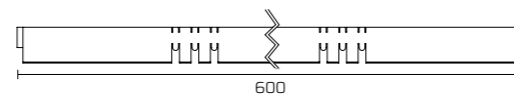
**OPEN CELL SECTIONS**

**BASE 4 EASY LINE**

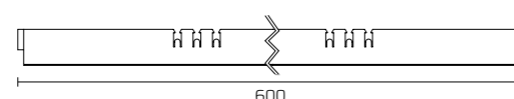


**ELEMENTS SECTION**

**TF ELEMENTS**



**TM ELEMENTS**

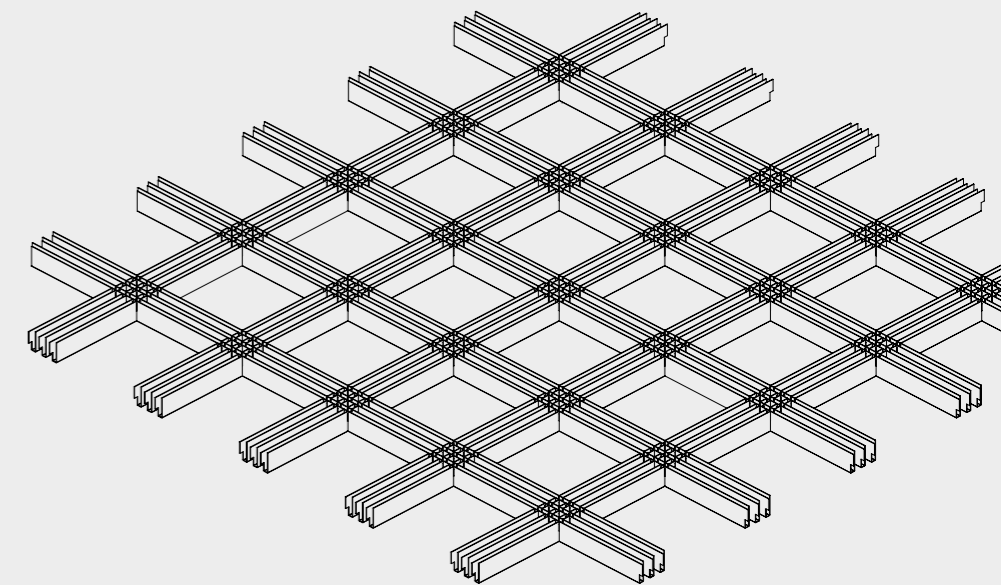


**PANELS**

By installing Atena Open Cell BASE 4 on Easy Line, you can create a particular colour scheme. Tiles laid on Easy Line coloured grid are perfectly planar with it; on request, Atena offers a coloured shutter with led lighting strip, which enriches the composition.

**ORIGINAL MIX!**

Base 4 is available in different models made up of one or more elements on request.



**TECHNICAL FEATURES**

| MODEL               | MESHES | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           | LM/SQM | KG/SQM |     |
|---------------------|--------|-----------|---------------------------------|-----------|--------|--------|-----|
|                     |        |           | TM 600 mm                       | TF 600 mm |        | H18    | H30 |
| BASE 4<br>T15   T24 | 20x20  | 64%       | 29                              | 29        | 96,67  | 4,1    | 6,6 |
|                     | 30x30  | 75,1%     | 19                              | 19        | 63,33  | 2,7    | 4,4 |
|                     | 40x40  | 81%       | 14                              | 14        | 46,67  | 2,0    | 3,2 |
|                     | 50x50  | 84,6%     | 11                              | 11        | 36,67  | 1,6    | 2,6 |
|                     | 60x60  | 87,1%     | 9                               | 9         | 30,00  | 1,3    | 2,1 |
|                     | 75x75  | 89,6%     | 7                               | 7         | 23,33  | 1,0    | 1,6 |

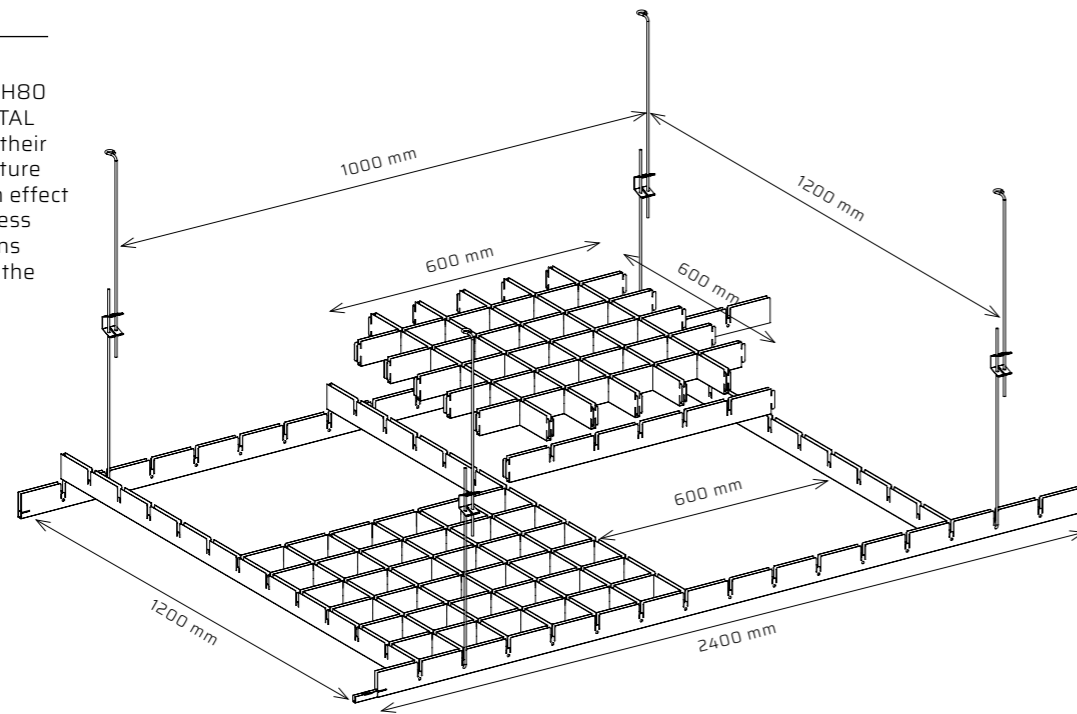
For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.



# ATENA METAL CELLS | OPEN CELL PANELS

## BASE 20 H80

Atena Base 20 H80 OPEN CELL METAL CEILINGS have their own main structure which create an effect of continuousness without junctions or gaps among the panels.



## FEATURES

### PRODUCT TYPE

600x600 mm open cell panels  
other modules on request

### OPEN CELL ELEMENTS

Base 20 H80 TM-TF interlocking profiles  
Central groove on request

### MATERIALS

5/10 Aluminum

### INTEGRATED STRUCTURE

2400 mm main profiles  
1200 mm cross profiles  
600 mm cross profiles

### HANGERS

Ø4 standard hanger with spring

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

### WALL ANGLES

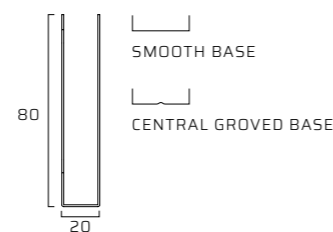
"C" 25x82x10 mm  
with the same material and finishing of the open cell

### ACCESSORIES

Lighting adapters

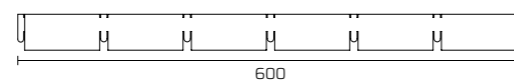
## OPEN CELL SECTIONS

### BASE 20 H80

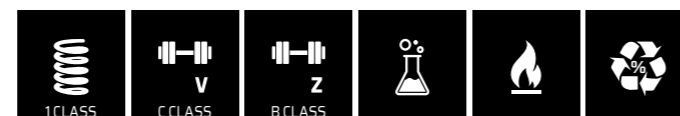
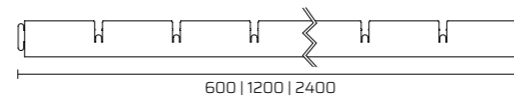


## ELEMENTS SECTION

### TF ELEMENTS



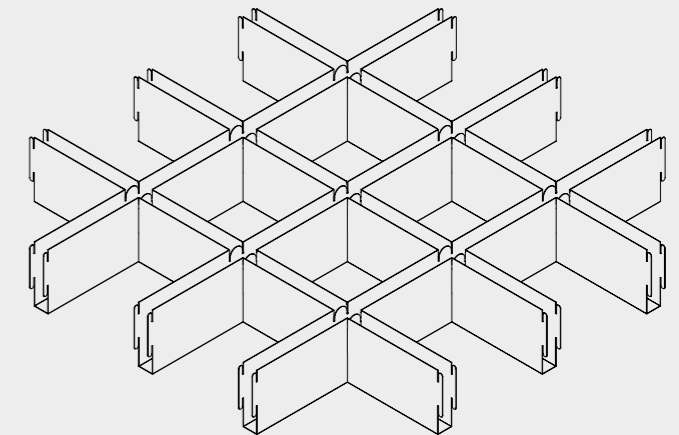
### TM AND MAIN ELEMENTS



## PANNELLI

The BASE 20 H80 open cell ceiling, is made up of 600x600 mm panels composed of TM and TF elements with 20 mm base and 80 mm in high.

This section gives the open cell a light and airy aesthetic, especially in the configuration with a 300x300 mm mesh, where the distance between elements, brings out the linearity of the configuration.



