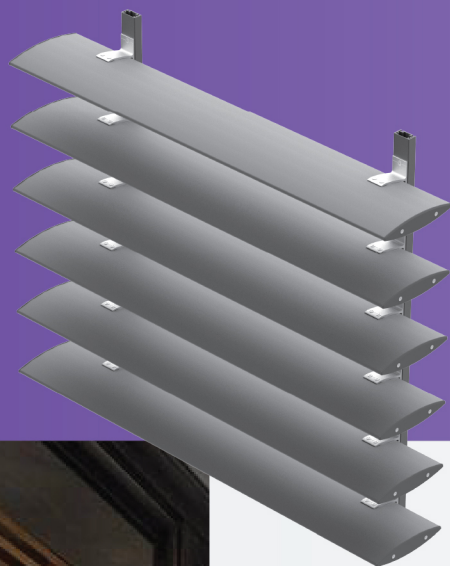




**Machines & Aluminium Center**  
مركز ماكينات ومستلزمات الألومنيوم

# ACACIA 42

Shading System Catalogue



# 2026

Ver.01

## MACHINES AND ALUMINUM CENTER

Machines and Aluminum Center is an Egyptian based company established in the year 1981 and started its activity with aluminium applications in architectural and construction field.

They represent and cooperate with several leading European firms in field of aluminium business including aluminium fabrication machinery, accessories and hardware for architectural applications and different aluminium systems varying from windows and doors, up to facades and solar protection.

Our goal is to supply our clients with whatever is needed to apply our aluminium systems in the building construction. We are specialized in supplying all required machinery, equipments, dies, punches, hardware and fittings for our aluminium systems.

We offer a wide range of products to local market and neighbor countries. Our product range includes windows and doors, partition systems, different façade solutions and the related integrated accessories.

We partner with our customers with value added services which means that with the help of our specialized team of engineers, we provide our clients with technical support to assist them in improving their product's quality.

We are committed to innovative and creative product design to fulfill all architectural requirements. Our products can meet the most exacting engineering and technical standards while overcoming sophisticated design challenges.



**Machines & Aluminium Center**  
مركز ماكينات ومستلزمات الألومنيوم

The profiles shown in this catalogue are patented. .

The items shown are the exclusive property of **MACHINES & ALUMINIUM CENTER** and may not be even partially reproduced without **MACHINES & ALUMINIUM CENTER** authorization.

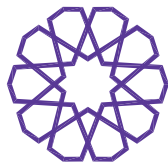
The manufacturer reserves the right to modify the items in this catalog without advanced notice.

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## Materials

### *Aluminium Profiles:*

All aluminium profiles are made of EN AW 6063 alloy in accordance with EN 755-1 or EN 12020-1, condition T5, T6. The alloy is resistant to corrosion and permits the production of high precision profiles according to EN 755-9.

### *Gaskets:*

All rubber gaskets profiles are produced from ethylene-propylene rubber (EPDM) are used to seal infill units, window middle part in a hardness that suit its applications, ensuring condensate removal and frame-sash connection.

### *Accessories:*

All systems are designed to use most of standard hardware. The hardware should be selected according to the minimum requirements mentioned in the system catalog.

### *Fixing elements:*

All the connectors and fasteners used for profiles, accessories and hardware connection should be made from galvanized steel or stainless steel.

### *Surface treatment:*

All exposed surfaces of the aluminium profiles is treated either by anodizing treatment (QUALANOD certified anodizing) or by electrostatic powder coating to meet international standards (QUALICOAT certified powder coating).



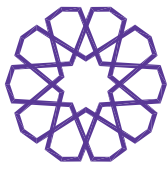
## Technical Features

- In all systems there are varieties available in types and dimensions.
- Tolerances in weights & dimensions are according to standard EN 755-9, EN 12020-2 or ANSI H35.2-5.
- The profiles provide a large range of infill types and measures, due to the availability of different profile types and a wide range of gaskets sizes.
- Glazing gaskets inside and outside of E.P.D.M. all-around, gasket profiles visually are in the same level inside and outside to enhance the gasket visibility.
- General compatibility of profiles, accessories and gaskets to hence fewer system accessories and reduced warehouse inventory.
- Charts are available for each system and its profiles indicate allowable panel /sash sizes and the right profile regarding the effective moment of inertia, wind load and window's type to guarantee resistance avoiding any deformation greater than allowable deflection 1/200 of window span according to European Standard hEN 14351-1

under load 500 Pascal up to 1000 Pascal, and up to 2000 Pascal for curtain wall according to EN 13830, charts are available also if requested with deflection (1/175 max 19mm.) of window/façade span according to American Standard) AAMA/WDMA/CSA 101/I.S.2.

- Water resistance is confirmed to International standards, water tightness performance varies according to window type and system design with no water penetration under pressure up to 600 Pascal for sliding types, and not less than 900 Pascal for hinged window types and façade types.

- Air permeability performance varies according to window type and system design, air permeability at pressure 100 Pascal is not greater than 2.25 cubic meter per hour per meter length of opening joint for sliding systems, and not greater than 0.75 cubic meter per hour of opening joint for hinged window types and not greater than 1.5 cubic meter per hour for each square meter of façade types.



## Powder Coating

ALWAN is one of the largest facilities in Egypt, in the field of electrostatic application of pure-polyester powder coatings as surface treatment, specifically designed to meet stringent requirements of the construction industry for architectural and industrial aluminum profiles.

We guarantee complete customer satisfaction on all our delivered products. Every production line has a fully equipped laboratory in order to meet all international quality specifications and standards as set by the QUALICOAT organization. The certifications of QUALICOAT  Quality Management ISO 9001 and Environmental Management ISO 14001, provide complete quality assurance. We ensure a full control over all the critical parameters concerning chemical

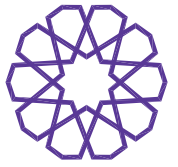
pretreatment and the use of enhanced chemical pretreatment process, with high etching degree, in accordance to QUALICOAT specifications, as well as a full control on the painting processes and polymerization during the whole surface treatment procedure. Therefore, through a unique blending system, stringent quality assurance and compliance to measures, consistent quality during the production process is guaranteed.

The application of the above-mentioned steps will assist along the line with the overall excellent properties and the longevity of the color, providing an attractive finish to the projects and building components by ensuring gloss retention, color stability and corrosion protection.

## Available Colors

In regards to the colors, they are available in RAL Gloss & RAL matt. The gloss affects how the eye perceives color so some slight variations in the finish may occur. In addition to that,

the coating provides a wide range of custom-made colors that gives a variety of effects, including metallic effects.



Most of the colors are available in standard durable and some are available in super durable, which complies with advanced levels of weather resistance, gloss and color retention, and corrosion resistance, when compared to the standard durable specification.

Color customization to our standard products may be available on a request basis, with unlimited options of powder coating. In this respect, Non-standard designs and applications can be reviewed to determine the feasibility on a project-specific basis.

## Warranty

The warranty is subject to terms and conditions based on the geographical location & when used on an architectural aluminum substrate.

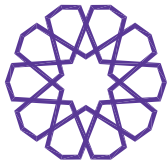
Standard Durable Class 1: Up to 10 years

Super Durable Class 2: Up to 25 years

### Notes:

- As the products are very often used under conditions beyond supplier's control, we cannot guarantee anything but the quality of the product itself.
- It is expected that any fading and/or chalking and/or change in gloss retention, either uniform or non-uniform that a color will experience in the field will result in the falling within acceptable range as specified in the Qualicoat specification standards.

\*QUALICOAT is a quality label organization committed to maintaining and promoting the quality of lacquering, painting and coating on aluminum and its alloys, for architectural applications.









**Interpon**  
POWDER COATINGS



Interpon D Approved Applicator



### Series D1000

## MACHINES AND ALUMINIUM CENTER (Alwan)

213, 2<sup>nd</sup> industrial Zone, 6<sup>th</sup> of October City, Giza  
Egypt

Has fulfilled AkzoNobel's tests and inspection regarding the pre-treatment, application, quality management standards and procedures, and complies with the requirements of the Architectural Range Approved Applicator schedule.

This certificate is effective from  
**12<sup>th</sup> October 2022 to 11<sup>th</sup> October 2023**

Approved for Aluminium Alloys: AA6060  
Approved for Pre-treatment Type: Chrome

  
  
 Wael Mahmoud  
Sales and Marketing Manager  
North Africa & Levant  
  
 12/10/2022  
AkzoNobel Industrial Paints



**Interpon**  
POWDER COATINGS



Interpon D Approved Applicator



### Series D2000

## MACHINES AND ALUMINIUM CENTER (Alwan)

213, 2<sup>nd</sup> industrial Zone, 6<sup>th</sup> of October City, Giza  
Egypt

Has fulfilled AkzoNobel's tests and inspection regarding the pre-treatment, application, quality management standards and procedures, and complies with the requirements of the Architectural Range Approved Applicator schedule.

This certificate is effective from  
**12<sup>th</sup> October 2022 to 11<sup>th</sup> October 2023**

Approved for Aluminium Alloys: AA6060  
Approved for Pre-treatment Type: Chrome

  
  
 Wael Mahmoud  
Sales and Marketing Manager  
North Africa & Levant  
  
 12/10/2022  
AkzoNobel Industrial Paints



## Certificate of Approval

### Machines & Aluminium Center (ALWAN)

**is certified as an Approved Applicator to coat**  
**Jotun SuperDurable**  
a product from Jotun Powder Coatings

This Company fulfils the requirements set by Jotun Powder Coatings for pre-treatment and application of powder coatings. These include having the necessary equipment, process controls and technical knowledge to comply with Jotun Powder Coatings' standards.

  
**December 31, 2025**  
 (Certificate valid until above date)

  
 Authorised Signatory  
 Jotun Powder Coatings UAE (LLC)



## Certificate of Approval

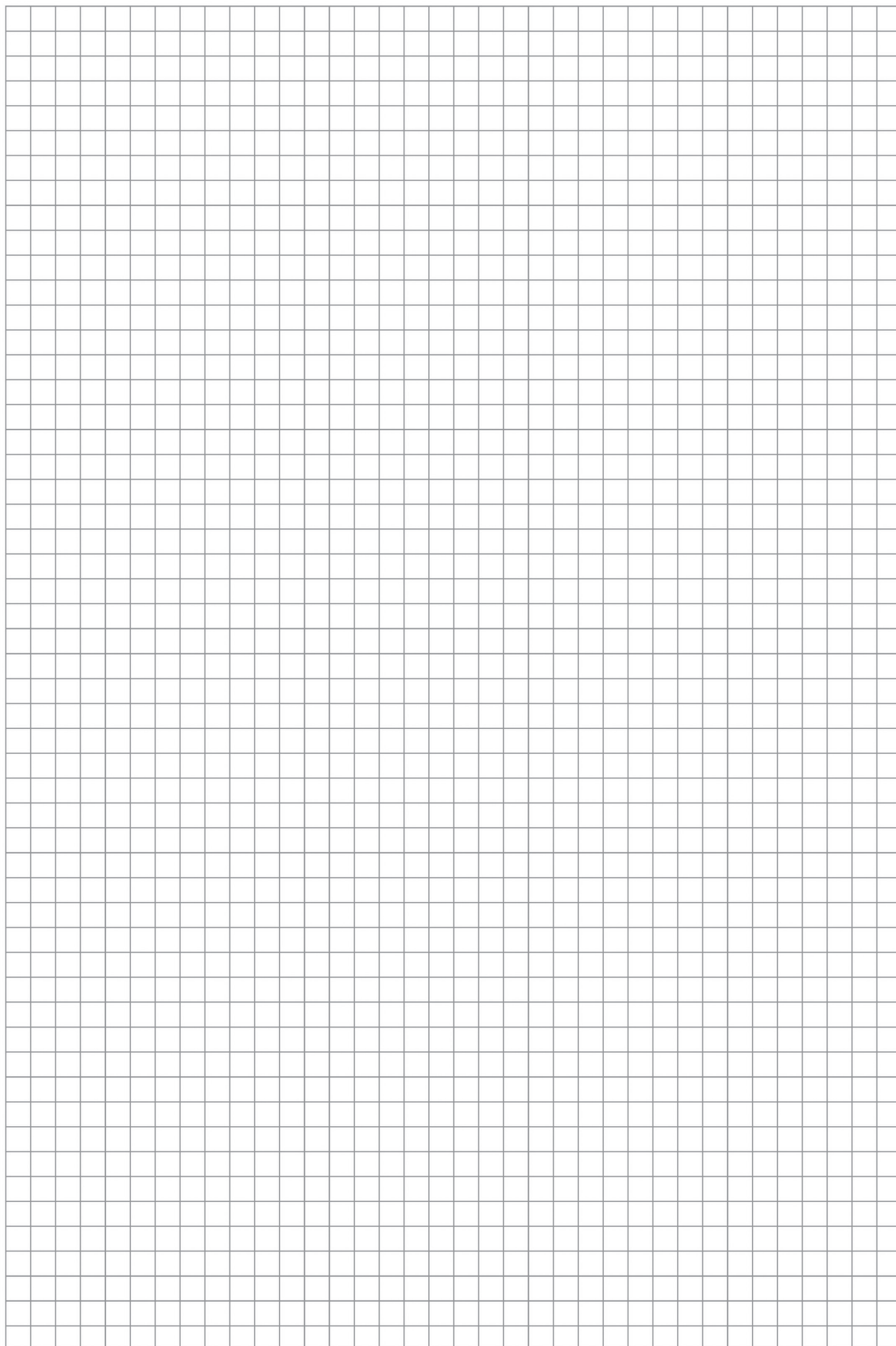
### Machines & Aluminium Center (ALWAN)

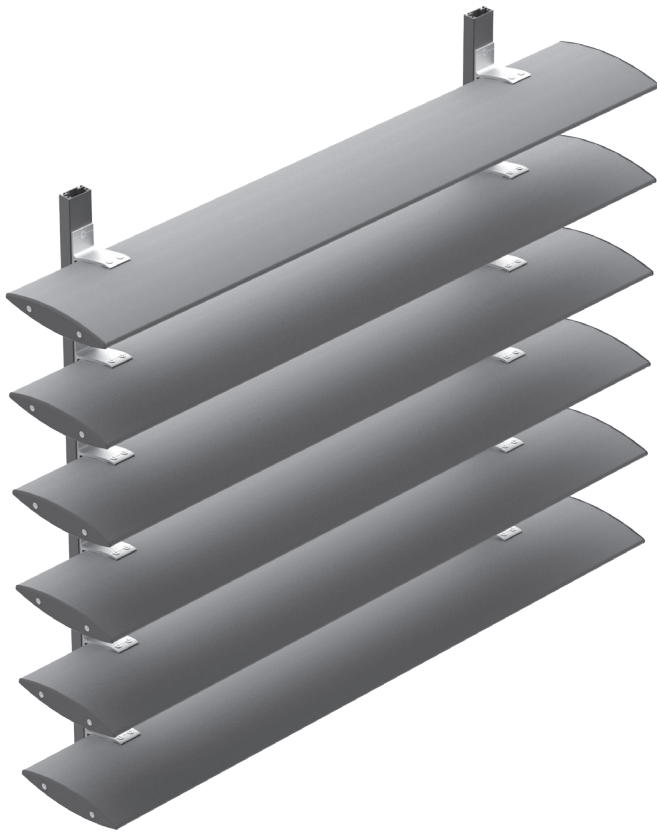
**is certified as an Approved Applicator to coat**  
**Jotun Durasol**  
a product from Jotun Powder Coatings

This Company fulfils the requirements set by Jotun Powder Coatings for pre-treatment and application of powder coatings. These include having the necessary equipment, process controls and technical knowledge to comply with Jotun Powder Coatings' standards.

  
**December 31, 2025**  
 (Certificate valid until above date)

  
 Authorised Signatory  
 Jotun Powder Coatings UAE (LLC)





- A complete system for solar control shading system by adapting the blades length with different angles and its intervals.
- Wide range of blades with different types, shapes and dimensions, can be positioned horizontal, vertical or inclined at different inclinations and at different blade pitches.
- Available in sliding panels cassettes, in which the blades have been screwed between vertical end cap plates.

## Technical Characteristics

### Main Profile Depth

42 mm. to 125 mm.

### Main Profile Height

21 mm. to 80 mm.

### Slat Depth

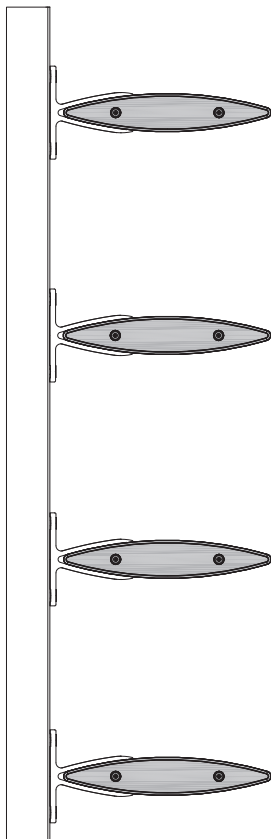
60 mm. to 200 mm.

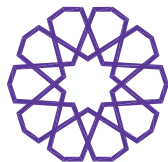
### Slat Height




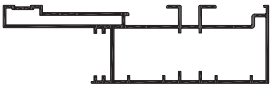







20 mm. to 40 mm.

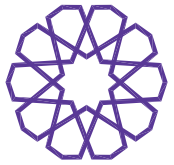
### Degree Obtained









30 - 45 - 60 - 90



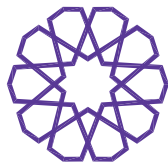


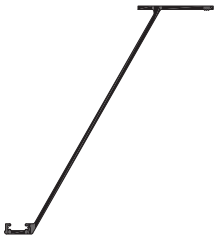

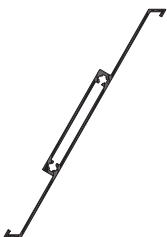



Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					I <sub>x</sub>	I <sub>y</sub>	
	52421100	Slat Profile	0.583	234	0.78	5.42	10
	52421108	Slat Profile	2.133	390	93.60	30.81	10
	52421111	Slat Profile	2.785	440	200.28	42.34	10
	52421211	Slat Profile	3.528	699	422.93	52.82	11
	52421606	Slat Profile	1.418	307	32.63	9.73	10
	52422110	Slat Profile	0.772	207	1.19	25.08	12
	52422115	Slat Profile	1.269	312	4.40	82.46	12
	52422120	Slat Profile	1.924	415	10.89	237.71	12
	52422210	Slat Profile	0.799	217	1.91	26.98	13
	52422215	Slat Profile	1.307	325	7.27	94.78	13
	52422220	Slat Profile	1.637	425	9.76	223.52	13






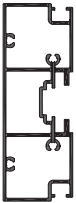




Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					Ix	Iy	
	52422310	Slat Profile	0.960	237	2.39	39.21	14
	52422315	Slat Profile	1.431	357	8.50	126.04	14
	52422320	Slat Profile	1.763	457	10.99	277.06	14
	52422620	Slat Profile	1.789	429	9.91	228.58	15
	52422770	Slat Profile	0.882	279	15.31	11.84	15
	52422771	Slat Profile	1.034	364	15.60	21.91	15
	52423106	Slat Profile	0.638	257	8.07	12.39	16
	52423208	Slat Profile	0.699	303	13.72	23.91	16

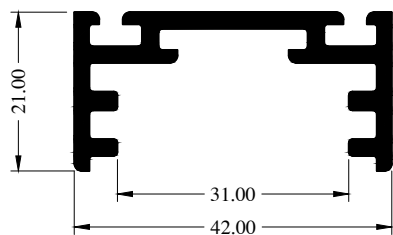
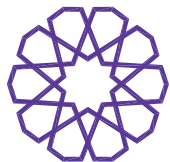




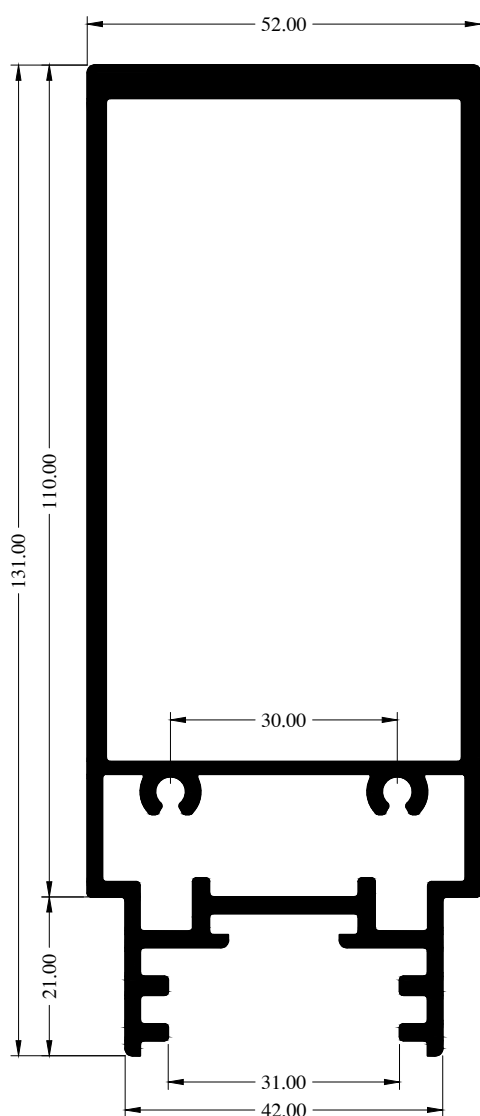
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					Ix	Iy	
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	52423710	Slat Profile	0.808	295	9.60	25.13	17
	52423712	Slat Profile	0.872	332	13.06	35.06	17
	52424115	Slat Profile	1.365	424	4.36	92.47	18
	52425223	Slat Profile	2.642	618	16.07	420.51	18
	52426170	Frame Profile	0.985	289	20.95	3.23	11



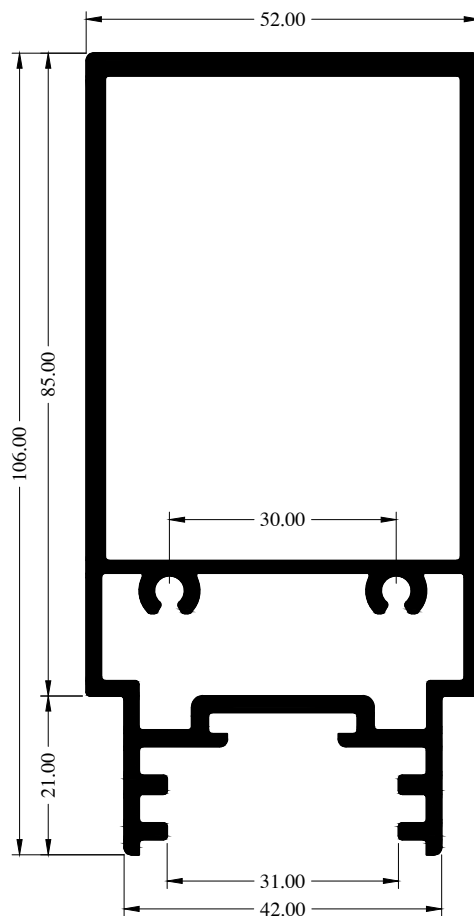
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	52427610	Slat Profile	1.003	362	2.07	60.86	19
	52427612	Slat Profile	0.869	449	3.22	71.10	19
	52427710	Slat Profile	1.919	393	12.69	69.27	19
	52427712	Slat Profile	1.636	393	7.48	85.78	19
	52429120	Additional Pieces	0.143	107	0.83	0.01	11
	52429121	Cover Profile	0.142	101	0.00	0.00	11
	52429910	Slat Profile	1.411	267	0.07	73.48	19



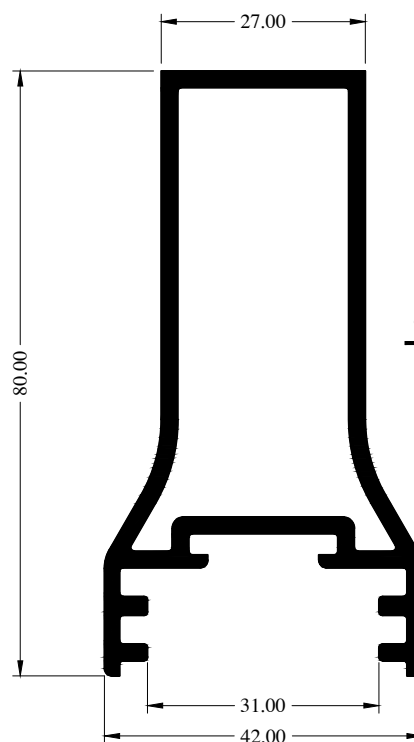
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5 242 1111  
2.785 Kg./ml.

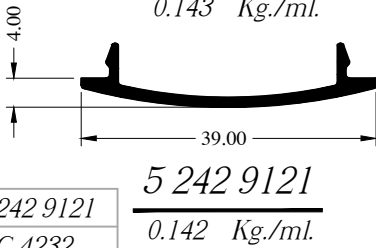
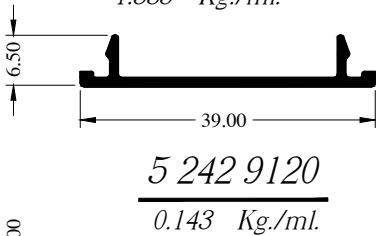
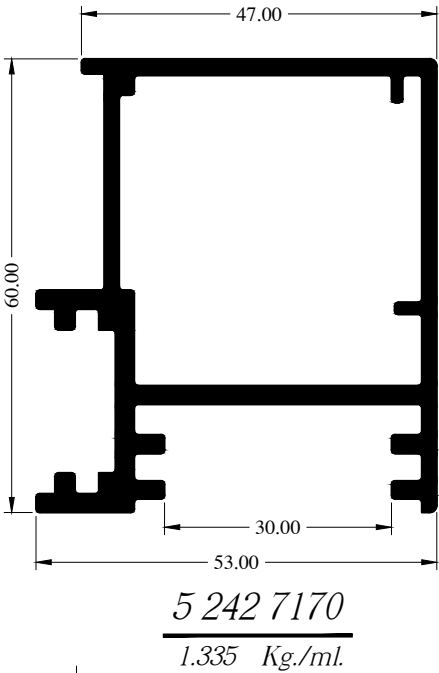
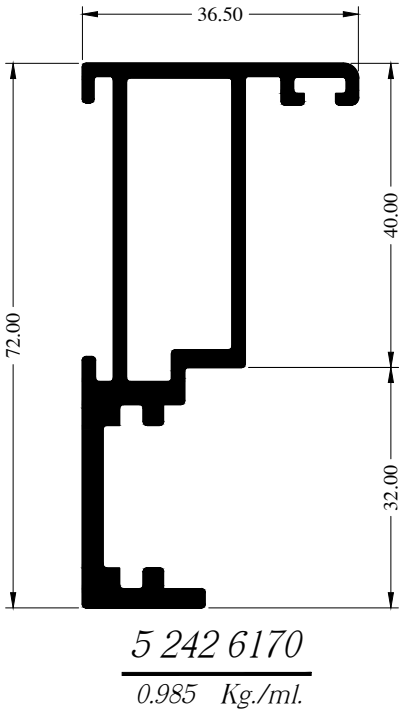
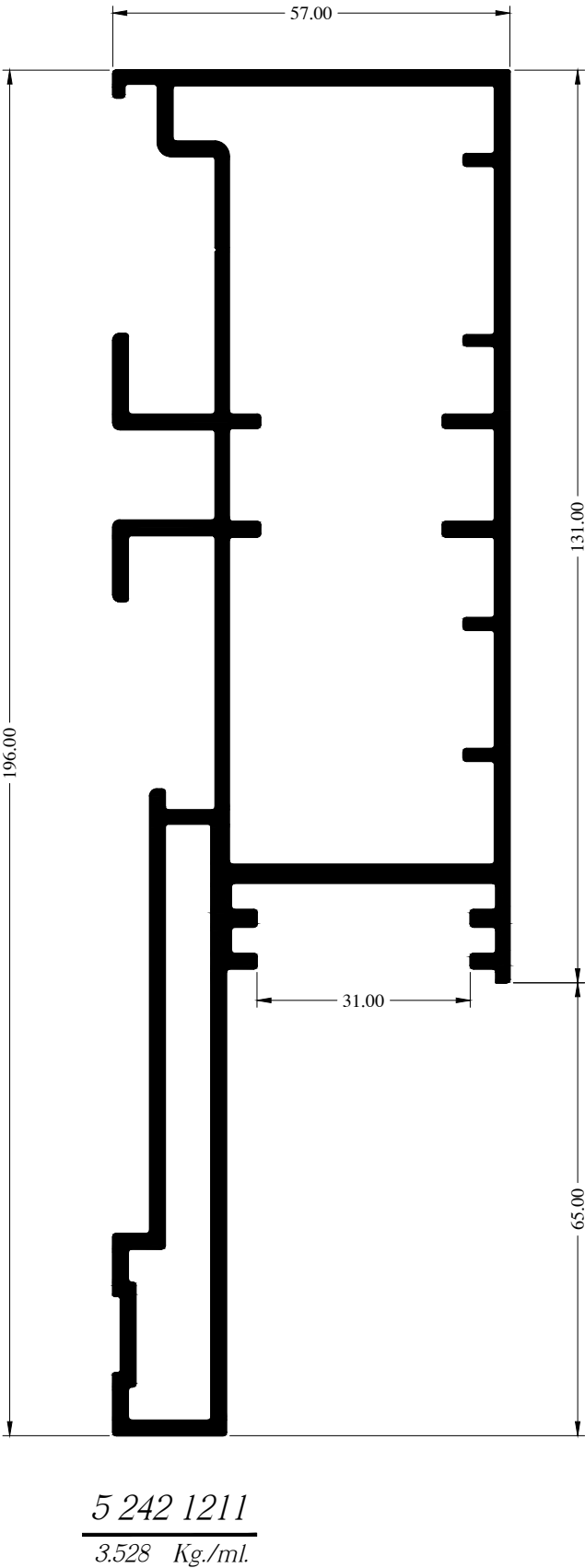


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2.133 Kg./ml.

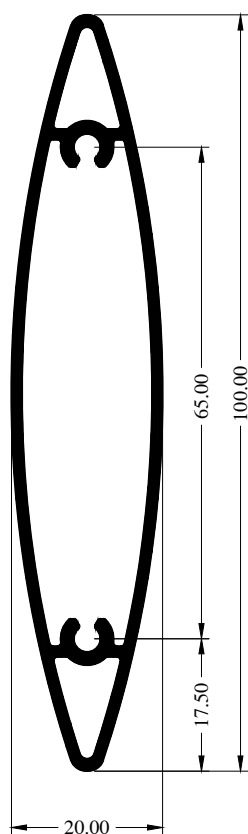
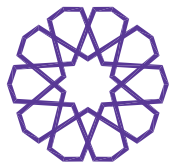


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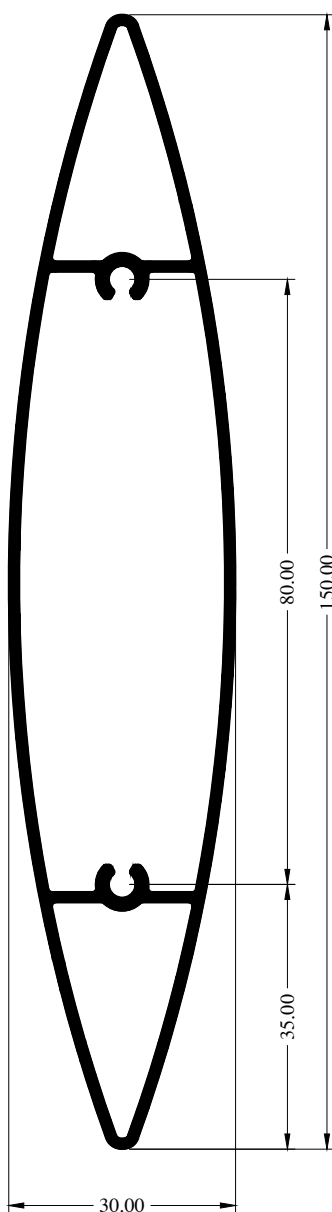
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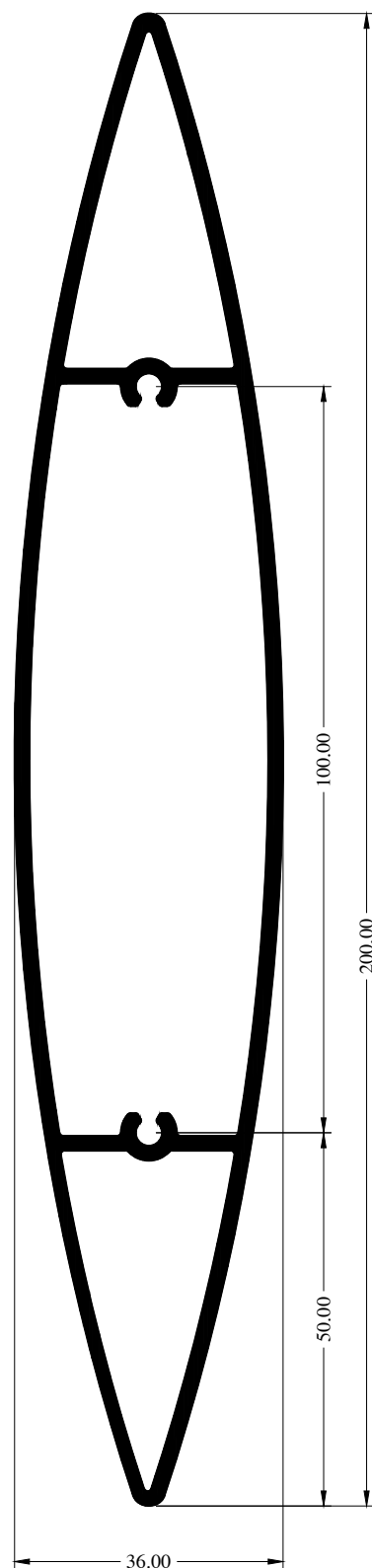
Profile No.	5 242 1211	5 242 6170	5 242 7170	5 242 9120	5 242 9121
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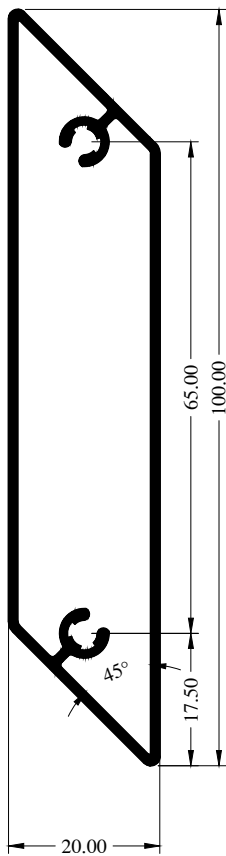
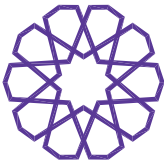
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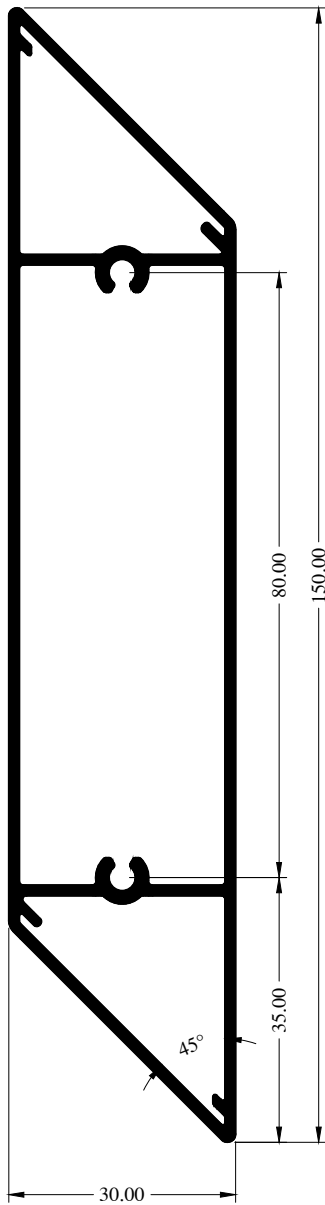
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2.303 Kg./ml.