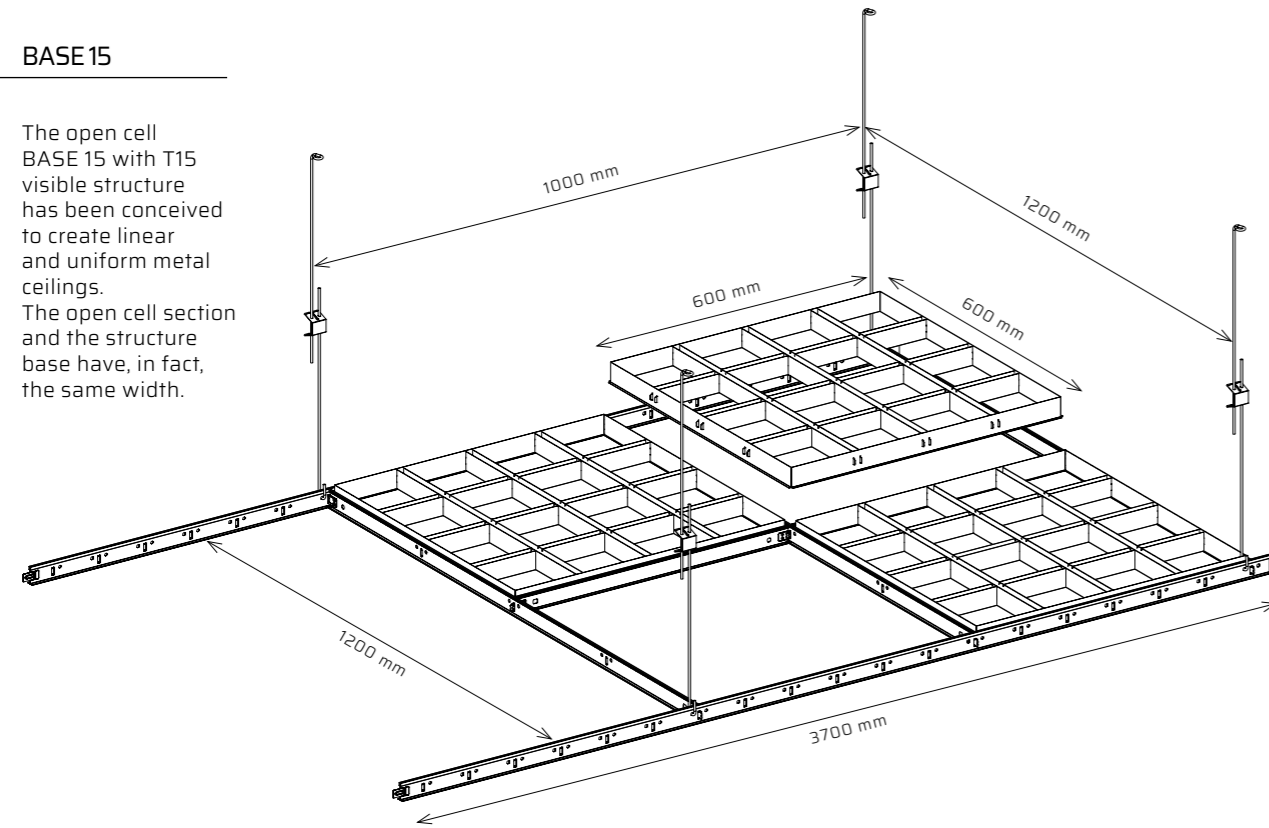
## TECHNICAL FEATURES

| MODEL       | MESHERS | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           | PIECES/SQM      |                 |                | LM/SQM | KG/SQM |
|-------------|---------|-----------|---------------------------------|-----------|-----------------|-----------------|----------------|--------|--------|
|             |         |           | TM 600 mm                       | TF 600 mm | 2400 mm PROFILE | 1200 mm PROFILE | 600 mm PROFILE |        |        |
| BASE 20 H80 | 100x100 | 64%       | 5                               | 5         | 0,36            | 1,38            | 1,38           | 20,00  | 4,9    |
|             | 150x150 | 75,11%    | 3                               | 3         | 0,36            | 1,38            | 1,38           | 13,33  | 3,3    |
|             | 200x200 | 81%       | 2                               | 2         | 0,36            | 1,38            | 1,38           | 10,00  | 2,5    |
|             | 300x300 | 87,11%    | 1                               | 1         | 0,36            | 1,38            | 1,38           | 6,67   | 1,6    |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.

**BASE 15**

The open cell BASE 15 with T15 visible structure has been conceived to create linear and uniform metal ceilings. The open cell section and the structure base have, in fact, the same width.



**FEATURES**

**PRODUCT TYPE**

600x600 | 600x1200 mm open cell panels  
other modules on request

**OPEN CELL ELEMENTS**

Base 15 H37,5 TM-TF interlocking profiles

**MATERIALS**

5/10 Aluminum

**STRUCTURE**

Steel Strong Easy T15

**HANGERS**

Twister, Nonius, Standard with spring, 90° hanger

**COLORS | FINISHING**

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

**WALL ANGLES**

"C" 25x42x10 mm  
with the same material and finishing of the open cell

**ACCESSORIES**

Lighting adapters

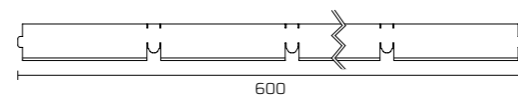
**OPEN CELL SECTIONS**

BASE 15

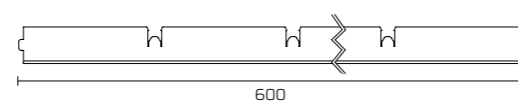


**ELEMENTS SECTION**

TF ELEMENTS

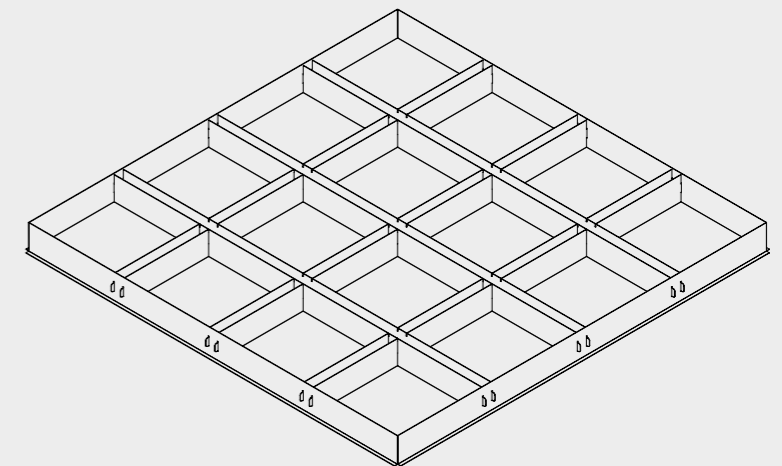


TM AND MAIN ELEMENTS



**PANELS**

BASE 15 metal ceiling is made up of panels composed of TM and TF elements having a "U-shaped" section with a height of 37,5 mm and a base of 15 mm. These elements cross each other to realize the desired mesh. Panels completed with their own frame lay on Atena Easy T15 visible structure.



**TECHNICAL FEATURES**

| MODEL   | MESHES  | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           |       | LM/SQM | KG/SQM |
|---------|---------|-----------|---------------------------------|-----------|-------|--------|--------|
|         |         |           | TM 600 mm                       | TF 600 mm | FRAME |        |        |
| BASE 15 | 50x50   | 49%       | 11                              | 11        | 4     | 36,66  | 4,7    |
|         | 60x60   | 56,25%    | 9                               | 9         | 4     | 30,00  | 3,9    |
|         | 75x75   | 64%       | 7                               | 7         | 4     | 23,33  | 3,0    |
|         | 86x86   | 68,16%    | 6                               | 6         | 4     | 20,00  | 2,6    |
|         | 100x100 | 72,25%    | 5                               | 5         | 4     | 16,66  | 2,2    |
|         | 120x120 | 76,56%    | 4                               | 4         | 4     | 13,33  | 1,8    |
|         | 150x150 | 81%       | 3                               | 3         | 4     | 10,00  | 1,4    |
|         | 200x200 | 85,56%    | 2                               | 2         | 4     | 6,66   | 1,0    |

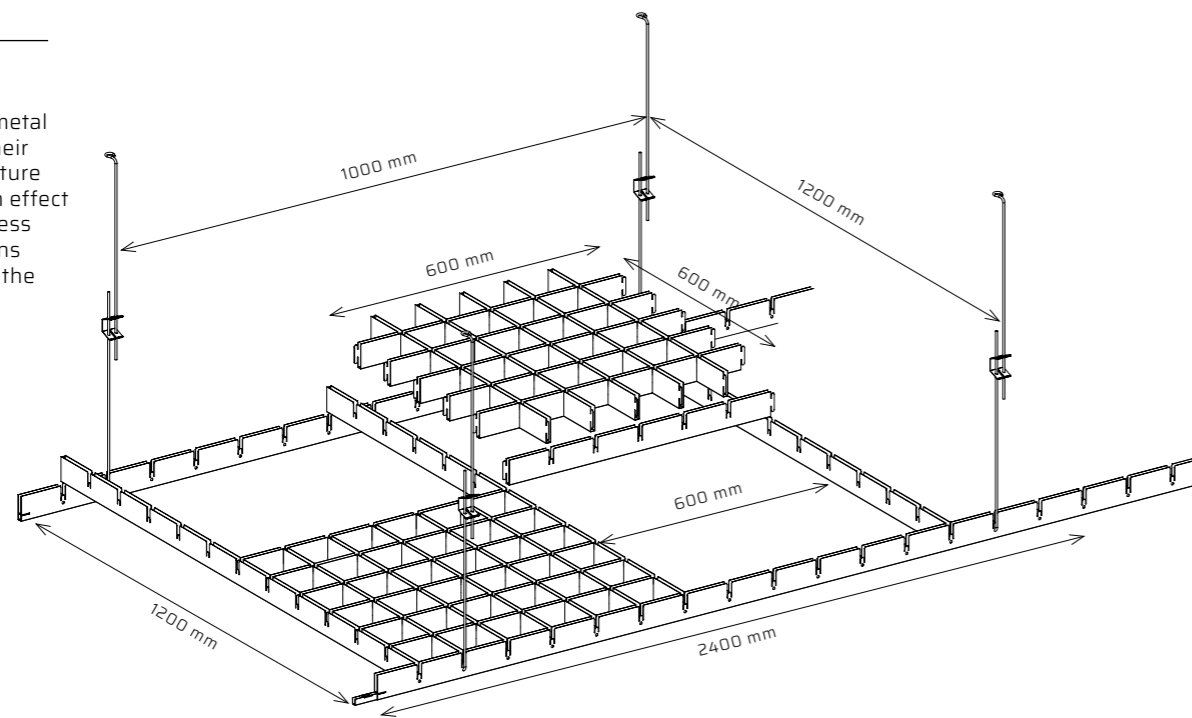
Value describe the incidence of TM and TF, without frame.  
For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.



# ATENA METAL CELLS | OPEN CELL PANELS

## H40 | H50

Atena H40 and H50 open cell metal ceilings have their own main structure which create an effect of continuousness without junctions or gaps among the panels.



## FEATURES

### PRODUCT TYPE

600x600 mm open cell panels  
other modules on request

### OPEN CELL ELEMENTS

Base 10 H40 | base 10 H50 TM-TF interlocking profiles

### MATERIALS

5/10 Aluminum

### INTEGRATED STRUCTURE

2400 mm main profile  
1200 mm cross profile  
600 mm cross profile

### HANGERS

Ø4 standard hanger with spring

### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

### WALL ANGLES

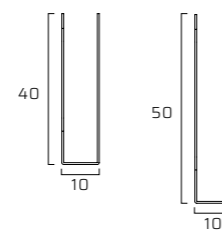
"C" 25x42x10 mm for H40 | 25x52x10 mm for H50  
with the same material and finishing of the open cell

### ACCESSORIES

Lighting adapters

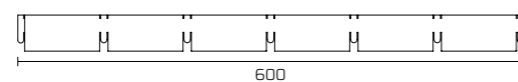
## OPEN CELL SECTIONS

H40 | H50

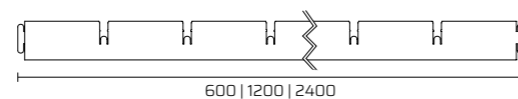


## ELEMENTS SECTION

TF ELEMENTS

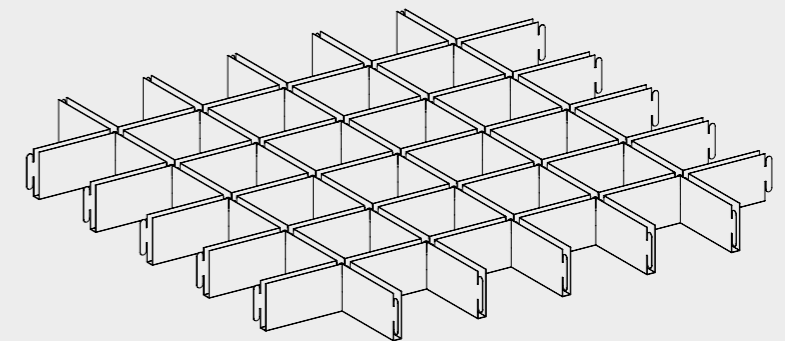


TM AND MAIN PROFILES



## PANELS

H40 - H50 metal ceiling is made up of 600x600 mm panels composed of TM and TF elements having a U-shaped section with a height of 40 mm or 50 mm and a base of 10 mm. These elements cross each other to realize the desired mesh and are installed with an integrated bearing structure made of the same material.



## TECHNICAL FEATURES

| MODEL | MESHES  | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           | PIECES/SQM      |                 |                | KG/SQM |     |     |
|-------|---------|-----------|---------------------------------|-----------|-----------------|-----------------|----------------|--------|-----|-----|
|       |         |           | TM 600 mm                       | TF 600 mm | 2400 mm PROFILE | 1200 mm PROFILE | 600 mm PROFILE | LM/SQM | H40 | H50 |
| H40   | 50x50   | 64%       | 11                              | 11        | 0,7             | -               | 2,78           | 40,00  | 4,9 | 6,0 |
|       | 60x60   | 69,44%    | 9                               | 9         | 0,7             | -               | 2,78           | 33,33  | 4,1 | 5,0 |
|       | 75x75   | 75,11%    | 7                               | 7         | 0,36            | 1,38            | 1,38           | 26,67  | 3,3 | 4,0 |
| H50   | 86x86   | 78,1%     | 6                               | 6         | 0,36            | 1,38            | 1,38           | 23,33  | 2,9 | 3,5 |
|       | 100x100 | 81%       | 5                               | 5         | 0,36            | 1,38            | 1,38           | 20,00  | 2,5 | 3,0 |
|       | 120x120 | 84,03%    | 4                               | 4         | 0,36            | 1,38            | 1,38           | 16,66  | 2,1 | 2,5 |
|       | 150x150 | 87,1%     | 3                               | 3         | 0,36            | 1,38            | 1,38           | 13,33  | 1,6 | 2,0 |
|       | 200x200 | 90,25%    | 2                               | 2         | 0,36            | 1,38            | 1,38           | 10,00  | 1,2 | 1,5 |

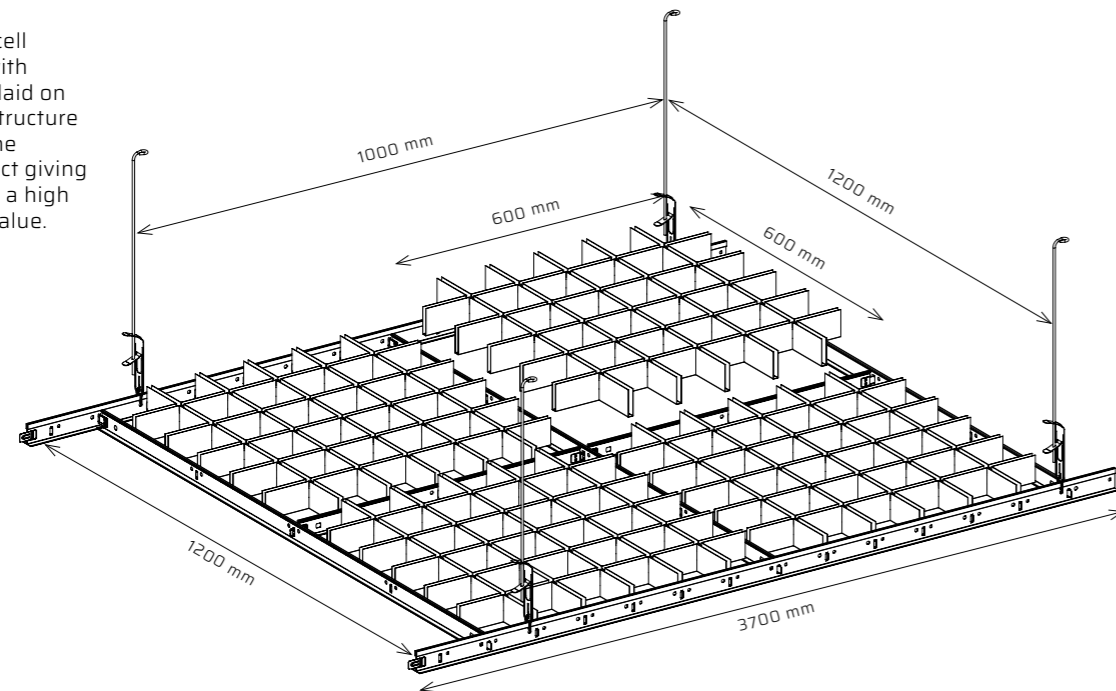
For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.



# ATENA METAL CELLS | OPEN CELL PANELS

## H40 | H50 T24

Atena open cell H40 - H50 with detachment laid on T24 visible structure underlines the modular effect giving the structure a high aesthetical value.



### FEATURES

#### PRODUCT TYPE

600x600 | 600x1200 mm open cell panels  
other modules on request

#### OPEN CELL ELEMENTS

Base 10 H40 | base 10 H50 TM-TF interlocking profiles

#### MATERIALS

5/10 Aluminum

#### INTEGRATED STRUCTURE ATENA STEEL STRONG

2400 mm main profiles Easy T24  
1200 mm cross profiles Easy T24 Antiseismic  
600 mm cross profiles Easy Fox

#### HANGERS

Twister, Nonius, Standard with spring, 90° hanger

#### COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

#### WALL ANGLES

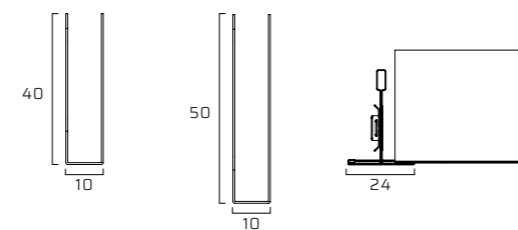
"C" 25x42x10 mm for H40 | 25x52x10 mm for H50  
with the same material and finishing of the open cell

#### ACCESSORIES

Lighting adapters | Antiseismic Kit on request

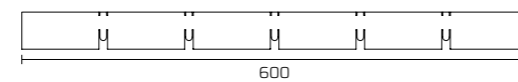
### OPEN CELL SECTIONS

H40 | H50 T24

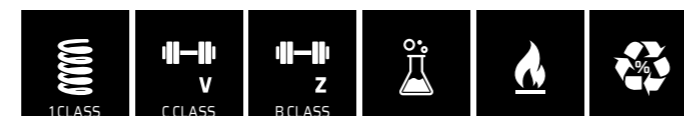
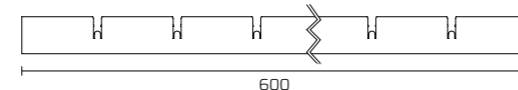