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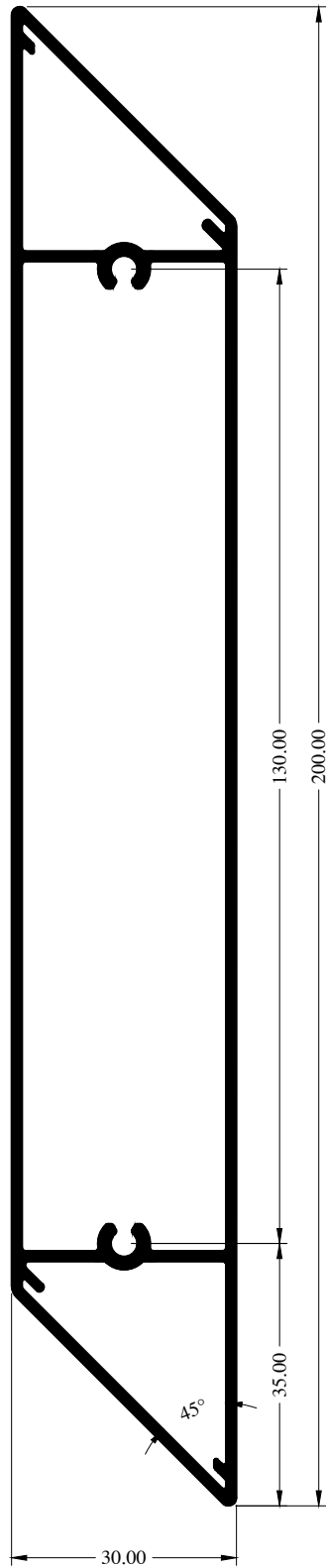




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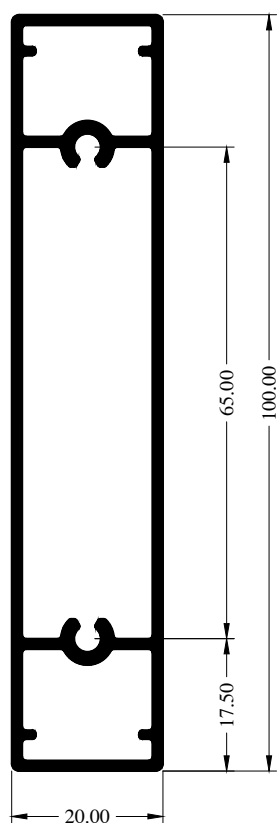
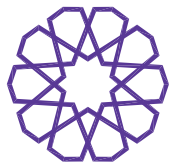


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1.307 Kg./ml.

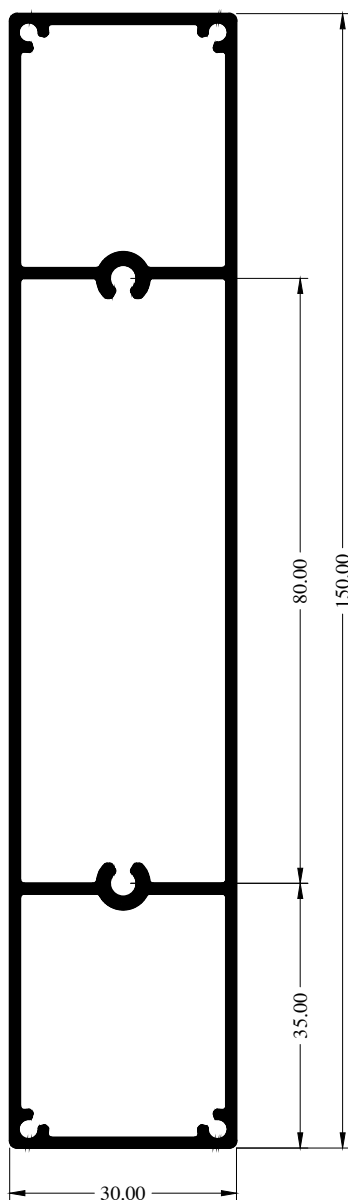


5 242 2220  
1.631 Kg./ml.

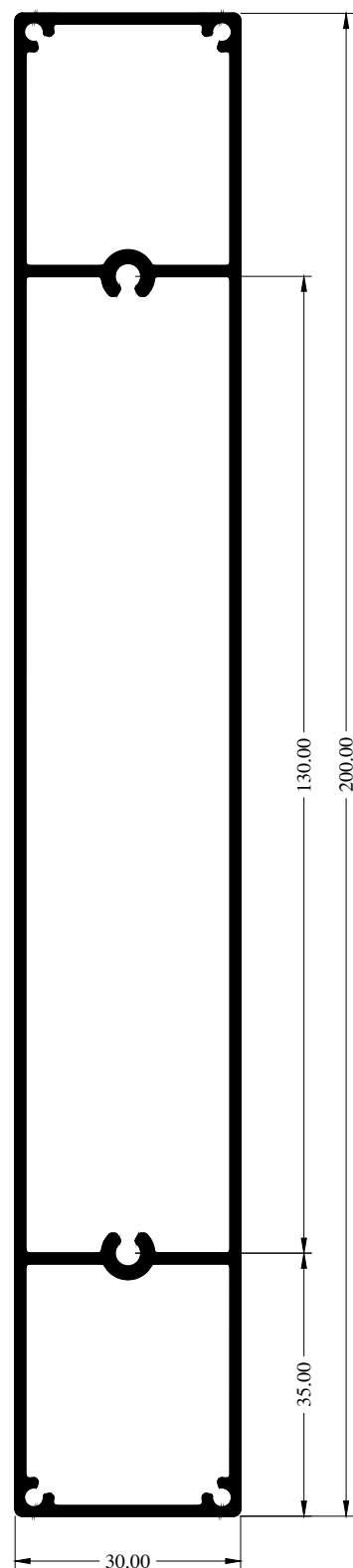
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Profile Old No.	C 4246	C 4248



*5 242 2310*  
*0.933 Kg./ml.*

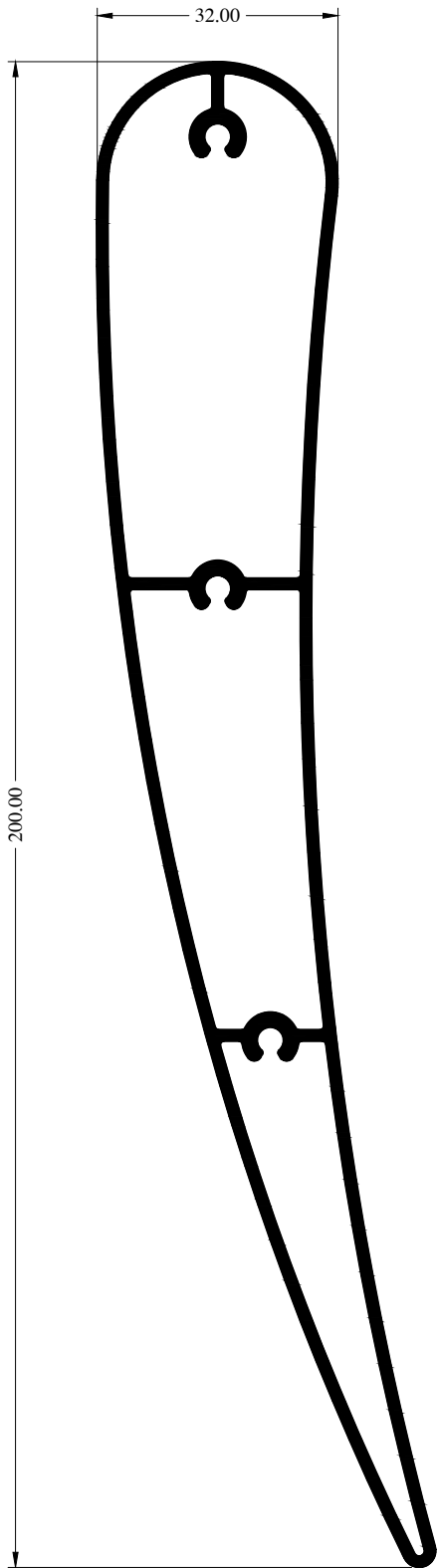
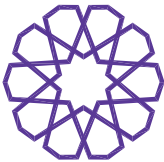


*5 242 2315*  
*1.431 Kg./ml.*

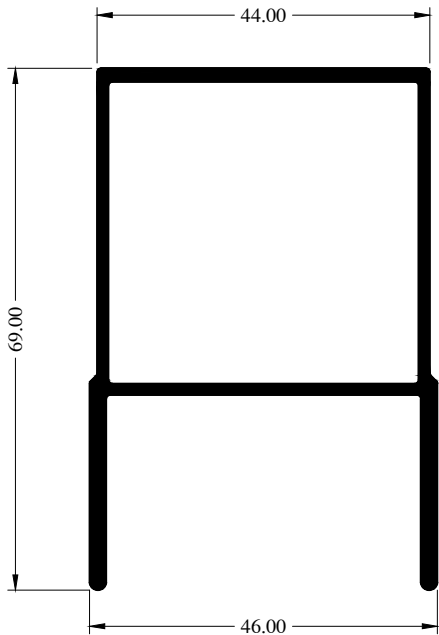


*5 242 2320*  
*1.757 Kg./ml.*

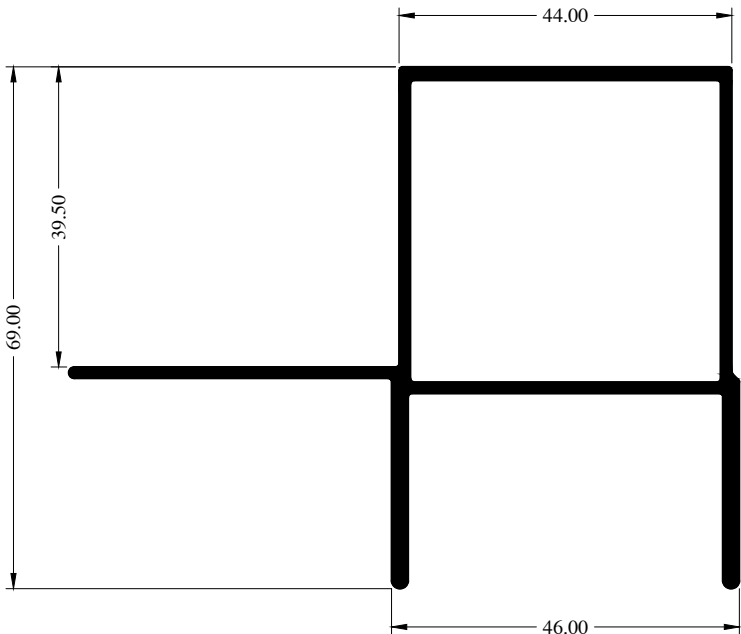
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Profile Old No.	C 4247	C 4249



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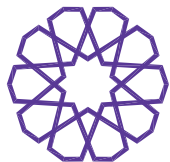


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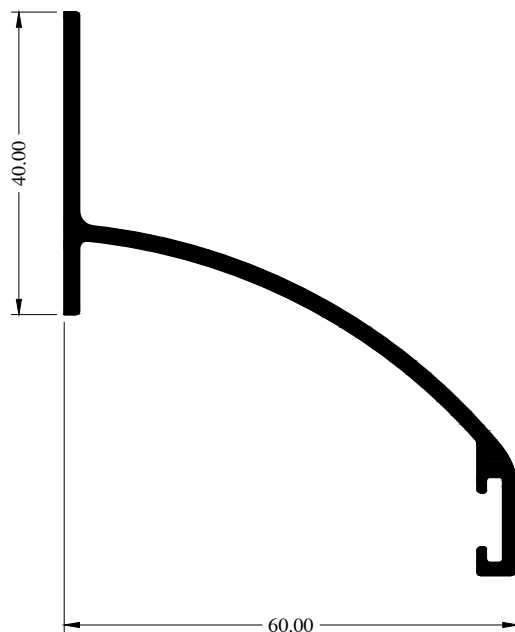


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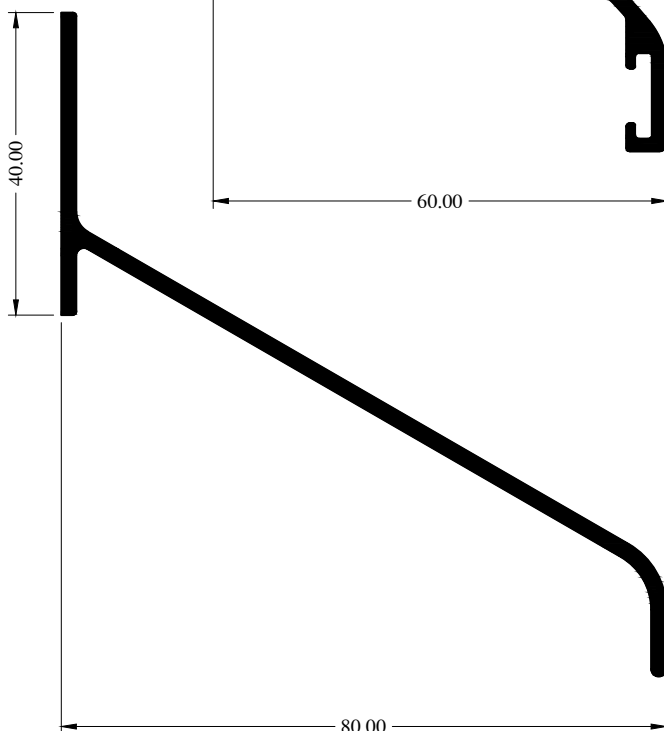
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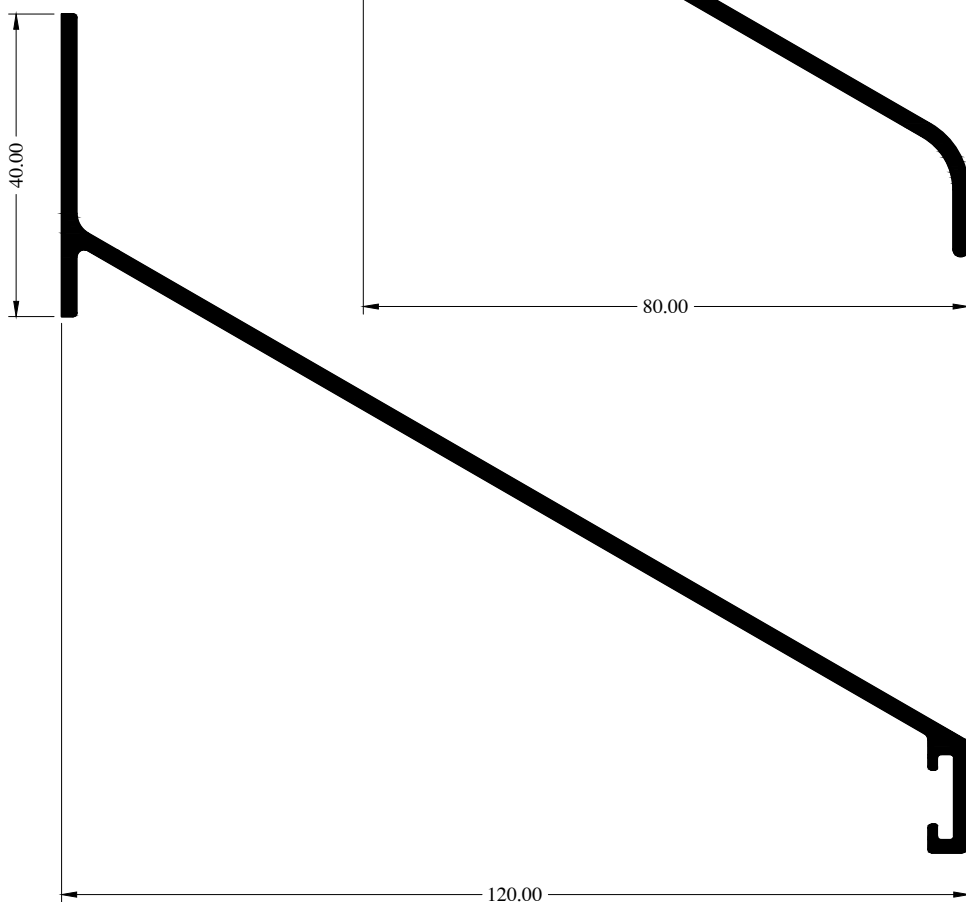
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0.638 Kg./ml.



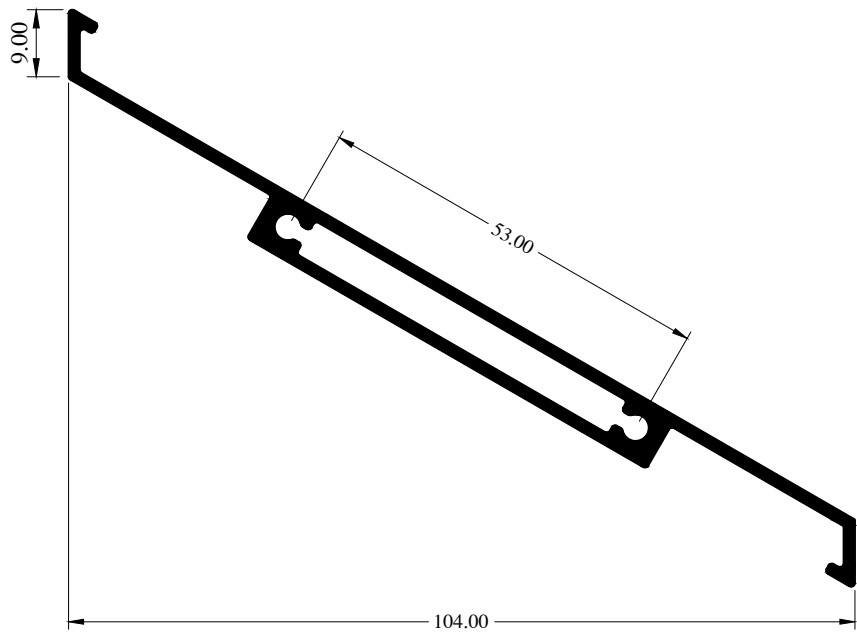
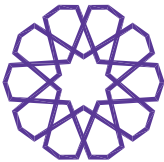
5 242 3208  
0.699 Kg./ml.



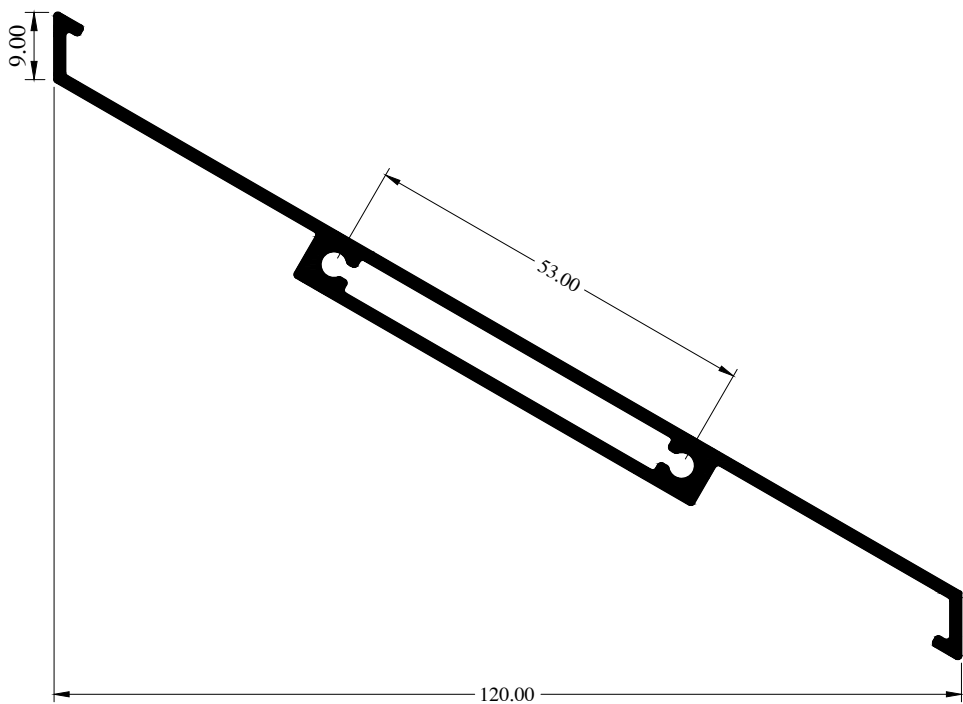
5 242 3312  
0.974 Kg./ml.