### ELEMENTS SECTION

TF ELEMENTS

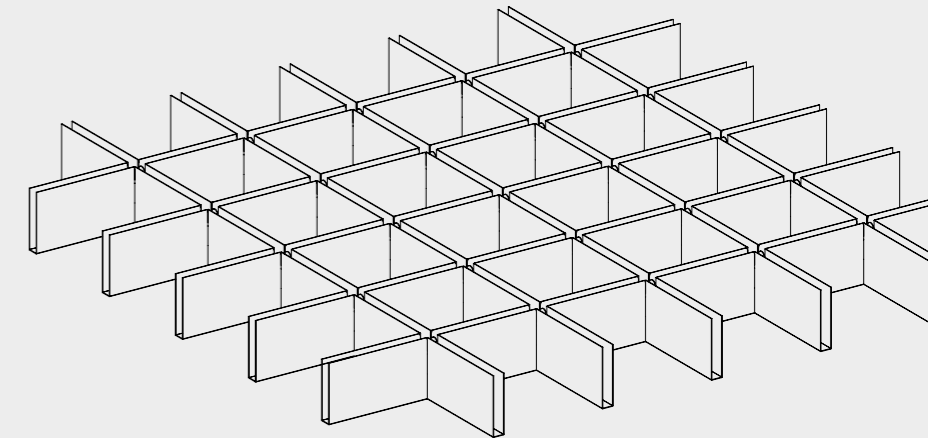


TM ELEMENTS



### PANELS

H40 - H50 T24 metal ceiling "with detachment" is made up of panels composed of TM and TF elements having a "U-shaped" section with a height of 40 mm or 50 mm and a base of 10 mm. These elements cross each other to realize the desired mesh and they lay on the Atena Steel Strong T24 visible structures.



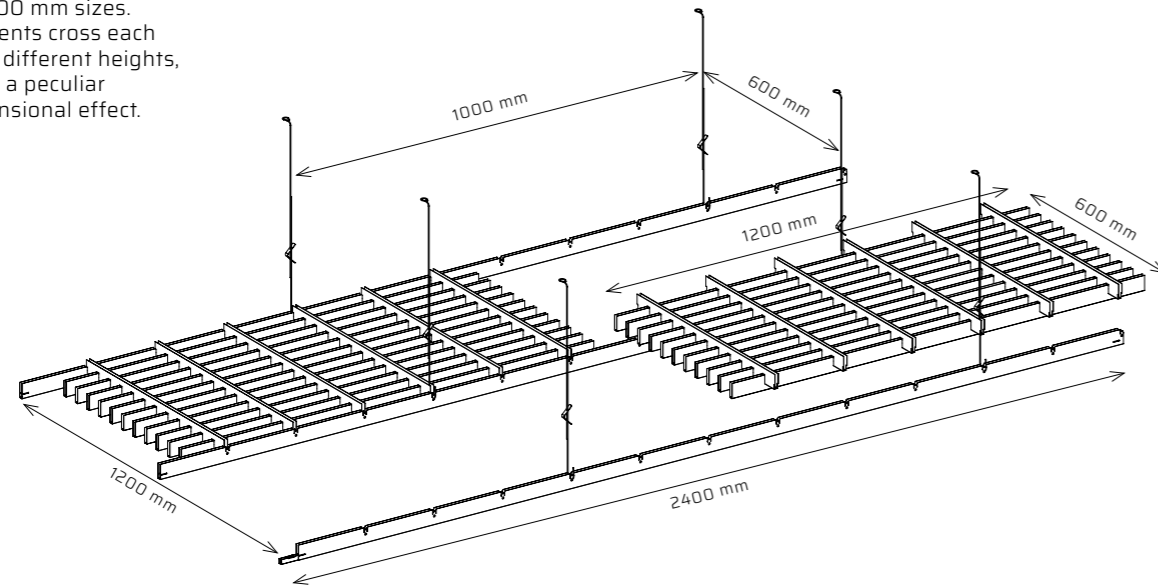
### TECHNICAL FEATURES

| MODEL                         | MESHERS | OPEN AREA | 600x600 PANEL ELEMENTS QUANTITY |           | LM/SQM | KG/SQM |     |
|-------------------------------|---------|-----------|---------------------------------|-----------|--------|--------|-----|
|                               |         |           | TM 600 mm                       | TF 600 mm |        | H40    | H50 |
| H40<br>H50<br>WITH DETACHMENT | 50x50   | 64%       | 11                              | 11        | 36,66  | 4,5    | 5,5 |
|                               | 60x60   | 69,44%    | 9                               | 9         | 30,00  | 3,7    | 4,5 |
|                               | 75x75   | 75,11%    | 7                               | 7         | 23,33  | 2,9    | 3,5 |
|                               | 86x86   | 78,1%     | 6                               | 6         | 20,00  | 2,5    | 3,0 |
|                               | 100x100 | 81%       | 5                               | 5         | 16,66  | 2,1    | 2,5 |
|                               | 120x120 | 84,03%    | 4                               | 4         | 13,33  | 1,6    | 2,0 |
|                               | 150x150 | 87,1%     | 3                               | 3         | 10,00  | 1,2    | 1,5 |
|                               | 200x200 | 90,25%    | 2                               | 2         | 6,66   | 0,8    | 1,0 |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.

DUALGRID

DUALGRID is the modular cells system available in 600x1200 mm sizes. Its elements cross each other at different heights, creating a peculiar tri-dimensional effect.



FEATURES

PRODUCT TYPE

600x1200 mm open cell panels  
other modules on request

OPEN CELL ELEMENTS

Base 10 H40 TM-TF interlocking profiles

MATERIALS

5/10 Aluminum

INTEGRATED STRUCTURE

2400 mm main profiles

HANGERS

Ø4 standard hanger with spring

COLORS | FINISHING

Atena standard white and silver pre-painted aluminum  
RAL / NCS post-painting  
Wood finishing on request (see page 40)

WALL ANGLES

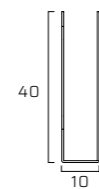
"C" 25x52x10 mm  
with the same material and finishing of the open cell

ACCESSORIES

Lighting adapters

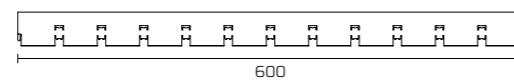
OPEN CELL SECTIONS

DUALGRID

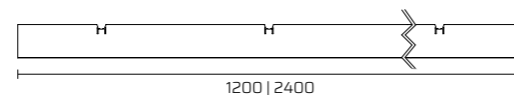


ELEMENTS SECTION

TF ELEMENTS



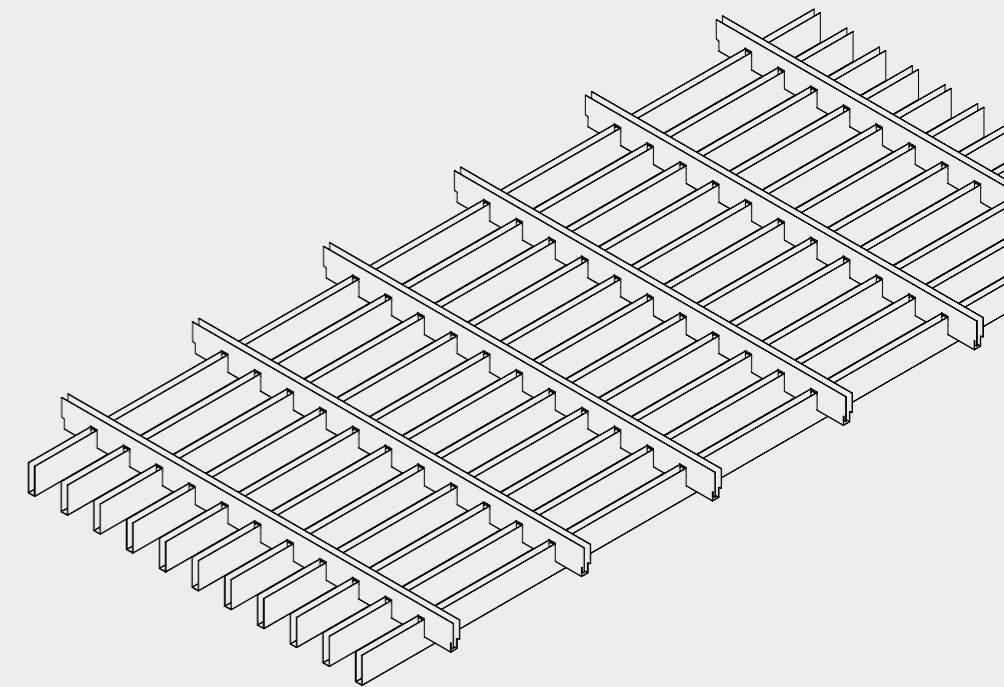
TM AND MAIN ELEMENTS



PANELS

DUALGRID metal ceiling is made up of 600x1200 mm tiles composed of TM and TF elements having a "U-shaped" section with a height of 40 mm and a base of 10 mm.

These elements cross each other to realize the desired mesh, creating a difference of 18 mm in height between the two elements. Panels are as well installed on their long side onto the bearing elements.



TECHNICAL FEATURES

| MODEL    | MESHES  | OPEN AREA | 600x1200 PANEL ELEMENTS QUANTITY |           | PIECES/SQM | LM/SQM | KG/SQM |
|----------|---------|-----------|----------------------------------|-----------|------------|--------|--------|
|          |         |           | TM 1200 mm                       | TF 600 mm |            |        |        |
| DUALGRID | 50x200  | 76%       | 11                               | 6         | 0,7        | 25,03  | 3,1    |
|          | 75x200  | 82,3%     | 7                                | 6         | 0,7        | 18,36  | 2,3    |
|          | 100x200 | 85,5%     | 5                                | 6         | 0,7        | 15,03  | 1,9    |
|          | 150x200 | 88,67%    | 3                                | 6         | 0,7        | 11,70  | 1,4    |

For specific project requirements, the hanger incidence may vary. Please check with the Atena S.p.A technical department.



EXECUTIVE ENGINEERING

# PERFORMANCES

DIMENSIONING, DESIGN FEASIBILITY



Finishing  
Wall angles and hangers  
Lighting fixtures  
Weights and packaging

ATENA-IT.COM

Picture: Open cell base 4 h18 panels metal ceiling | ph: Kristína Hrabětová




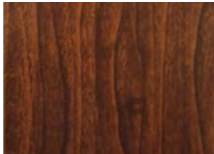

FINISHING

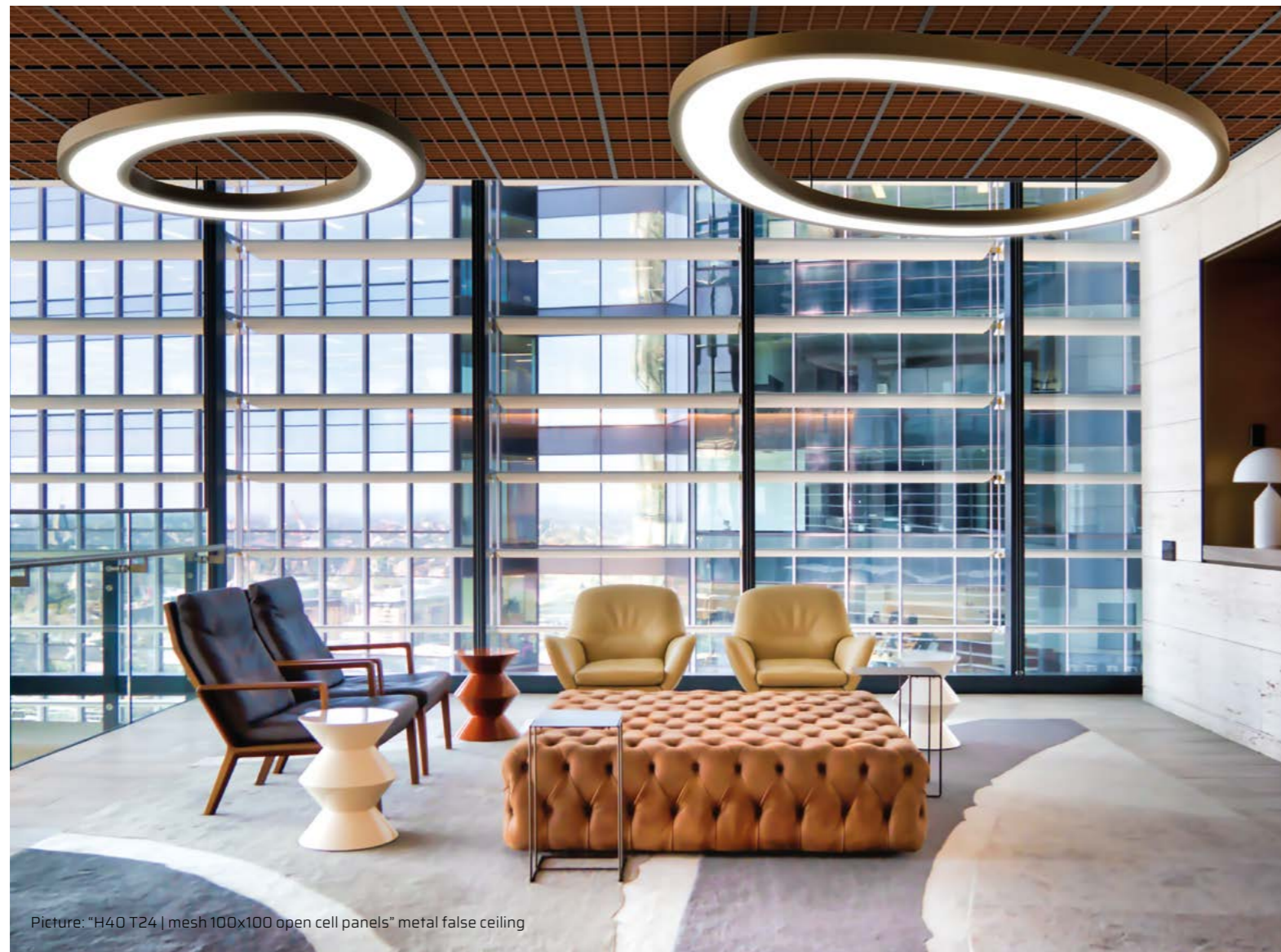


**Metal wood effect**  
**PVC covering**  
**Nanotech powder coatings**

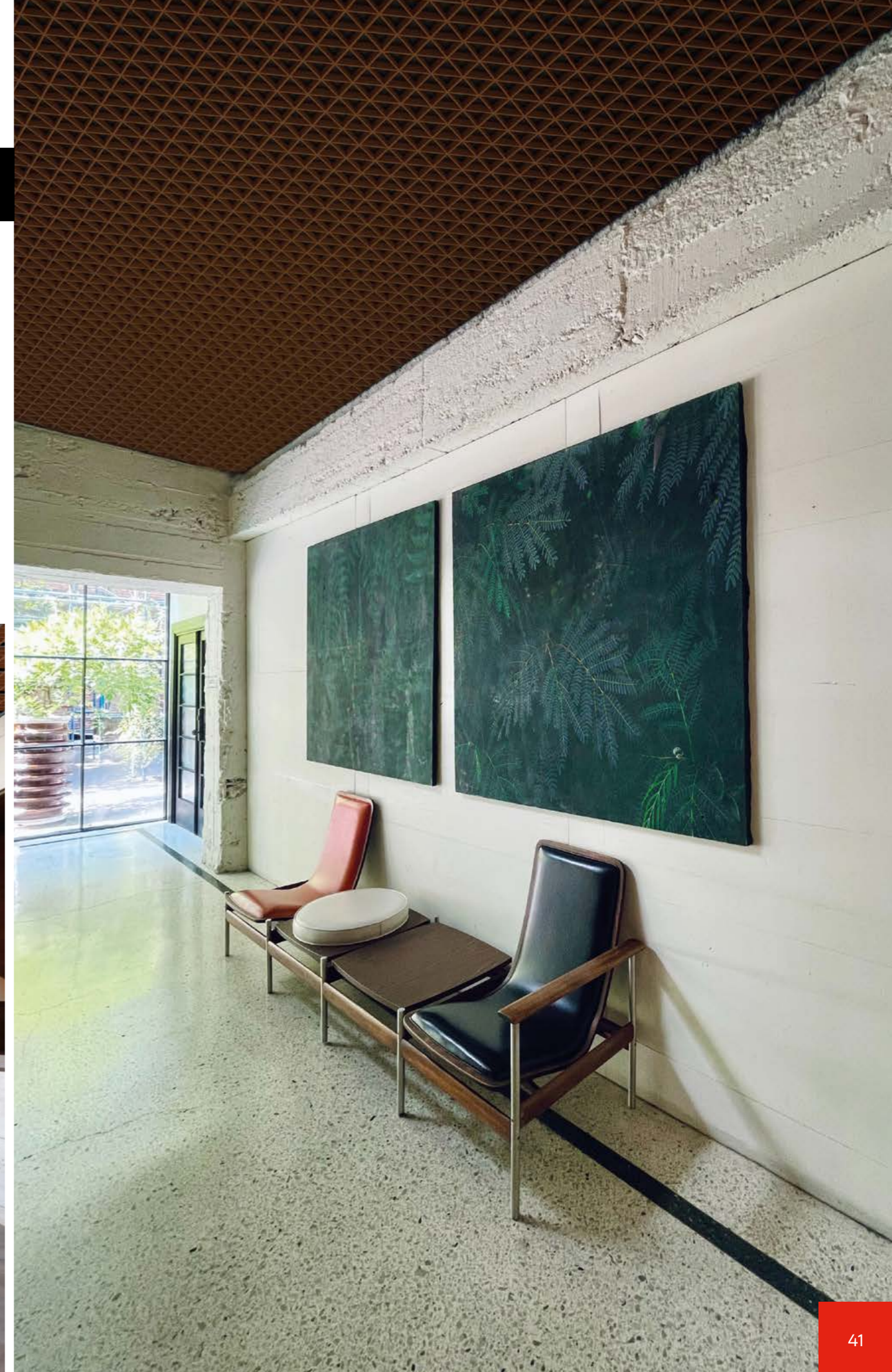
The **aesthetic metal finishing** represents an important phase of the manufacturing process, and includes a wide range of **decorative techniques**, high levels of **precision in execution**, continuous research of **new materials** and **latest generation machines** to ensure high quality standards.

Standard aluminum wood

|   |  |   |
|---|--|---|
|  |  |   |
| L07<br>MEDIUM PINE  | L13<br>CHÊNE IRLANDAIS   |   |
|  |  |  |
| L17<br>OREGON 4   | L14<br>MADERA BRAZIL   | L40<br>ROUGH WHITE  |



Picture: "H40 T24 | mesh 100x100 open cell panels" metal false ceiling



WALL ANGLES AND HANGERS

"C" AND "L" PROFILES

To frame the open cells Atena has a complete range of wall angles, supplied in the same materials and finishing of the ceiling. In addition to the standard solutions, the perimeter frame of the ceiling can be realized both with plasterboard closure and micro-perforated, smooth or sublimated metal surfaces. **According to the UNI EN 13964:2007 Atena wall angles for metal ceilings have been tested for static load by Istituto Giordano S.p.A.**

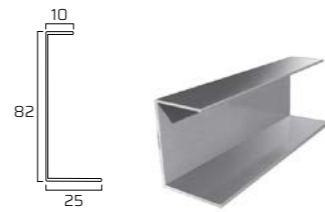
"C" 25x42x10 mm PROFILE  
L=4000mm  
H40 | H40 T24 | BASE 15  
BASE 4 T24 | BASE 4 T15 | TRIGON



"C" 25x52x10 mm PROFILE  
L=4000mm  
H50 | H50 T24 | DUALGRID  
BASE 4 EASY LINE



"C" 25x82x10 mm PROFILE  
L=4000mm | BASE 20 H80



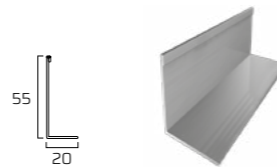
"C" 10x20x25 mm PROFILE  
L=4000mm  
BASE 4 H18



"C" 18x33x25 mm PROFILE  
L=4000mm  
BASE 4 H30 | BASE 4 H30 SC  
BASE 4 H30 SC DUALGRID



"L" 55x20 mm PROFILE  
L=3000mm  
MONOLAMA R-T24



Please check with the technical department of the correct sizing of the perimeter according to the project requirements.