Profile No.	5 242 3106	5 242 3208	5 242 3312
Profile Old No.	C 4260	C 4262	C 4264



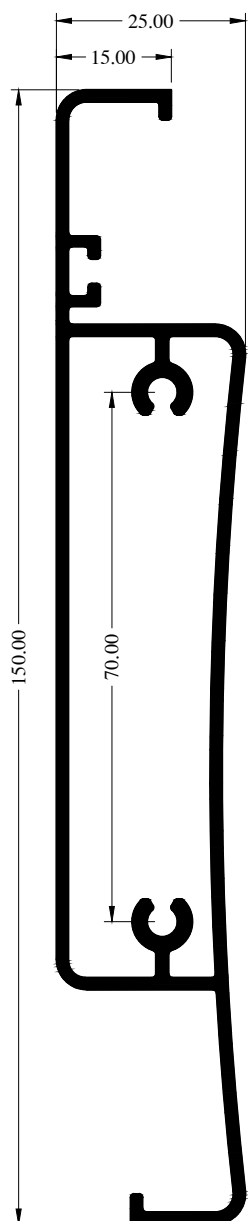
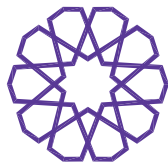
5 242 3710  
0.808 Kg./ml.



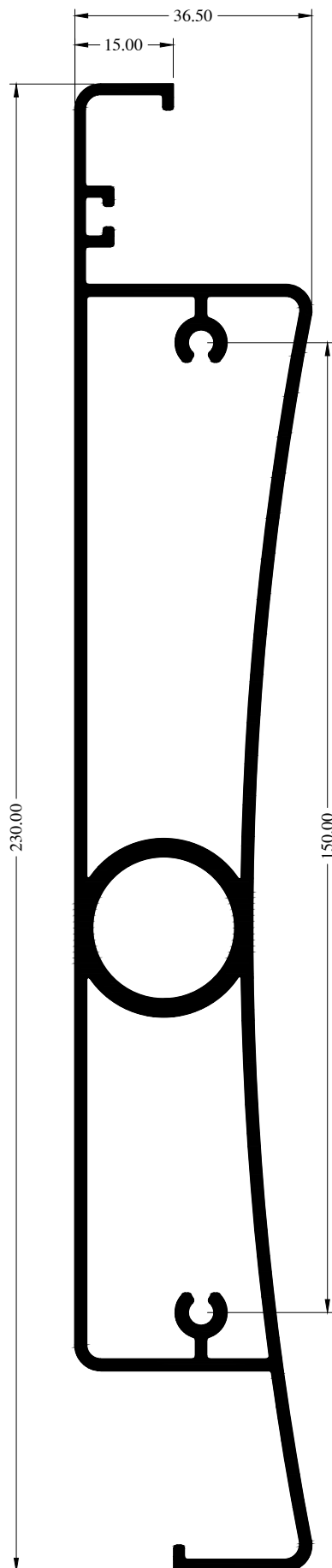
5 242 3712  
0.872 Kg./ml.

Profile No.	5 242 3710	5 242 3712
Profile Old No.	C 4273	C 4274



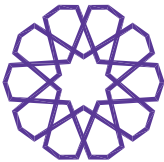


5 242 4115  
1.365 Kg./ml.

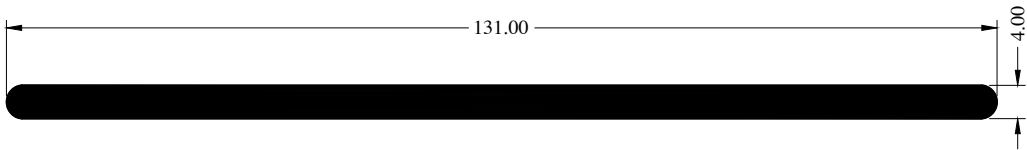


5 242 5223  
2.642 Kg./ml.

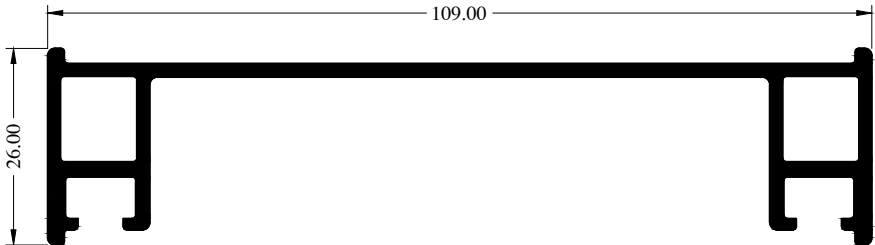
Profile No.	5 242 4115	5 242 5223
Profile Old No.	C 4266	C 4269



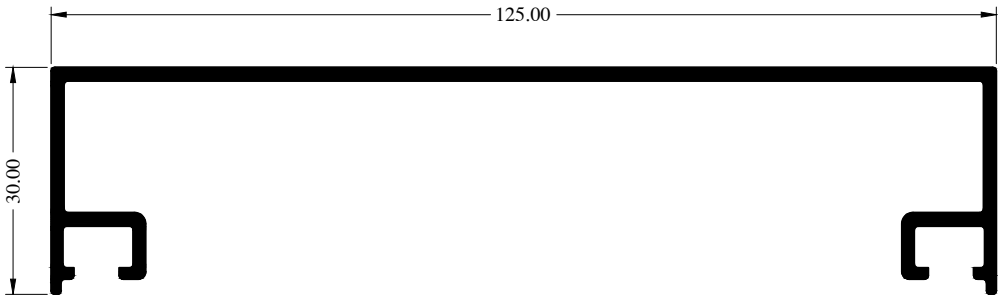
5 242 9910  
1.411 Kg./ml.



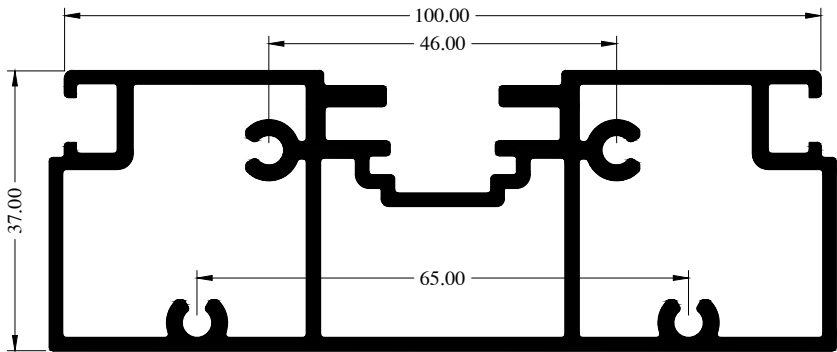
5 242 7610  
1.003 Kg./ml.



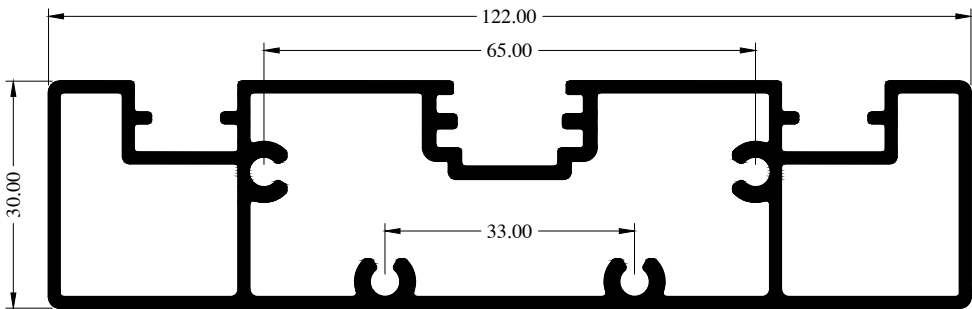
5 242 7612  
0.869 Kg./ml.



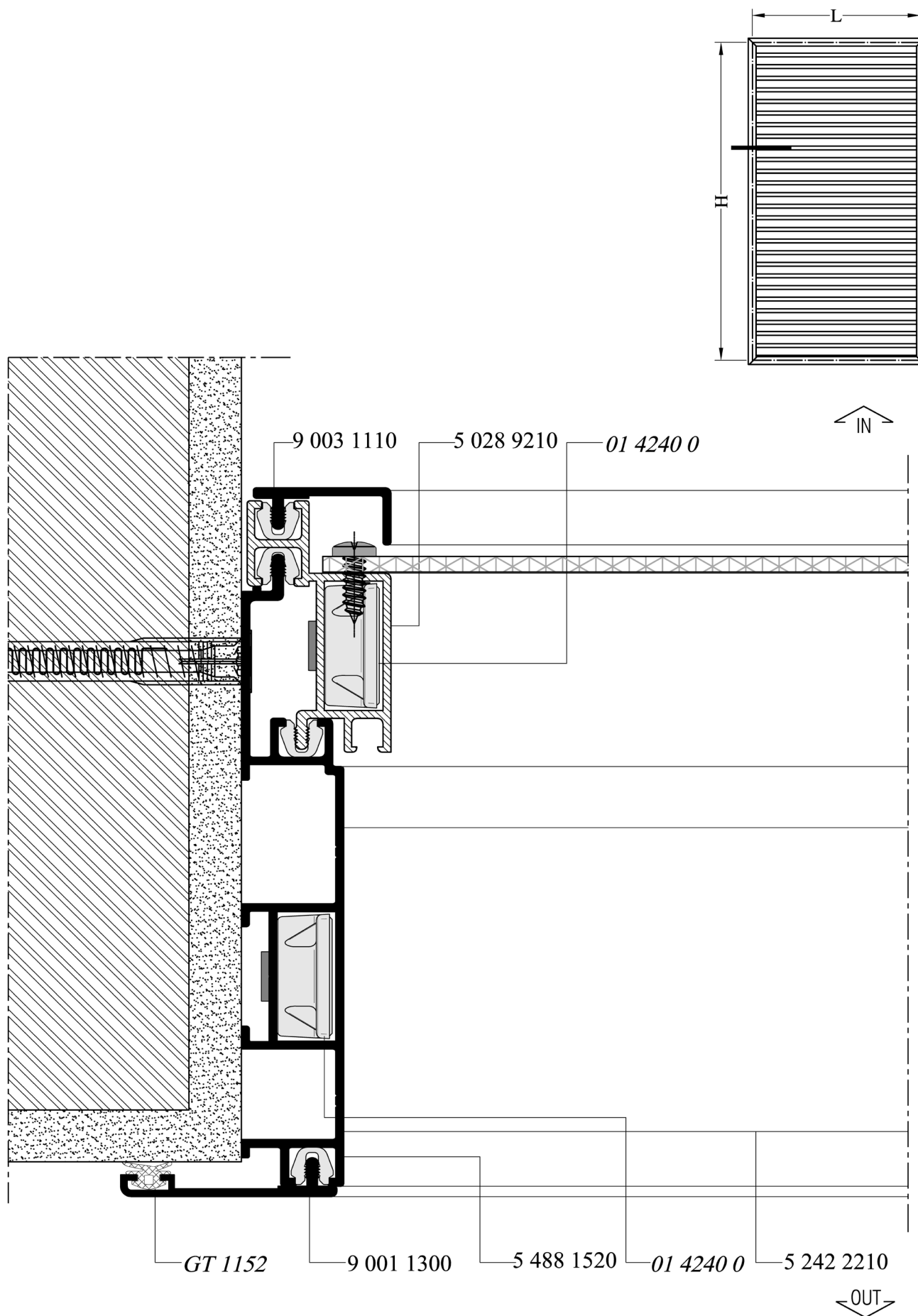
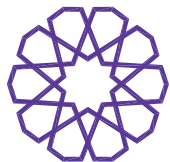
5 242 7710  
1.919 Kg./ml.

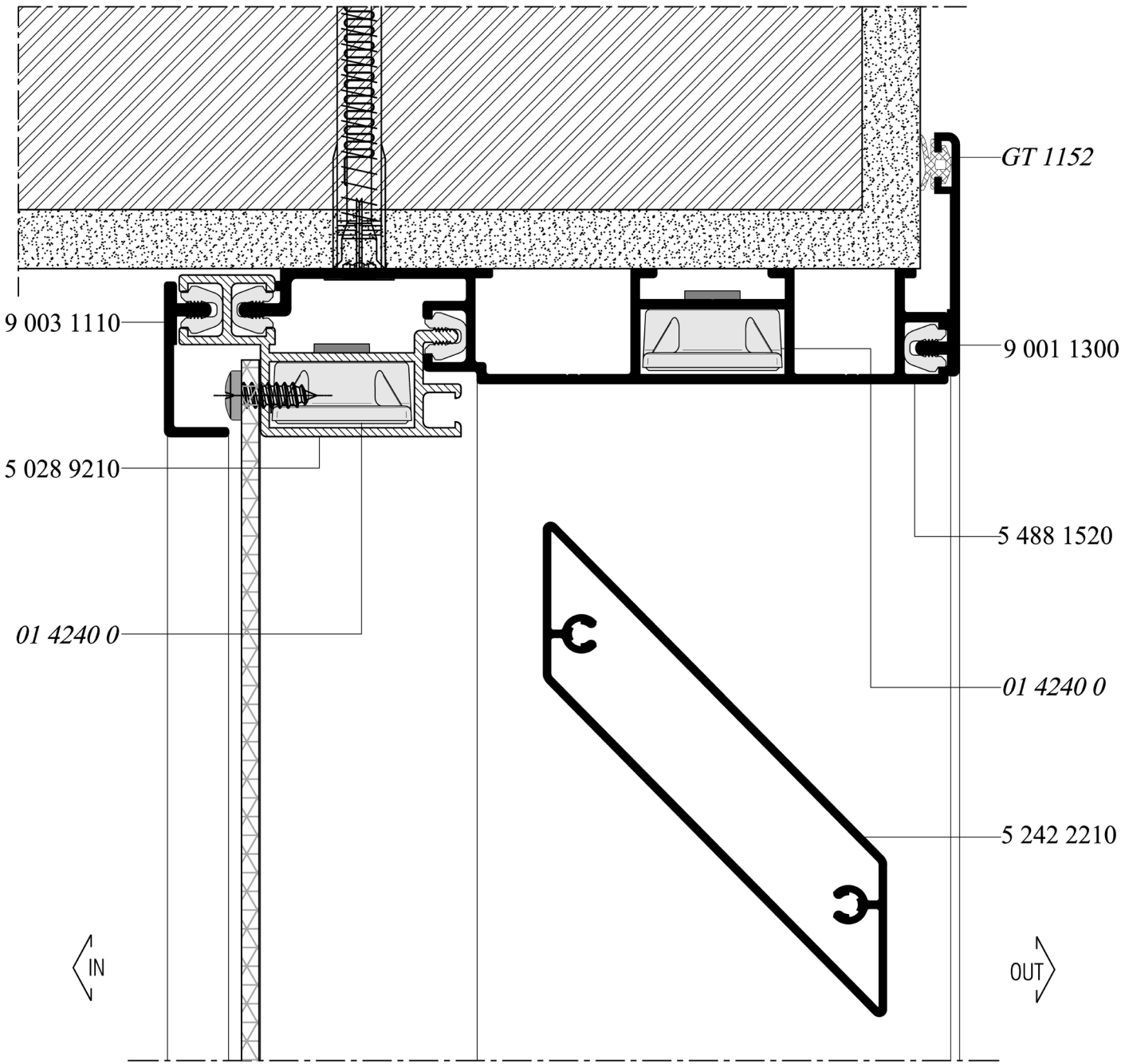
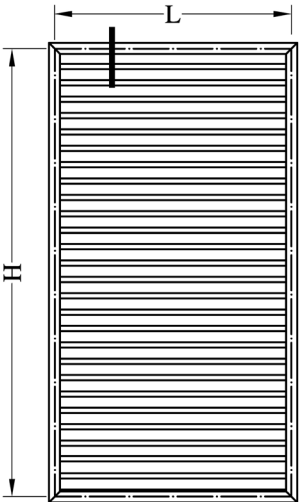
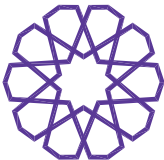