OPEN CELL HANGERS

Open cell with integrated structure

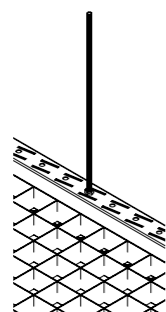
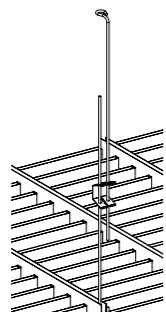
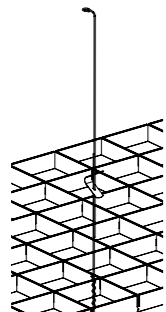
Ø2 mm double hanger with single spring  
BASE 4 H18 | H30

Ø4 mm double hanger with single spring

H40 | H50 | DUALGRID  
BASE 4 H30 SC/DUALGRID  
BASE 20 H80 | TRIGON

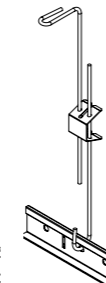
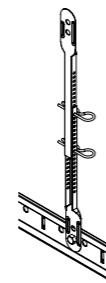
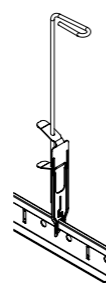
M6 threaded bar

LOGICO | BASE 4 H30 SC  
BASE 4 H30 SC/DUALGRID



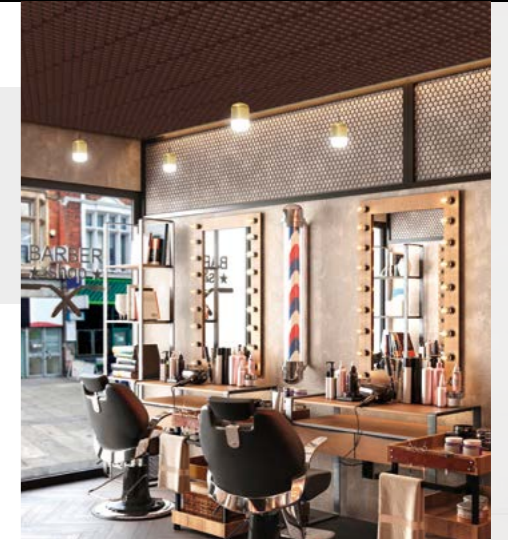
Open cell with T24 - T15 - Easy Line structure

Twister Nonius Standard 90° hanger



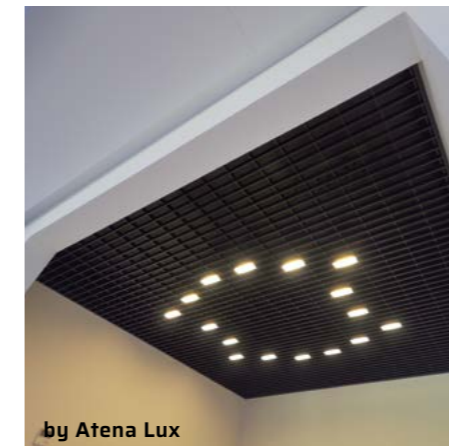
LIGHTING SOLUTIONS

In addition to lighting solutions made up of **recessed lighting elements** or **spotlights with custom made adapters**, Atena Lux signs innovative lighting solutions conceived to **perfectly integrate** the Atena metal ceilings' design.



MET G FOR ATENA DUALGRID LIGHTING SYSTEM

Integrated lighting system for ATENA DUALGRID  
75x200 mm mesh.



by Atena Lux



PLANG

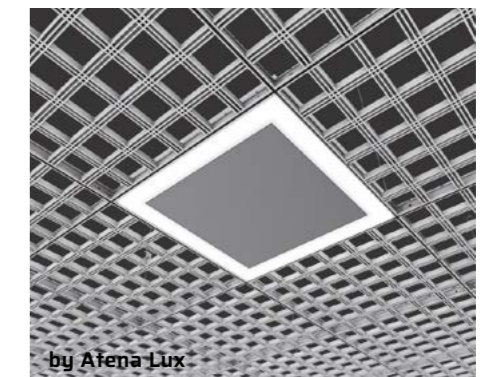
Integrated solution for ATENA H40 and H50 open cells.



by Atena Lux

4 SIDE G

4SIDE G lay in lighting LED solution for ATENA Base 4 open cell with Easy Line structure.



by Atena Lux

WEIGHTS



| MESHES  | BASE 20 H80 | H40 | H40 WITH DETACHMENT | H50 | H50 WITH DETACHMENT | BASE 15 | MESHES  | DUALGRID | MESHES | BASE 4 |     | BASE 4 + T |     | MONOLAMA R-T24 |
|---------|-------------|-----|---------------------|-----|---------------------|---------|---------|----------|--------|--------|-----|------------|-----|----------------|
|         |             |     |                     |     |                     |         |         |          |        | H18    | H30 | H18        | H30 |                |
| 50x50   | /           | 4,9 | 4,5                 | 6,0 | 5,5                 | 4,7     | 50x200  | 3,1      | 20x20  | 4,3    | 6,8 | 4,1        | 6,6 | /              |
| 60x60   | /           | 4,1 | 3,7                 | 5,0 | 4,5                 | 3,9     | 75x200  | 2,3      | 30x30  | 2,9    | 4,7 | 2,7        | 4,4 | /              |
| 75x75   | /           | 3,3 | 2,9                 | 4,0 | 3,5                 | 3,0     | 100x200 | 1,9      | 35x35  | /      | /   | /          | /   | /              |
| 86x86   | /           | 2,9 | 2,5                 | 3,5 | 3,0                 | 2,6     | 150x200 | 1,4      | 40x40  | 2,2    | 3,6 | 2,0        | 3,2 | 4,40           |
| 100x100 | 4,9         | 2,5 | 2,1                 | 3,0 | 2,5                 | 2,2     | /       | /        | 50x50  | 1,7    | 2,7 | 1,6        | 2,6 | /              |
| 120x120 | /           | 2,1 | 1,6                 | 2,5 | 2,0                 | 1,8     | /       | /        | 60x60  | 1,4    | 2,3 | 1,3        | 2,1 | /              |
| 150x150 | 3,3         | 1,6 | 1,2                 | 2,0 | 1,5                 | 1,4     | /       | /        | 75x75  | 1,1    | 1,8 | 1,0        | 1,6 | /              |
| 200x200 | 2,5         | 1,2 | 0,8                 | 1,5 | 1,0                 | 1,0     | /       | /        | /      | /      | /   | /          | /   | /              |
| 300x300 | 1,6         | /   | /                   | /   | /                   | /       | /       | /        | /      | /      | /   | /          | /   | /              |

| SQUARE MESHES | BASE 4 H30 SC 600x600 | BASE 4 H30 SC 600x1200 | RECTANGULAR MESHES | BASE 4 H30 SC 600x600 | BASE 4 H30 SC 600x1200 | RECTANGULAR MESHES | BASE 4 H30 SC 600x600 | BASE 4 H30 SC 600x1200 |
|---------------|-----------------------|------------------------|--------------------|-----------------------|------------------------|--------------------|-----------------------|------------------------|
| 40x40         | 4,80                  | 4,22                   | 30x60              | 4,80                  | 4,22                   | 100x40             | 3,78                  | 3,19                   |
| 50x50         | 4,12                  | 3,53                   | 30x100             | 4,35                  | 3,76                   | 100x50             | 3,44                  | 2,85                   |
| 60x60         | 3,67                  | 3,08                   | 30x120             | 4,23                  | 3,65                   | 100x60             | 3,21                  | 2,62                   |
| 100x100       | 2,76                  | 2,17                   | 30x150             | 4,12                  | 3,53                   | 100x150            | 2,53                  | -                      |
| 120x120       | 2,53                  | 1,94                   | 40x100             | 3,78                  | 3,19                   | 120x40             | 3,67                  | 3,08                   |
| 150x150       | 2,30                  | 1,72                   | 40x120             | 3,67                  | 3,08                   | 120x50             | 3,32                  | 2,74                   |
| /             | /                     | /                      | 40x150             | 3,55                  | 2,97                   | 120x60             | 3,10                  | 2,51                   |
| /             | /                     | /                      | 50x100             | 3,44                  | 2,85                   | 150x40             | 3,55                  | 2,97                   |
| /             | /                     | /                      | 50x120             | 3,32                  | 2,74                   | 150x50             | 3,21                  | 2,62                   |
| /             | /                     | /                      | 50x150             | 3,21                  | 2,62                   | 150x60             | 2,98                  | 2,40                   |
| /             | /                     | /                      | 60x40              | 3,89                  | 3,65                   |                    |                       |                        |
| /             | /                     | /                      | 60x100             | 3,21                  | 2,62                   |                    |                       |                        |
| /             | /                     | /                      | 60x120             | 3,10                  | 2,51                   |                    |                       |                        |
| /             | /                     | /                      | 60x150             | 2,98                  | 2,40                   |                    |                       |                        |

| RECTANGULAR MESHES | BASE 4 H30 SC DUALGRID 600x1200 | RECTANGULAR MESHES | BASE 4 H30 SC DUALGRID 600x1200 | RECTANGULAR MESHES | BASE 4 H30 SC DUALGRID 600x1200 | RECTANGULAR MESHES | BASE 4 H30 SC DUALGRID 600x1200 |
|--------------------|---------------------------------|--------------------|---------------------------------|--------------------|---------------------------------|--------------------|---------------------------------|
| 30x200             | 6,62                            | 50x200             | 4,80                            | 100x200            | 3,44                            | 150x200            | 2,98                            |
| 30x300             | 6,39                            | 50x300             | 4,57                            | 100x300            | 3,21                            | 150x300            | 2,76                            |
| 40x200             | 5,48                            | 60x200             | 4,35                            | 120x200            | 3,21                            | /                  | /                               |
| 40x300             | 5,26                            | 60x300             | 4,12                            | 120x300            | 2,98                            | /                  | /                               |

| STRUCTURE | EASY T24 | EASY FOX | EASY EASY ANTISIS. | EASY T15 | EASY LINE |
|-----------|----------|----------|--------------------|----------|-----------|
| Kg/ mq    | 1,24     | 0,84     | 1,24               | 0,96     | 1,20      |

| MESHES  | TRIGON | STRUCTURE | EASY T24   EASY ANTISISMICO (3700-1200) |      |
|---------|--------|-----------|---|------|
|         |        |           | H38                                     | H32  |
| 120x120 | 3,07   | Kg/ mq    | 0,77                                    | 0,81 |
| 150x150 | 2,45   |           |   |      |
| 200x200 | 1,84   |           |   |      |

| MODEL  | BLADES    | PITCH | SYSTEM WEIGHT     |                   |
|--------|-----------|-------|-------------------|-------------------|
|        |           |       | Ste. Blades       | All. Blades       |
|        |           |       | Kg/m <sup>2</sup> | Kg/m <sup>2</sup> |
| LOGICO | B100 H100 | 100   | 13,87             | 9,17              |
|        | B100 H120 | 100   | 15,12             | 9,61              |
|        | B100 H150 | 100   | 17,01             | 10,27             |
|        | B100 H100 | 120   | 10,75             | 7,49              |
|        | B100 H120 | 120   | 11,62             | 7,79              |
|        | B100 H150 | 120   | 12,93             | 8,25              |

The weights are intended per sqm, structure included. Hangers excluded. For T-frame models, add the relative weight. Regarding the open cell LOGICO, weights refer to the ceiling system both with steel and aluminium blades.



PACKAGING

| MODEL                            | ASSEMBLED PANELS |   | NOT ASSEMBLED PANELS |    |     |    | 2400 mm PROFILE | 1200 mm PROFILE | 600 mm PROFILE |
|----------------------------------|------------------|---|----------------------|----|-----|----|-----------------|-----------------|----------------|
|                                  | A                | B | TM                   |    | TF  |    | PIECES PER BOZ  |                 |                |
|                                  |                  |   | A                    | B  | A   | B  |                 |                 |                |
| BASE 20 H80                      | 10               | 8 | 212                  | 26 | 212 | 26 | 25              | 59              | 212            |
| H40                              | 20               | 8 | 424                  | 26 | 424 | 26 | 50              | 118             | 424            |
| H40 + T24                        | 20               | 8 | 424                  | 26 | 424 | 26 | /               | /               | /              |
| H50                              | 16               | 8 | 338                  | 26 | 338 | 26 | 34              | 96              | 338            |
| H50 + T24                        | 20               | 8 | 338                  | 26 | 338 | 26 | /               | /               | /              |
| DUALGRID                         | 10               | 6 | 118                  | 26 | 424 | 26 | 50              | /               | /              |
| BASE 4 H18                       | *                | * | 400                  | 96 | 400 | 96 | * (1800 mm)     | *               | *              |
| BASE 4 H30                       | *                | * | 250                  | 96 | 250 | 96 | * (1800 mm)     | *               | *              |
| BASE 4 H18 + T24   T15 EASY LINE | *                | * | 400                  | *  | 400 | *  | /               | /               | /              |
| BASE 4 H30 + T24   T15 EASY LINE | *                | * | 250                  | *  | 250 | *  | /               | /               | /              |
| LOGICO                           |                  |   |                      |    |     |    |                 |                 | *              |
| TRIGON                           |                  |   |                      |    |     |    |                 |                 | *              |
| MONOLAMA R-T24                   |                  |   |                      |    |     |    |                 |                 | *              |
| BASE 4 H30 SC                    |                  |   |                      |    |     |    |                 |                 | *              |
| BASE 4 H30 SC D.                 |                  |   |                      |    |     |    |                 |                 | *              |

| MODEL   | ASSEMBLED PANELS |   | NOT ASSEMBLED ELEMENTS |    |     |    |     |     |
|---------|------------------|---|------------------------|----|-----|----|-----|-----|
|         | A                | B | TM                     |    | TF  |    | L   |     |
|         |                  |   | A                      | B  | A   | B  | A   | B   |
| BASE 15 | 22               | 8 | 300                    | 26 | 300 | 26 | 400 | 120 |

A = pieces per box B = box per pallet L = base 15 open cell panels lateral elements.

\* Variable packaging according to the quantity.



HIGH PERFORMANCE SYSTEMS

# CERTIFICATIONS

INTERNATIONAL TECHNICAL STANDARDS

Certifications

ATENA-IT.COM

Picture: "Open cell panels" metal ceiling

PERFORMANCE



|  |  |  |
|--|--|--|
|  | <b>FLEXION RESISTANCE</b>                          | Maximum span mm 1200 - 1 Class<br>EN13964  |
|  | <b>CORROSION RESISTANCE</b>                        | Galvanized steel products: <b>C2 Class</b><br>Pre-painted galvanized steel products: <b>C3 Class</b><br>Post-painted galvanized steel products: <b>C4 Class</b><br>Pre/post-painted aluminum products: <b>C5 Class</b> |
|  | <b>(RH%) RELATIVE HUMIDITY RESISTANCE</b>          | Galvanized steel products: <b>≤ 90%</b><br>Pre/post-painted galvanized steel products: <b>&gt; 90%</b><br>Stainless steel and aluminium products: <b>&gt; 90%</b>  |
|  | <b>FIRE REACTION</b><br>UNI EN 13501-1             | <b>A1 Class</b>  |
|  | <b>CLEANING</b>                                    | Wet cloth with warm water and neutral non-abrasive detergents.   |
|  | <b>COLOR STABILITY</b>                             | In compliance with technical tolerances standard.<br>Test according the ΔE - CIELab method.<br>ISO 7724-2 (3)  |
|  | <b>PAINTED ITEMS DURABILITY</b>                    | C Class<br>EN13964   |
|  | <b>GALVANIZED ITEM DURABILITY</b>                  | B Class<br>EN13964   |
| <b>SUSTAINABILITY</b> Data declared according to ISO 14021 standard and validated during the EPD verification. Type III environmental labelling. |  |  |
|  | <b>RECYCLED PRODUCT CONTENT</b>                    | Compliance<br>CAM 2.5.8  |
|  | <b>GREEN BUILDING</b>                              | Requirements compliance:<br><b>LEED®   BREEAM®   WELL™</b><br>CAM 1.3.4  |
|  | <b>MATERIAL DEMOLITION AND REMOVAL</b>             | Non hazardous waste in compliance with CAM 2.6.2.  |
|  | <b>GREEN ENERGY</b>                                | Renewables prevalent use<br>CAM 1.2  |
|  | <b>DISASSEMBLY</b>                                 | Steel   Aluminium<br>100% recyclable<br>CAM 2.6.2   2.4.14   |
|  | <b>WASTE MANAGEMENT</b>                            | Compliance<br>CAM 2.6.2.   |
|  | <b>ACOUSTIC PERFORMANCE</b>                        | Non applicabile  |
|  | <b>BIM DESIGN AND MAINTENANCE PLAN OF THE WORK</b> | CAM 2.7.3   2.4.13   |
|  | <b>SVHC PRESENCE</b>                               | Compliance<br>CAM 2.5.7  |
|  | <b>FORMALDEHYDE</b>                                | Absent<br>E1 Class<br>CAM 2.5.1.   3.2.8   |
|  | <b>RELEASE OF DANGEROUS SUBSTANCES</b>             | 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.   |



TECHNICAL STANDARDS

All Atena metal ceilings are produced for **internal use** according to the technical rules for construction NTC 2018 and UNI EN 13964 standard.

For **external application**, metal ceilings and coverings have to be dimensioned on environment features, to list some of the possible examples: earthquakes, wind, thermal expansion, place of installation, use destination of the building and project requirements.

According to NTC 2018 and EUROCODICI each Atena product for interior application has its own D.o.P. (Declaration Of Performance) CE mark according to the European Law 305/2011.



**BEARING CAPACITY AND FLEXION RESISTANCE**

Limit states of **bearing and flexion resistance** of Atena structures and panels are reported in technical data sheets. Atena panels are classified in 1st Class of flexion resistance. Structures have generally a **maximum span of 1200 mm**. According to Technical Norme for Construction - D.M. 14/01/2018, **lighting elements and accessories must be fixed directly to the concrete and not load the metal ceiling system.**

According to the engineering criteria of metal ceilings, panels are tested to support their mass and to maintain flatness and curvature properties. On request Atena S.p.A. can conceive and produce panels suitable to support additional loads, that must be clearly specified in terms of quantity, position and application modes.



**COLOUR TOLERANCE**

Atena S.p.A. has a **quality control management system** to ensure the **compliance with law requirements** in force and technical standard tolerances. All color controls included those on products made in different production periods or made and processed using raw materials and powders from different lots, are verified and test by Atena according the **ΔE - CIELab method**.