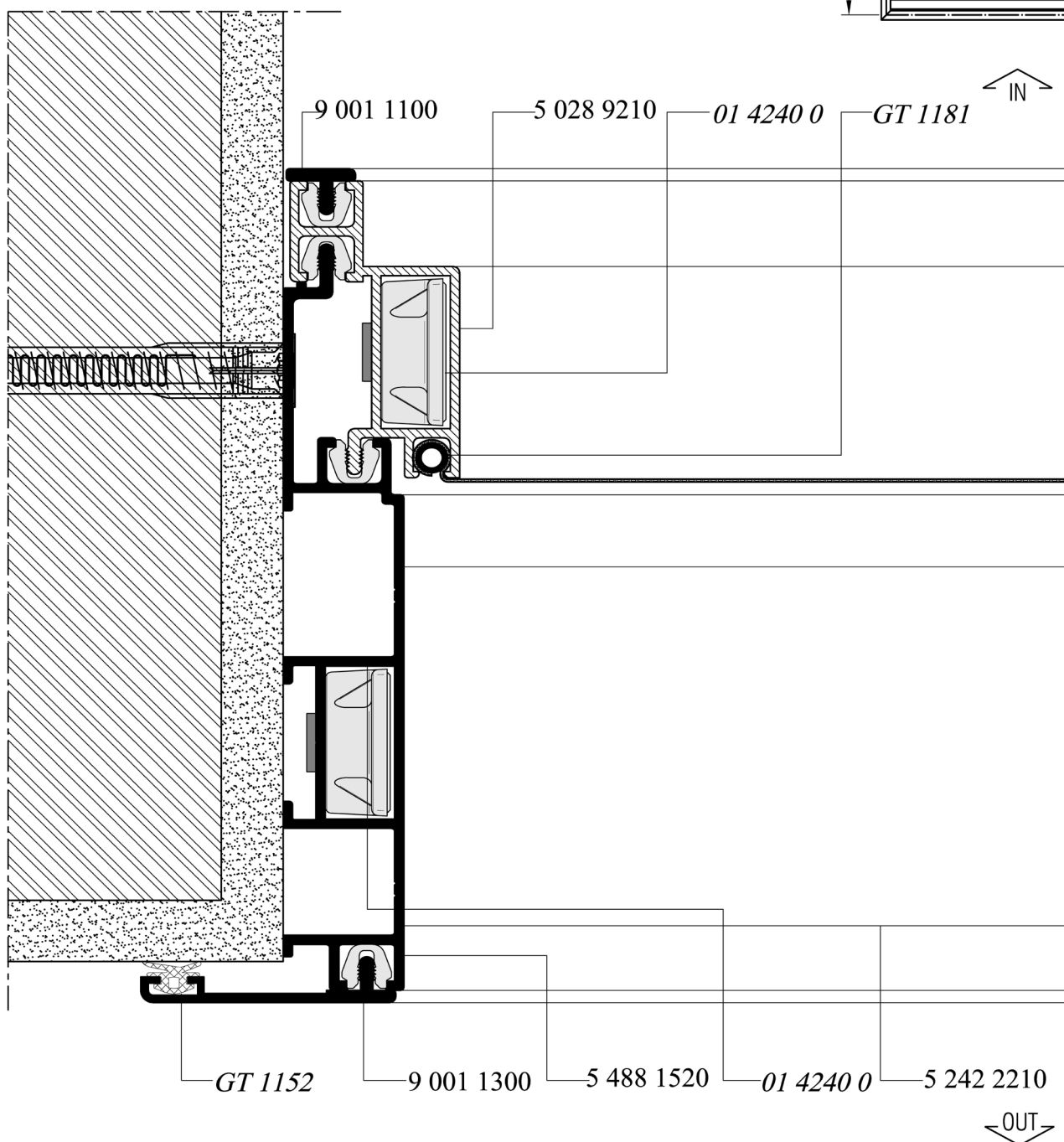
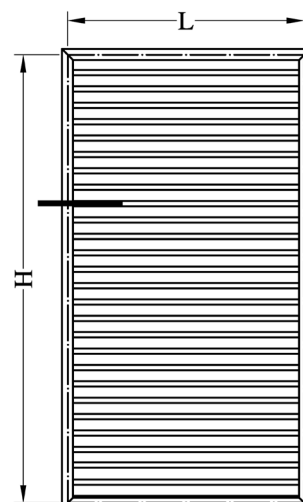
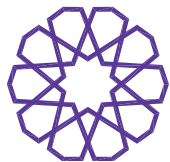
5 242 7712  
1.636 Kg./ml.

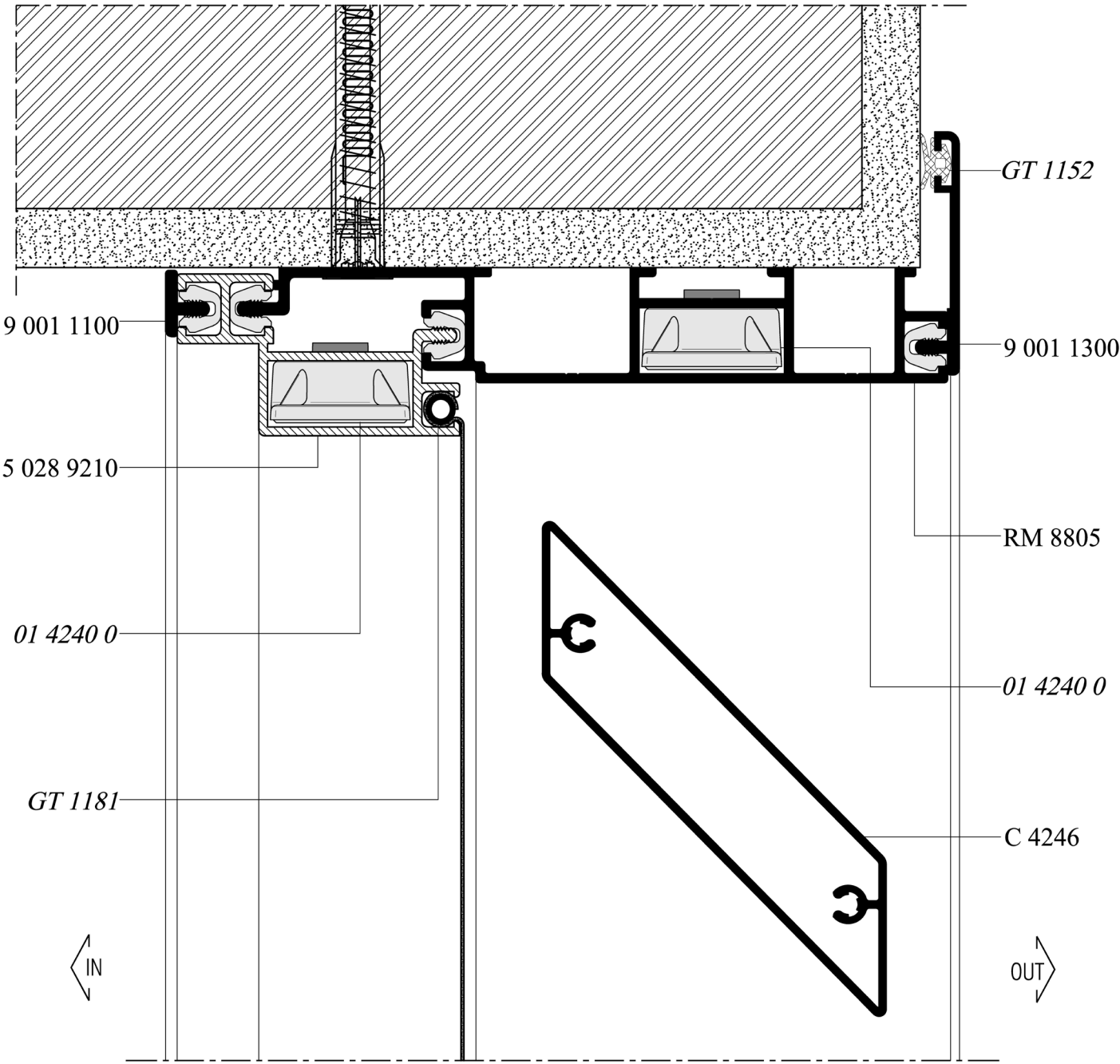
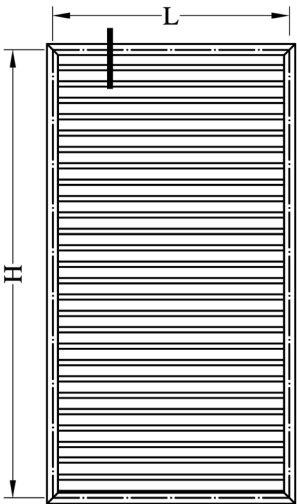
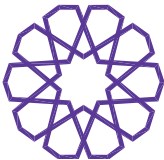


Profile No.	5 242 7610	5 242 7612	5 242 7710	5 242 7712	5 242 9910
Profile Old No.	C 4297	C 4295	C 4292	C 4290	C 4291



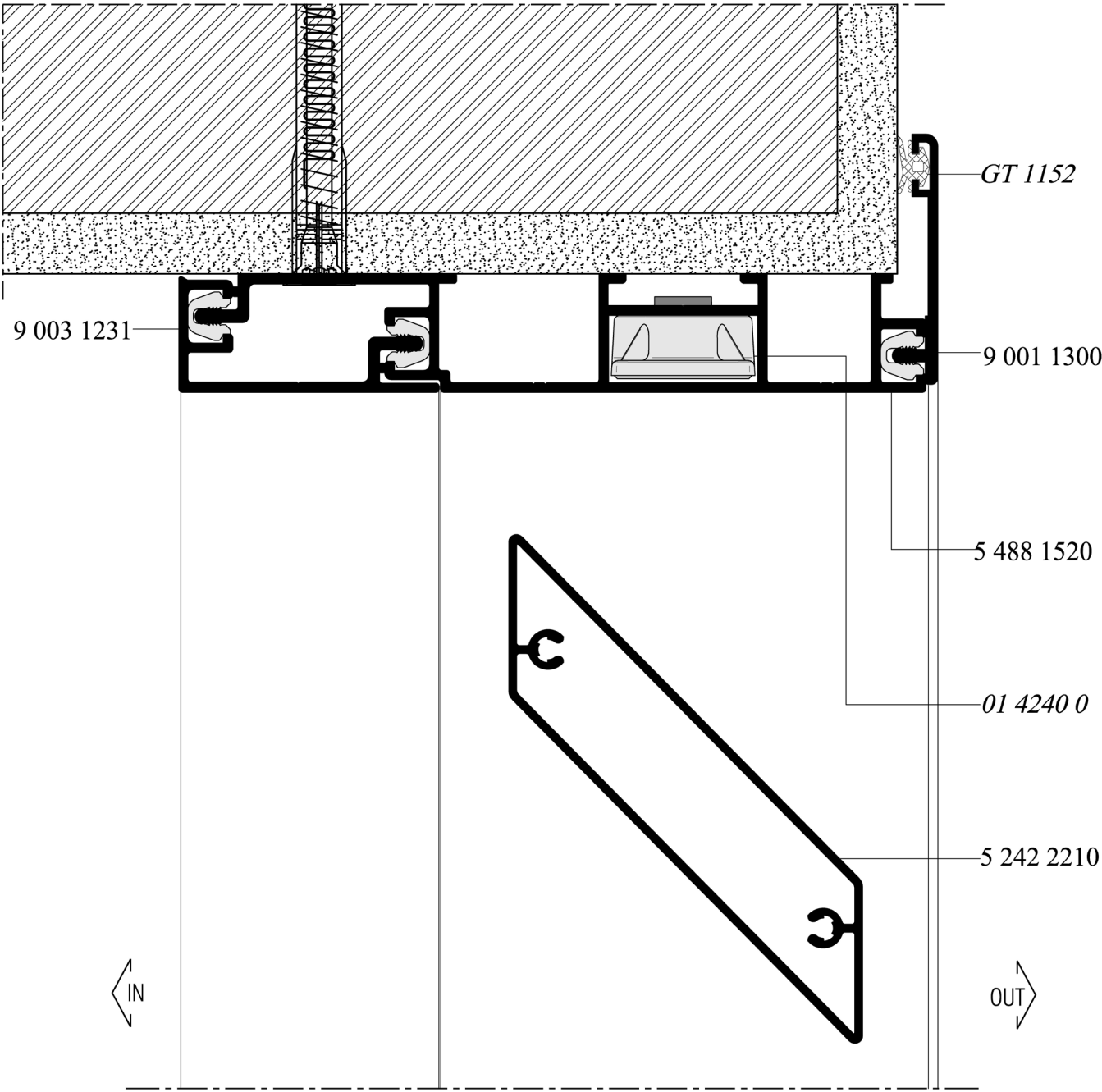
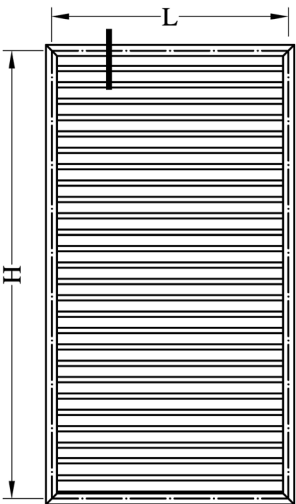
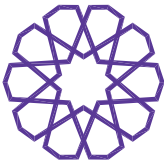




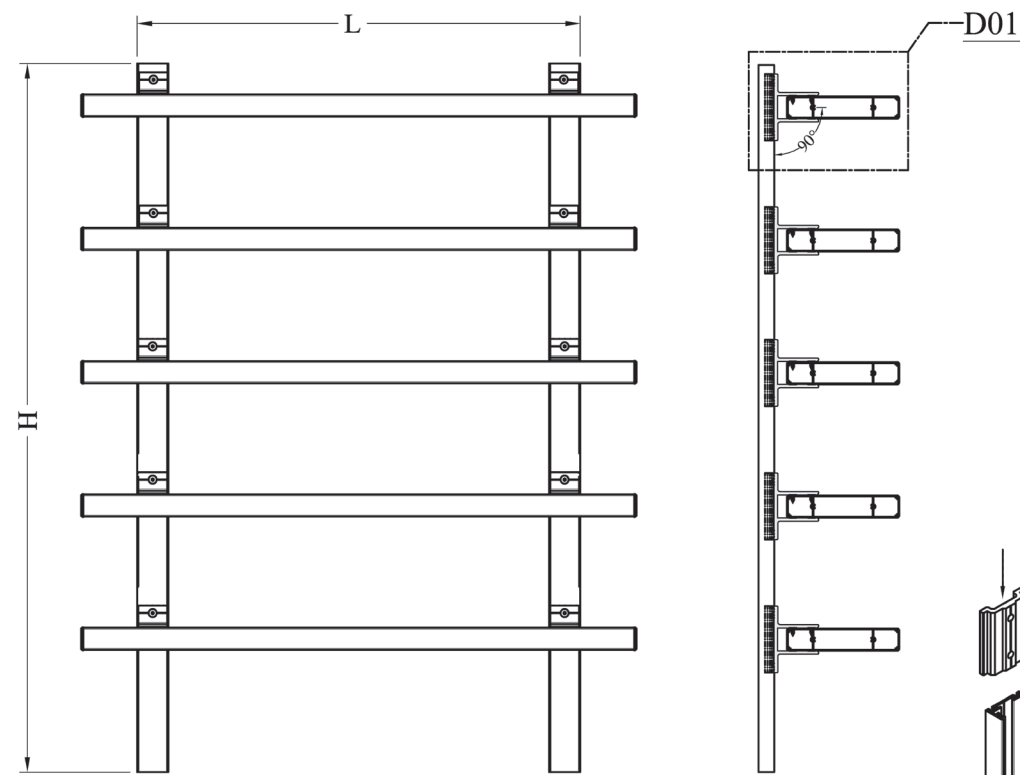










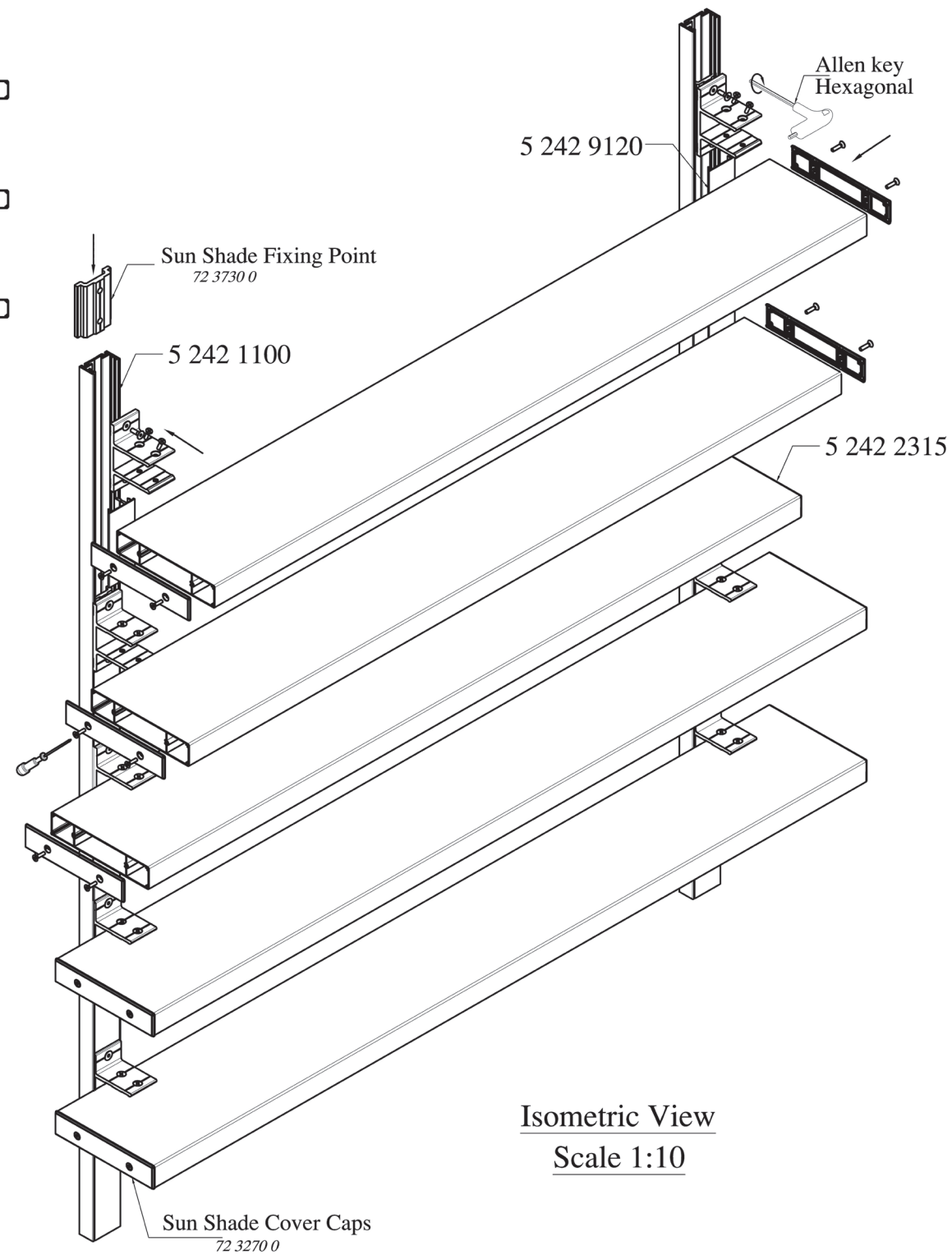
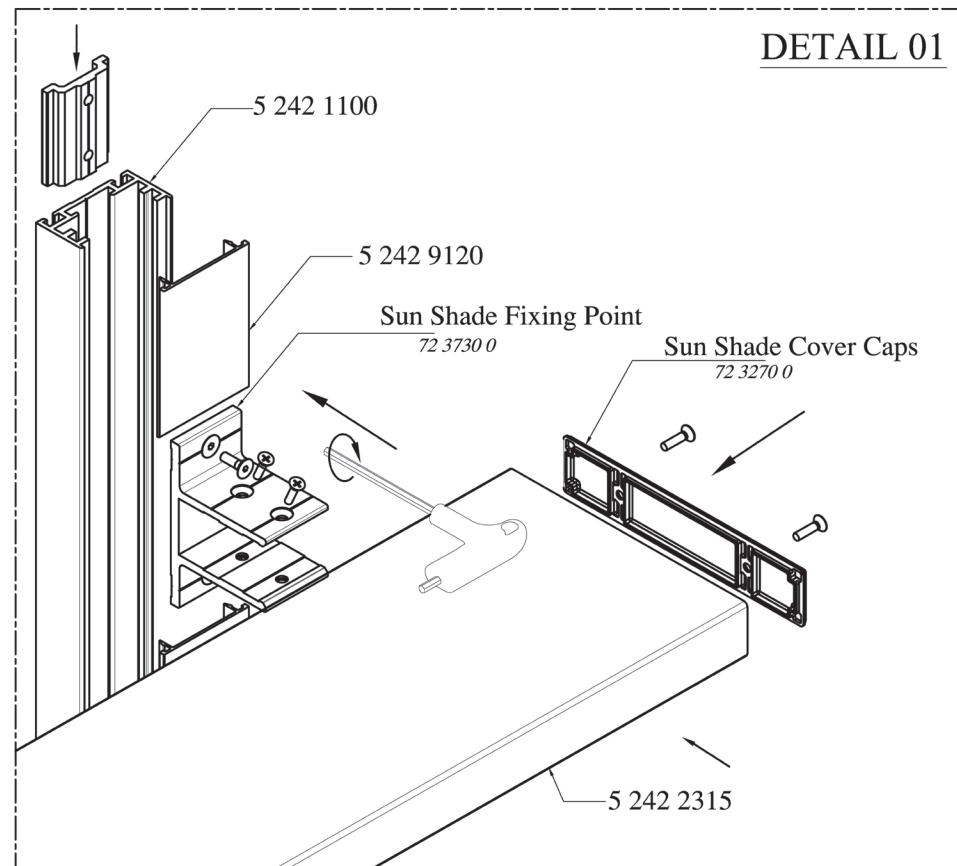


Elevation View  
Scale 1:10

Side View  
Scale 1:10

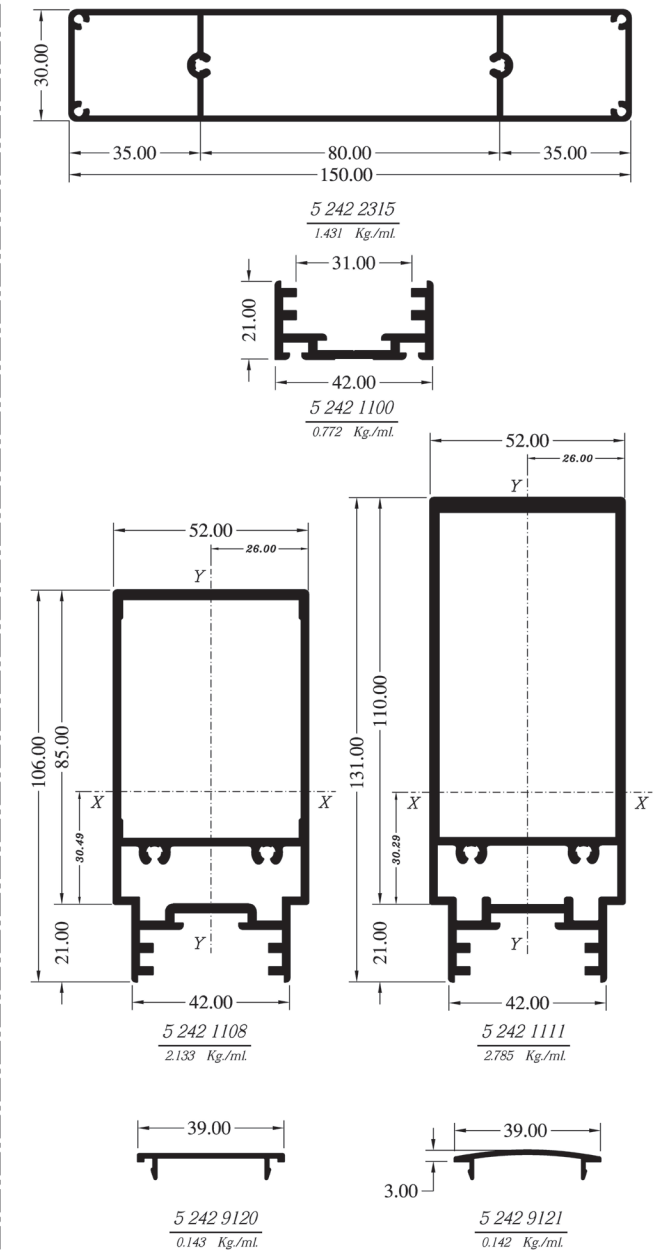




Plan View  
Scale 1:10



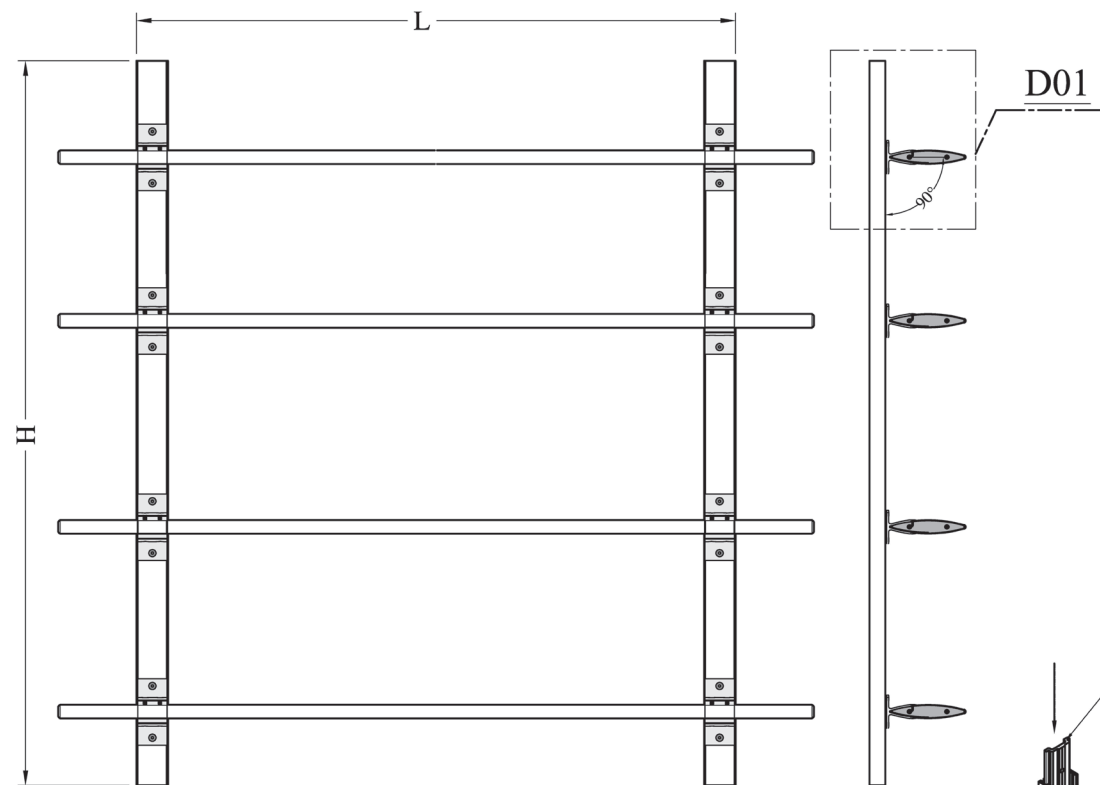
Isometric View  
Scale 1:10

## Profiles:



ACCESSORIES LIST		
FIGURE	ACC. NO	DESCRIPTION
	72 3730 0	Sun Shade Fixing point
	72 3270 0	Sun Shade Cover Caps



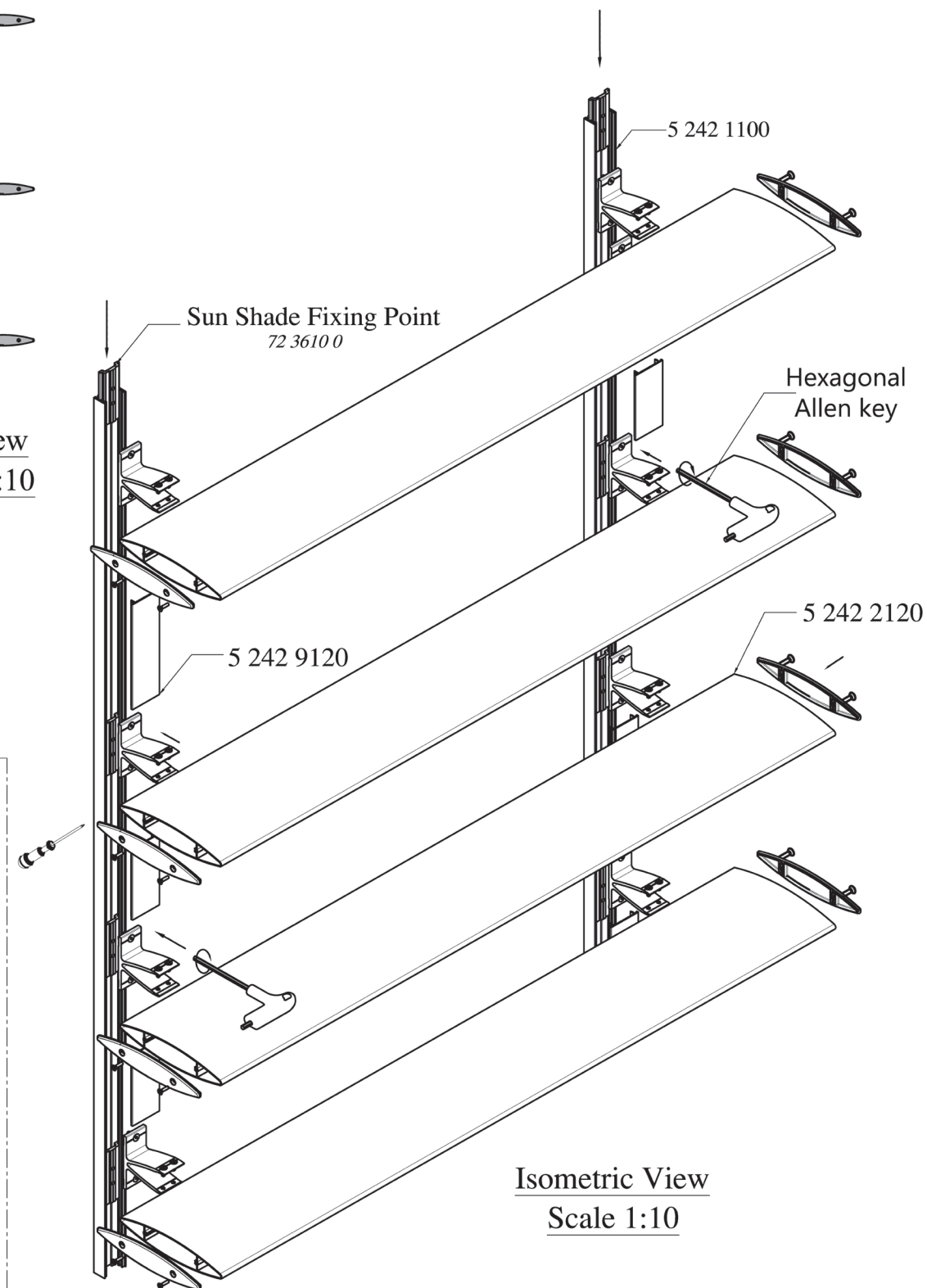
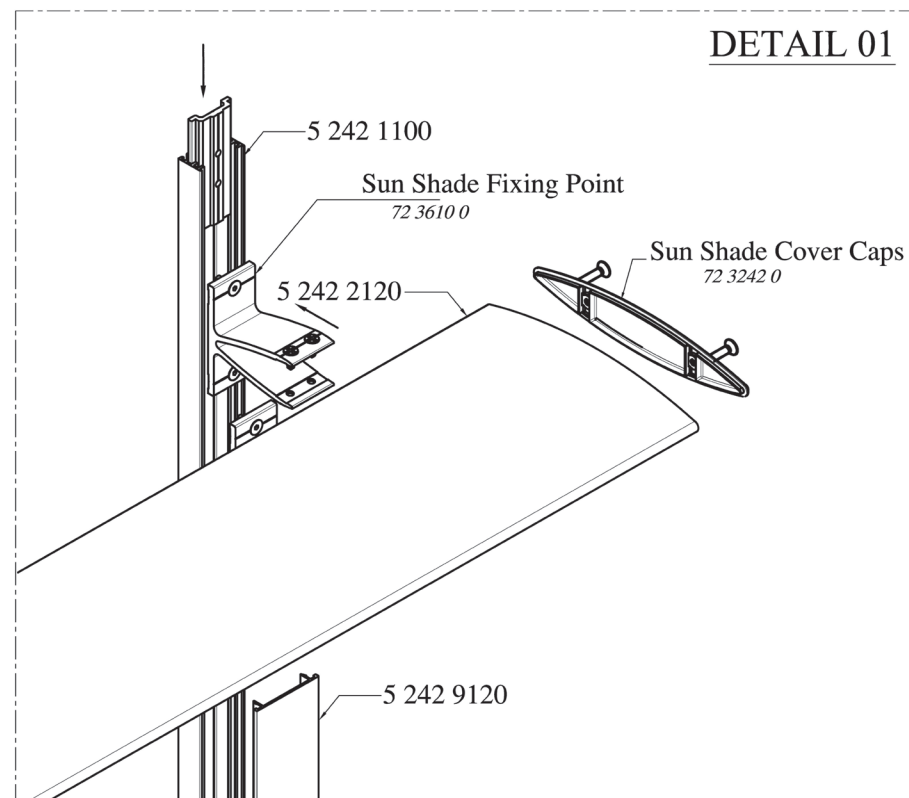


Elevation View  
Scale 1:10

Side View  
Scale 1:10

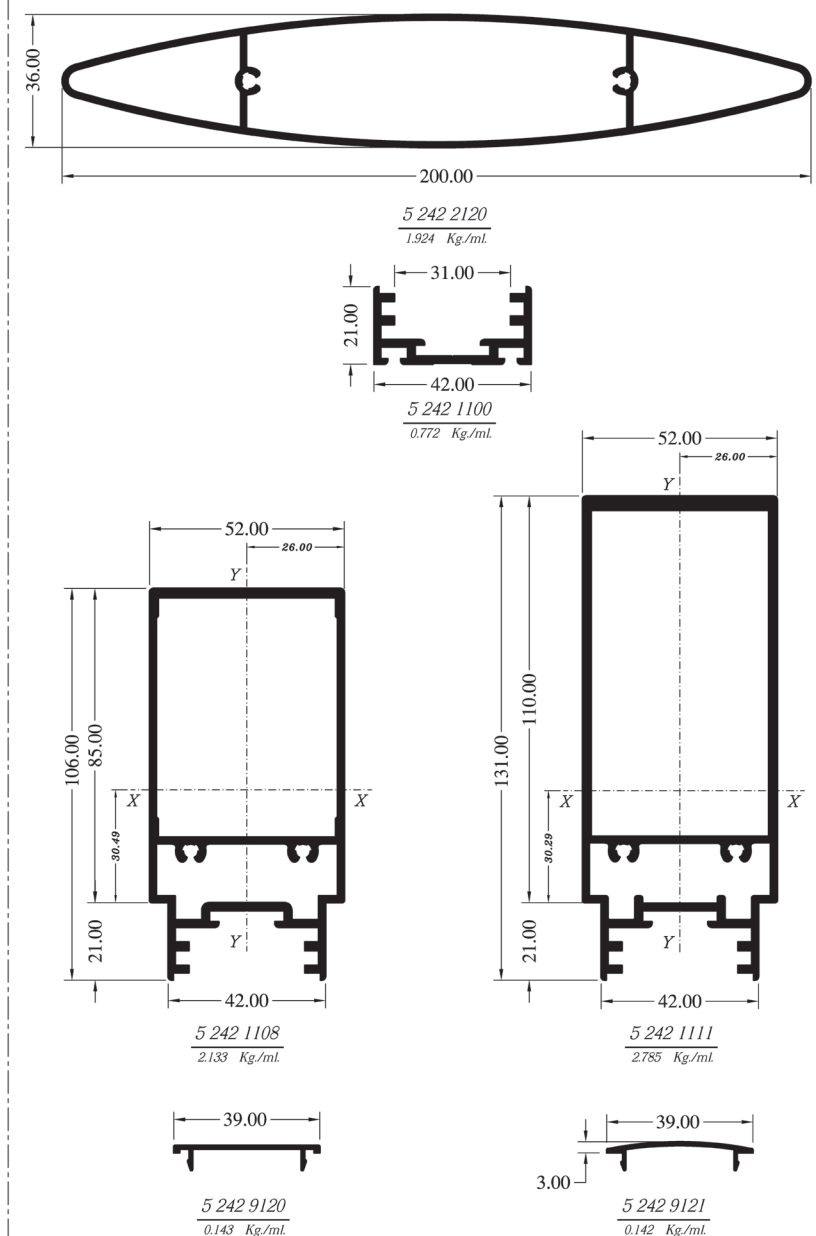


Plan View  
Scale 1:10





Isometric View  
Scale 1:10

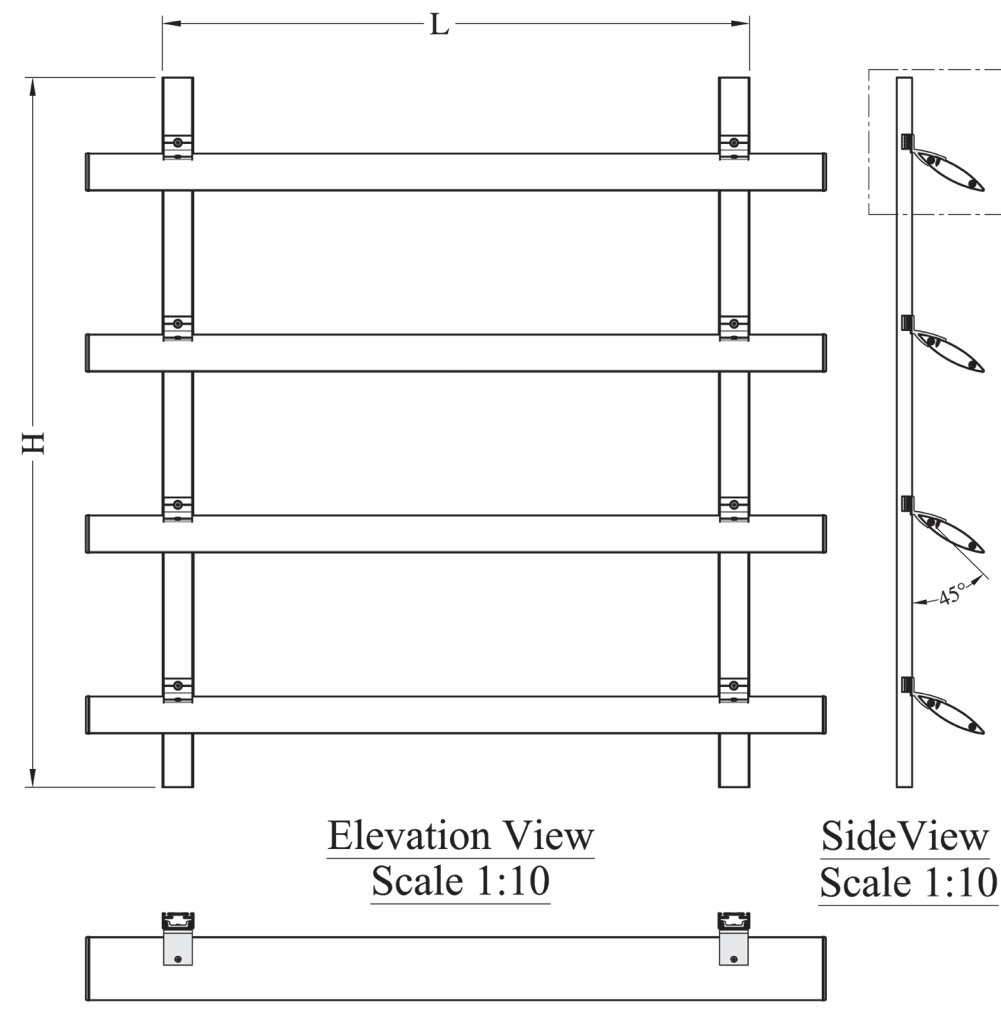
### Profiles:



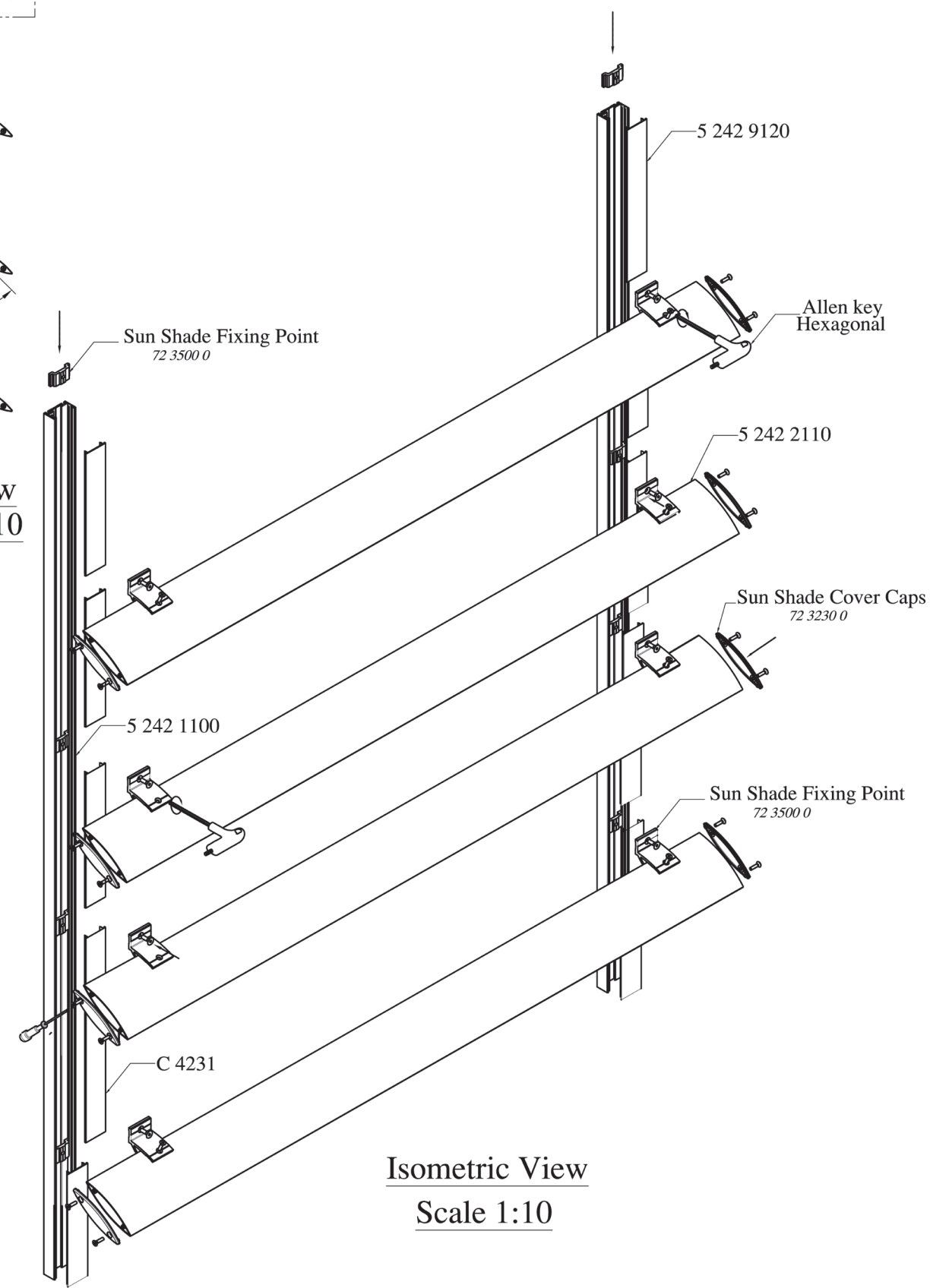
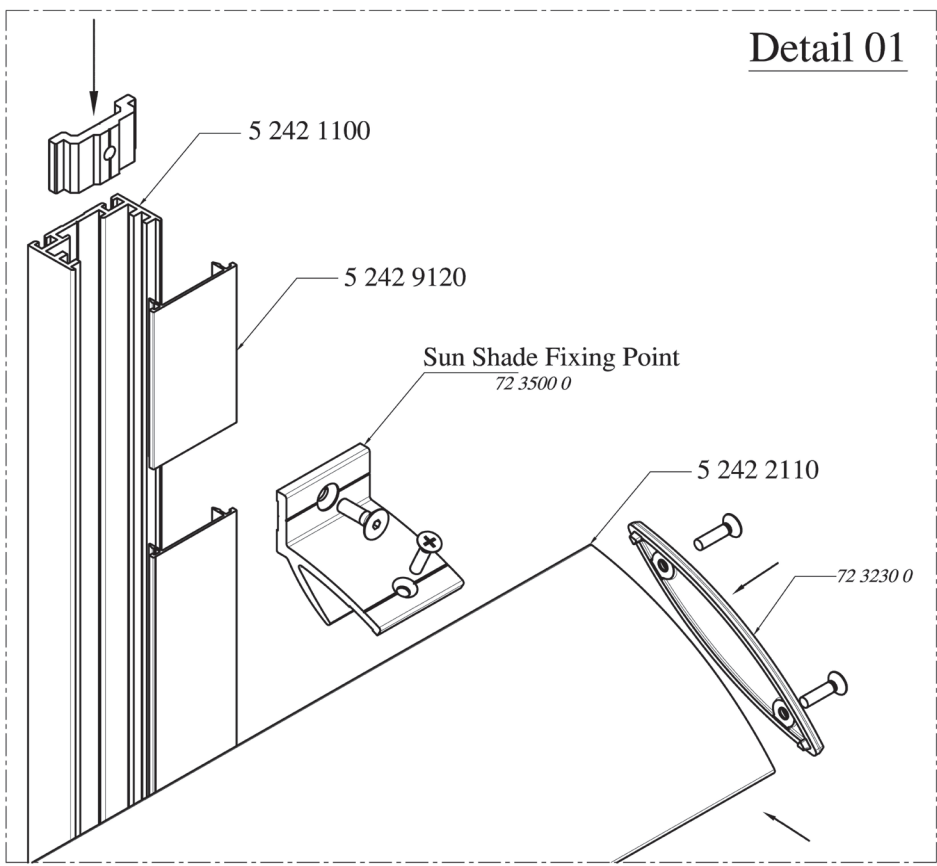
### ACCESSORIES LIST

FIGURE	ACC. NO	DESCRIPTION
	72 3610 0	Sun Shade Fixing point
	72 3242 0	Sun Shade Cover Caps

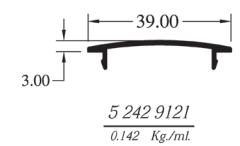
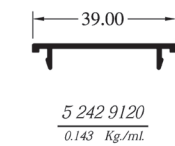
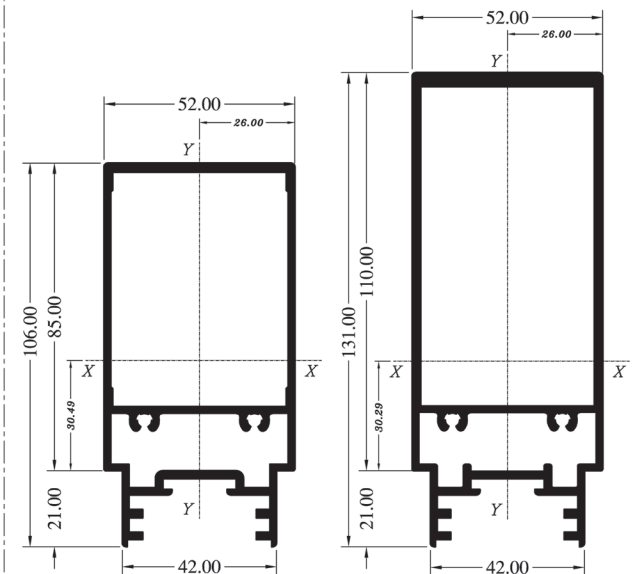
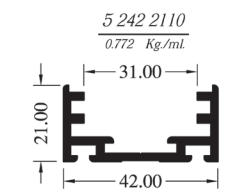
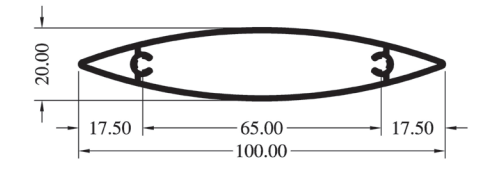




**Plan View**  
Scale 1:10

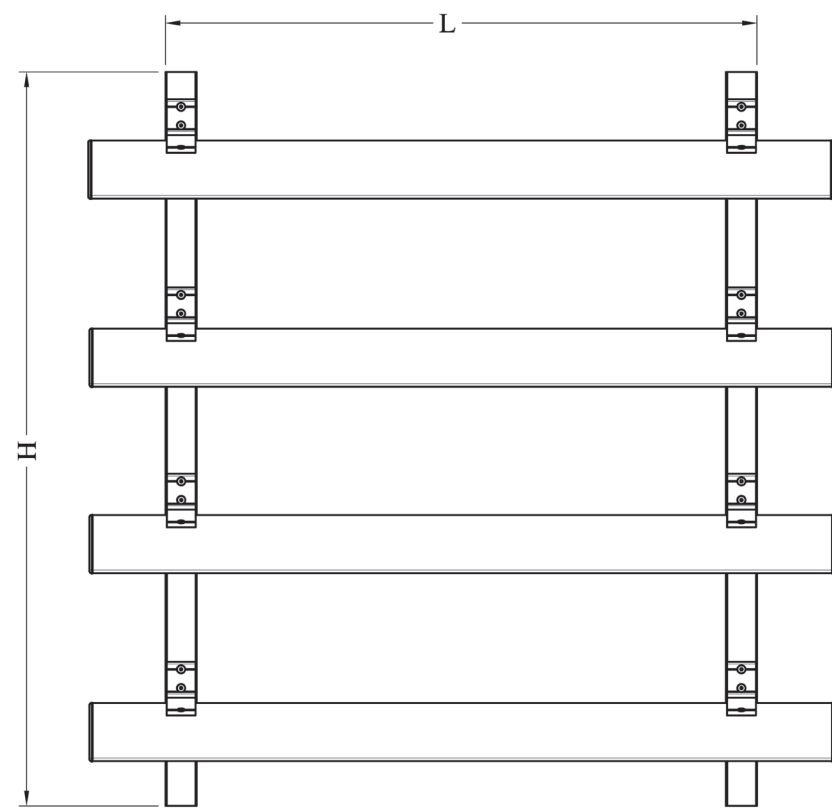


**Profiles:**



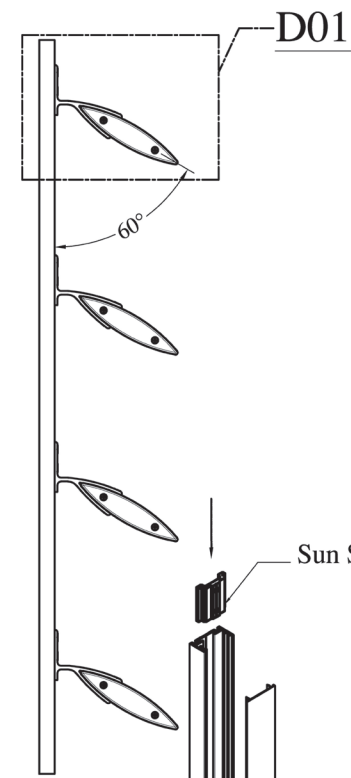
ACCESSORIES LIST		
FIGURE	ACC. NO	DESCRIPTION
	72 3500 0	Sun Shade Fixing point
	72 3230 0	Sun Shade Cover Caps