**INDOOR WIND LOAD RESISTANCE**

For the calculation on the panels mechanical strength Atena S.p.A. considered the vertical dead load.

**Any upward thrusts** that can overcome the dead weight of the metal ceiling **should be checked at project stage** by identifying critical areas where upward thrusts can occur, such as in entrances, near the doors or windows, on the corners of buildings, in the presence of large or permanent openings such as car parks or access routes. In all these cases, the ceiling must be dimensioned to withstand any wind aspirations or pressures.

## DURABILITY

Atena metal ceilings are made of galvanized and painted materials suitable to the different **durability exposure classes** as set in UNI EN ISO 13964. Specifically, galvanized steel products are classified in exposure B class, painted steel products in C Class, the stainless steel and aluminum elements in D Class.

On request Atena S.p.A. can proceed with special treatments against galvanic and chemical corrosion in the most critical conditions.

| EXPOSURE CLASS | ENVIRONMENT CONDITIONS  | PRODUCTS DURABILITY CLASSIFICATION                              |
|----------------|---|---|
| A              | Buildings frequently exposed to relative humidity up to 70% and varying temperatures up to 25°C but with no corrosive pollutants. | Atena galvanized steel products                                 |
| B              | Buildings frequently exposed to relative humidity up to 90% and varying temperatures up to 30°C but with no corrosive pollutants. | Atena galvanized steel products                                 |
| C              | Exposure to an atmosphere with 90% humidity level and risk of condensation.   | Atena post-painted steel, Stainless steel and aluminum products |
| D              | Critical conditions.  | Atena products with specific treatment on request               |

The **durability** of a material/component is the **capability to maintain its performance properties and perform the required functions** during a defined period; Since the "moment zero", when the component is installed and put into operation, to the "end of its life cycle".

The **performance properties** declared in D.o.P. (Declarations of Performance) provided by Atena S.p.A. are guaranteed, if the metal ceiling is installed in the environment conditions for which it has been conceived, the recommended maintenance is executed and it is not affected from inadequate treatments such as tampering, cuts, abrasion, damages which can interrupt the coated layer, please check with Atena's technical department the specific environmental conditions to which the product will be submitted in order to choose the most suitable material.

## FIRE REACTION

All Atena metal ceilings comply with the Euroclass standard for building materials; systems, with holed or metal membrane with acoustic tissue "PLUS", are incombustible and come into **A1 Class**.

## CHEMICAL CORROSION PROTECTION

According the UNI EN ISO 13964 standard all steel and aluminum components must be protected against corrosion in relation to exposure class. The material corrosion is a natural and irreversible deterioration process of the physical properties due to its slow and continuous consumption. The **corrosion resistance** is indicated as **low, medium** or **high**, near the **environment corrosion class**, in order to evaluate the performance of the coating in the environment and under operating conditions. It should be understood as an **indication of the effectiveness of a protection treatment for a given period of time**.

UNI EN ISO 12944-1 durability classes

- Low (L) = from 2 to 5 years
- Medium (M) = from 5 to 10 years
- High (H) = over 15 years

This is not a guarantee of durability, but an indication to schedule the maintenance tasks necessary to keep the **material's properties in relation to its life cycle**.

The durability tests based on the corrosion classes conducted by the Istituto Giordano S.p.A. on the galvanized steel, post-painted galvanized steel, pre-painted galvanized steel and aluminum Atena components used for the construction of metal ceilings, report excellent corrosion resistance and have been classified in **C5-M media**. Tests were carried out in compliance with UNI EN ISO 6270-2:2005 and 12944-6:2001 standards in humidistatic chamber with humidity atmospheres for the determination of moisture resistance and the protection of steel structures coating against corrosion. The excellent result has been confirmed by the **corrosion resistance tests in salt fog** conducted by the Istituto Giordano S.p.A. according to UNI EN ISO 9227:2012. As the laboratory environment can not represent the normal conditions of use, Atena S.p.A., according to its experience, recommends the choice of materials according to the classification given in the schedule on page 50.

## PROTECTION AGAINST GALVANIC CORROSION

Electrochemical corrosion is due to the **contact of materials with different potentials** that produce galvanic currents.

In these cases Atena recommends the use of **polymer separators and/or the use of post-painted polyester-coated galvanized materials with at least 60 µm**; the paint is a good protection against galvanic corrosion in environment conditions that do not deteriorate the coated layer.

For specific applications, please check with Atena technical department the proper material according to the application field.

| CLASS OF CORROSIVITY   | INTERNAL ENVIRONMENTS          | OUTDOOR ENVIRONMENTS   |
|--|--------------------------------|--|
| <b>C1 VERY LOW</b><br>$r_{corr} \leq 0,1^*$                            | NOT AGGRESSIVE ENVIRONMENT     | Low humidity in heated environment, no pollution.  |
| <b>C2 LOW</b><br>$0,1 < r_{corr} \leq 0,7^*$                           | LITTLE AGGRESSIVE ENVIRONMENT  | Temperatures and variable humidity in an no-heated environment, low pollution and moisture values.   |
| <b>C3 AVERAGE</b><br>$0,7 < r_{corr} \leq 2^*$                         | AVERAGE AGGRESSIVE ENVIRONMENT | Moderate presence of moisture and pollution due to light productive processes.   |
| <b>C4 HIGH</b><br>$2 < r_{corr} \leq 4^*$                              | AGGRESSIVE ENVIRONMENT         | Frequent moisture and high pollution levels due to industrial processes and sports pools.  |
| <b>C5-I VERY HIGH</b><br><b>C5-M MARINE</b><br>$4 < r_{corr} \leq 8^*$ | HIGH AGGRESSIVE ENVIRONMENT    | Caves.<br>Very serious pollution (SO <sub>2</sub> up to 250 µg/m <sup>3</sup> ); Areas with heavy industrialization, buildings on the coast. |

\* ENVIRONMENTAL CLASSIFICATION AND CORROSION RATES  $r_{corr}$  [µm/year (zinc thickness loss)]

Source: ISO 9223 - Corrosion of metals and their alloys - UNI EN ISO 14713 - Zinc Coatings, guidelines and recommendations

## ENVIRONMENTAL STANDARD



### GREEN ENERGY

#### CAM 1.2 | GREEN BUILDING REQUIREMENTS

The production plant is mainly powered by **renewable sources** through high-performance photovoltaic systems.



### GREEN BUILDING REQUIREMENTS

#### CAM 1.3.4 | GREEN BUILDING REQUIREMENTS

Get credits for building certification according to the **LEED® | BREEAM® | WELL™** standards, by using Atena products. The evidence of compliance can be used in the C.A.M. report.



### RECYCLED MATERIAL CONTENT

#### CAM 2.5.8 | GREEN BUILDING REQUIREMENTS

Atena products are, as a whole, **manufactured using recycling processes materials**, the **recycled content** is **calculated for each type of product**, in compliance with C.A.M. requirements and declared according to the ISO14021-ISO14025-EN15804:2012+A2:2019 standards for EPD drafting.



### RELEASE OF DANGEROUS SUBSTANCES

#### CAM 2.5.1 - 3.2.8 | GREEN BUILDING REQUIREMENTS

Atena products **do not release dangerous substances** and do not contain formaldehyde (E1 Class). Paints and sublimations are carried out using VOC-free substances. Compliance on all products for 2.5.1 requirement. Rewarding requirement 3.2.8 for post painted products with "Gold Leaf" high performance coating.



### CONTENT OF SVHC

#### CAM 2.5.7 | GREEN BUILDING REQUIREMENTS

Atena uses raw materials **free of SVHC** very high concern substances listed in "Candidate list of SVHC" released by the European Chemical Agency.



### DISASSEMBLABILITÀ

#### CAM 2.6.2 - 2.4.14 | GREEN BUILDING REQUIREMENTS

Atena steel and aluminum products are **100% recyclable** and at the end of their life cycle can be prepared for re-use, recovery, recycling and selective demolition.



### MATERIALS DEMOLITION AND REMOVAL

#### CAM 2.6.2 | GREEN BUILDING REQUIREMENTS

At the end of their life cycle, the Atena products become **non-hazardous waste** that can be prepared for re-use, recovery or recycling.



### WASTE MANAGEMENT

#### CAM 2.6.2. | GREEN BUILDING REQUIREMENTS

Atena uses **recyclable** packaging.



### BIM DESIGN AND MAINTENANCE PLAN OF THE BUILDING

#### CAM 2.7.3 - 2.4.13 | GREEN BUILDING REQUIREMENTS

Atena provides the **BIM model** of its products and systems including the applicable environmental information, therefore the Atena BIM model is useful both for achieving a rewarding score and for the **building end-of-life plan drafting**.

## *Quality, environment, health, safety: together for a sustainable architecture*

Atena's commitment to **Environmental Sustainability** and **Safety** passes through all main company processes to produce safe products, whose use contributes to the construction of **high performance buildings**, conceived to achieve the **highest levels of comfort, healthiness** and **respect for the environment**.

Pictures:  
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## INNOVATIVE ARCHITECTURAL SOLUTIONS

All dimensions are nominal and expressed in millimeters.  
All weights are expressed net of tare.  
All technical specification data and information can be changed without advise.  
More details concerning colours, perforations, perimeter profiles and laying  
instructions are described in technical data sheets suitable on line: [atena-it.com](http://atena-it.com)  
For further information please contact sales department:  
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ISO 9001



FALSE CEILINGS AND COVERINGS

Atena S.p.A.  
Via A. De Gasperi, 52 - 30020 Gruaro (VE) Italy  
Ph: +39 0421 75526 - Fax: +39 0421 75692  
[atena-it.com](http://atena-it.com) - [info@atena-it.com](mailto:info@atena-it.com)