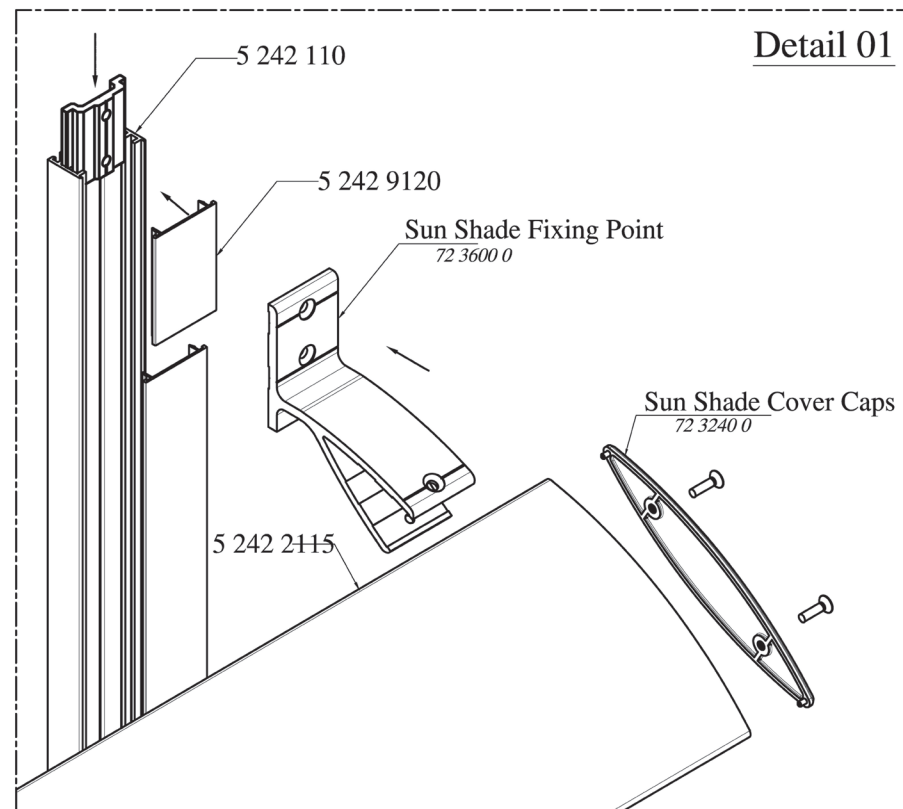


Elevation View  
Scale 1:10

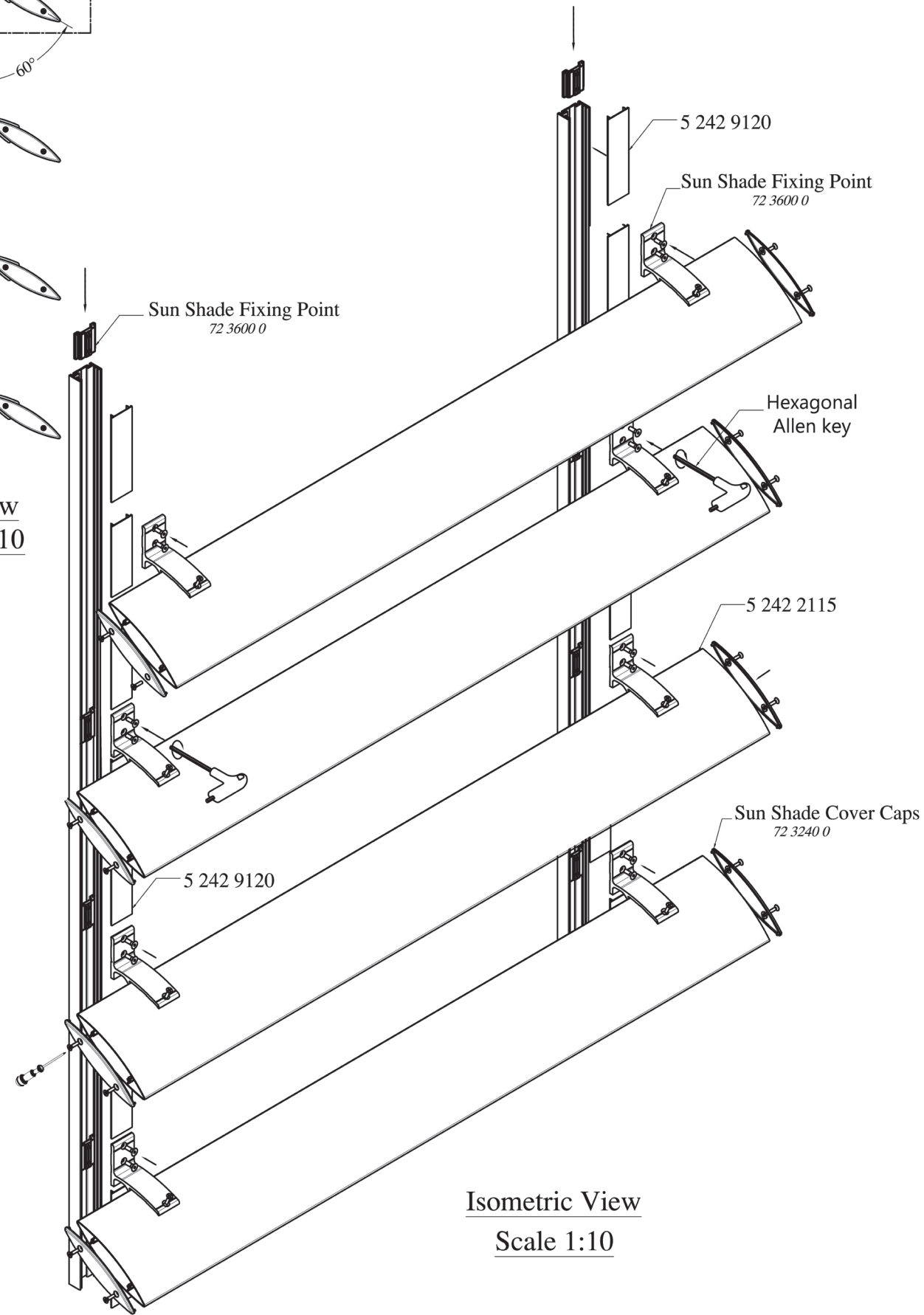
Plan View  
Scale 1:10



Side View  
Scale 1:10

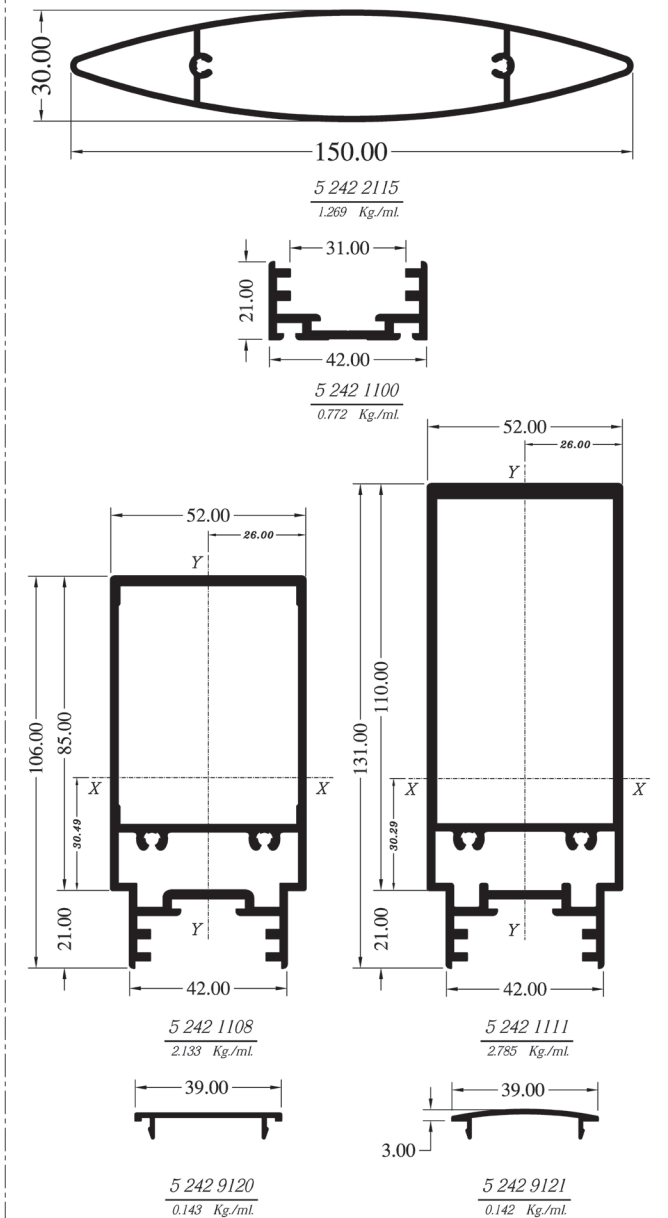


Detail 01





Isometric View  
Scale 1:10

### Profiles:

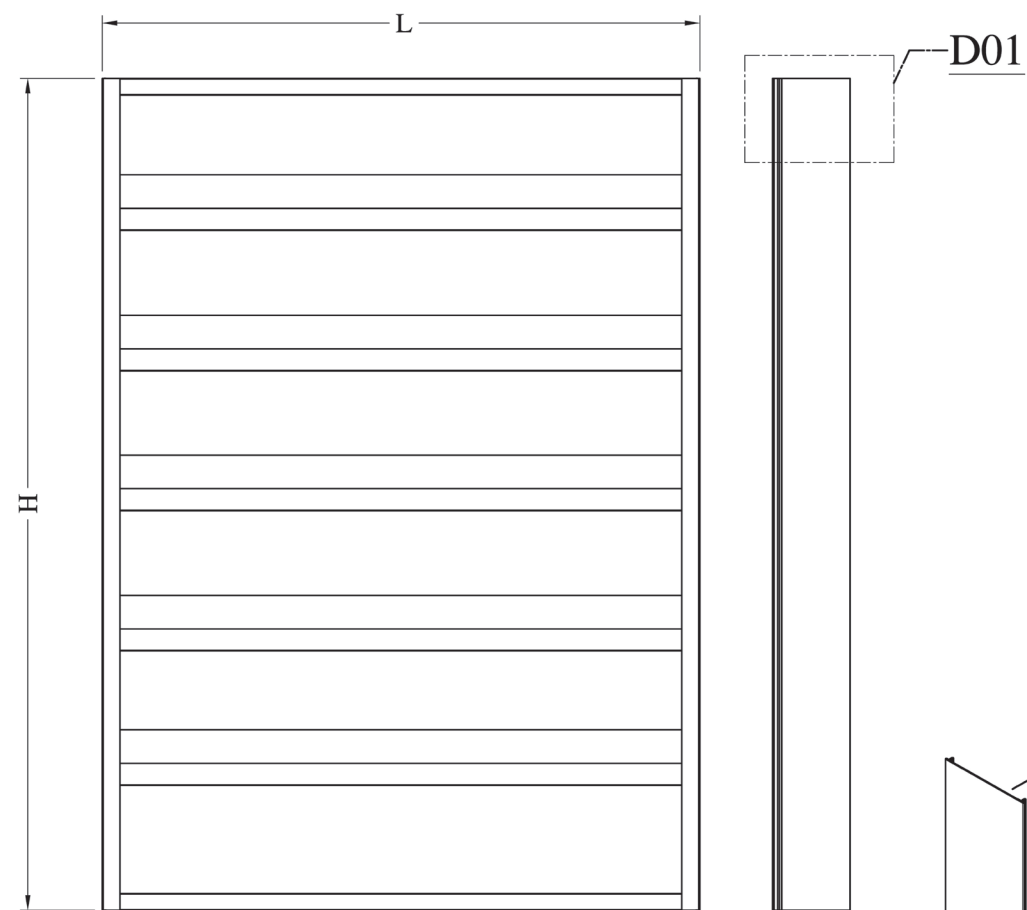


### ACCESSORIES LIST

FIGURE	ACC. NO	DESCRIPTION
	72 3600 0	Sun Shade Fixing point
	72 3240 0	Sun Shade Cover Caps

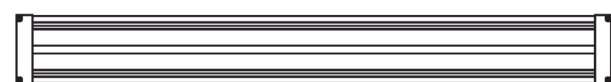




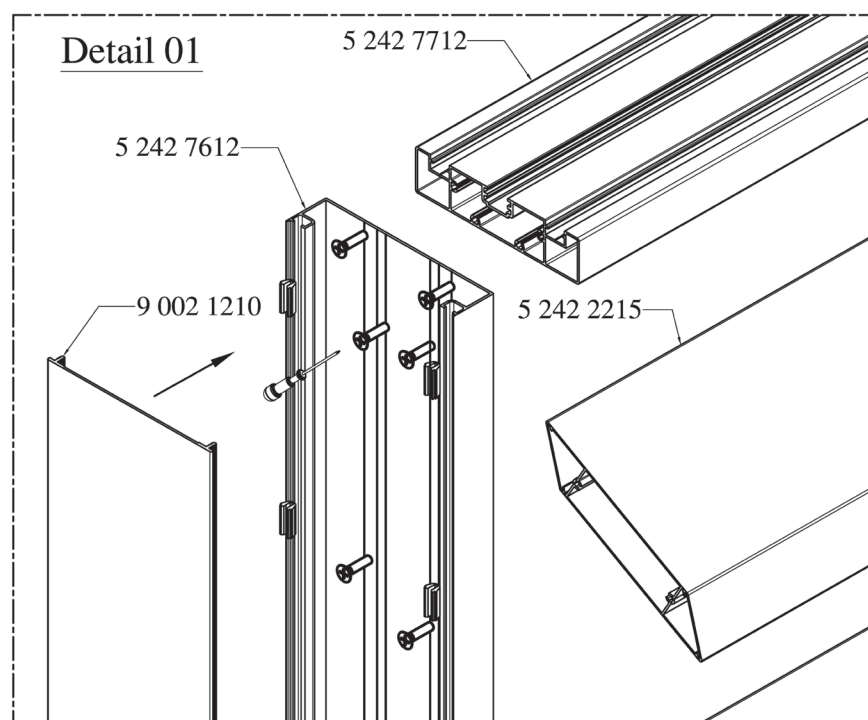


Elevation View  
Scale 1:15

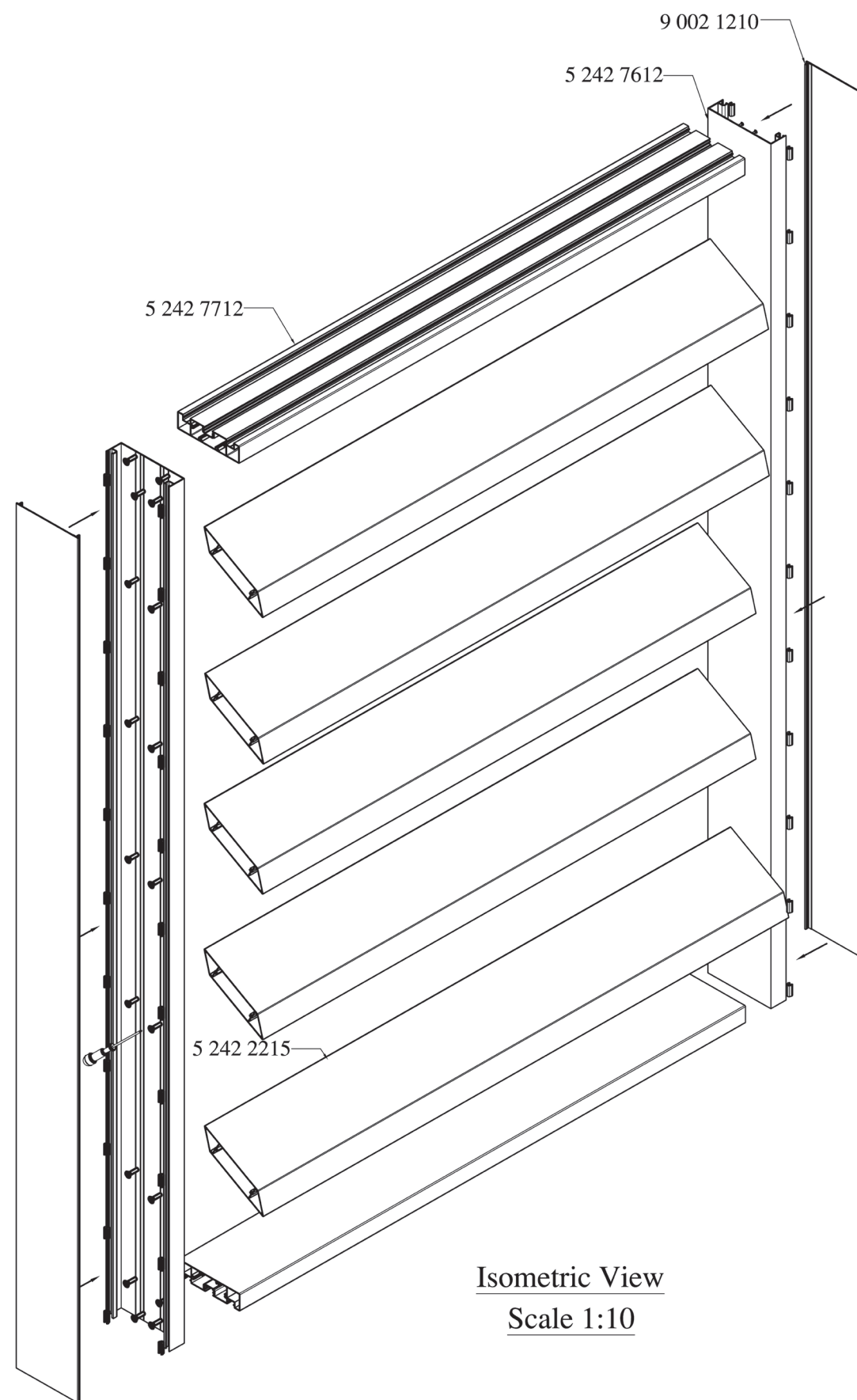
Side View  
Scale 1:15



Plan View  
Scale 1:15

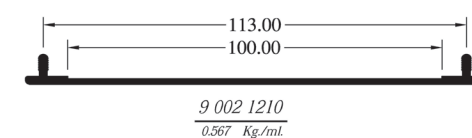
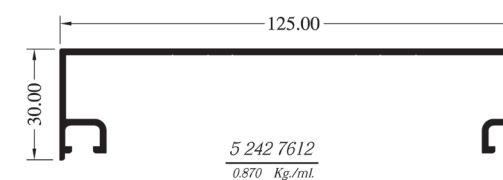
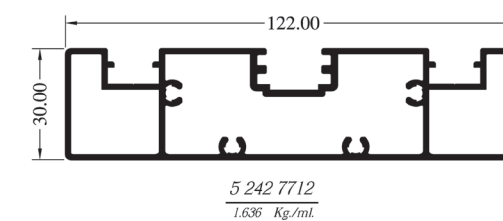
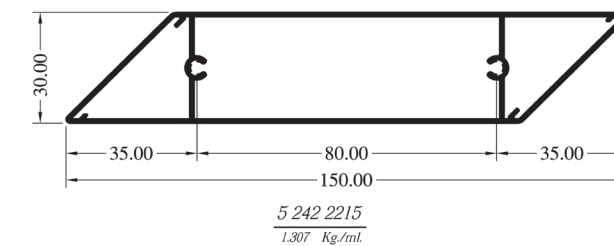
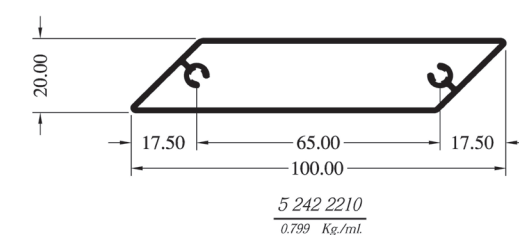



Detail 01



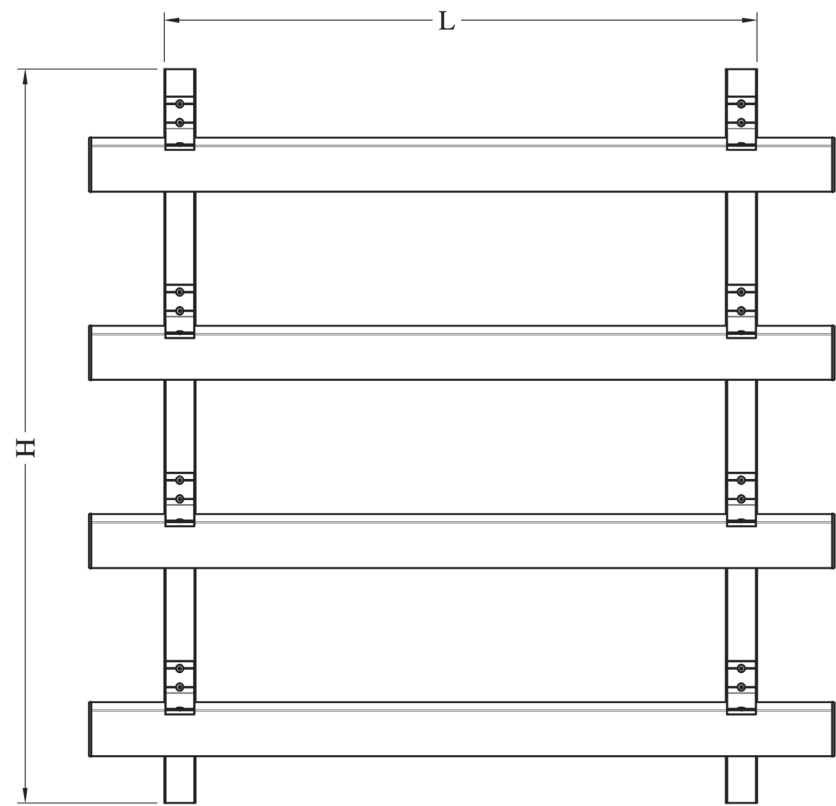
Isometric View  
Scale 1:10

### Profiles:

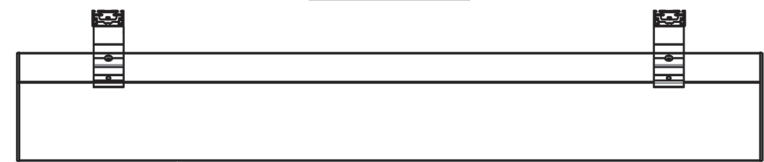


ACCESSORIES LIST			
FIGURE	ACC. NO	QTY.	DESCRIPTION
	60 0500 0	$\frac{4H}{30}$	Clip

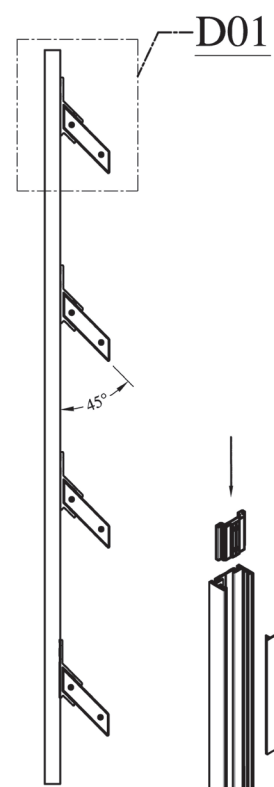




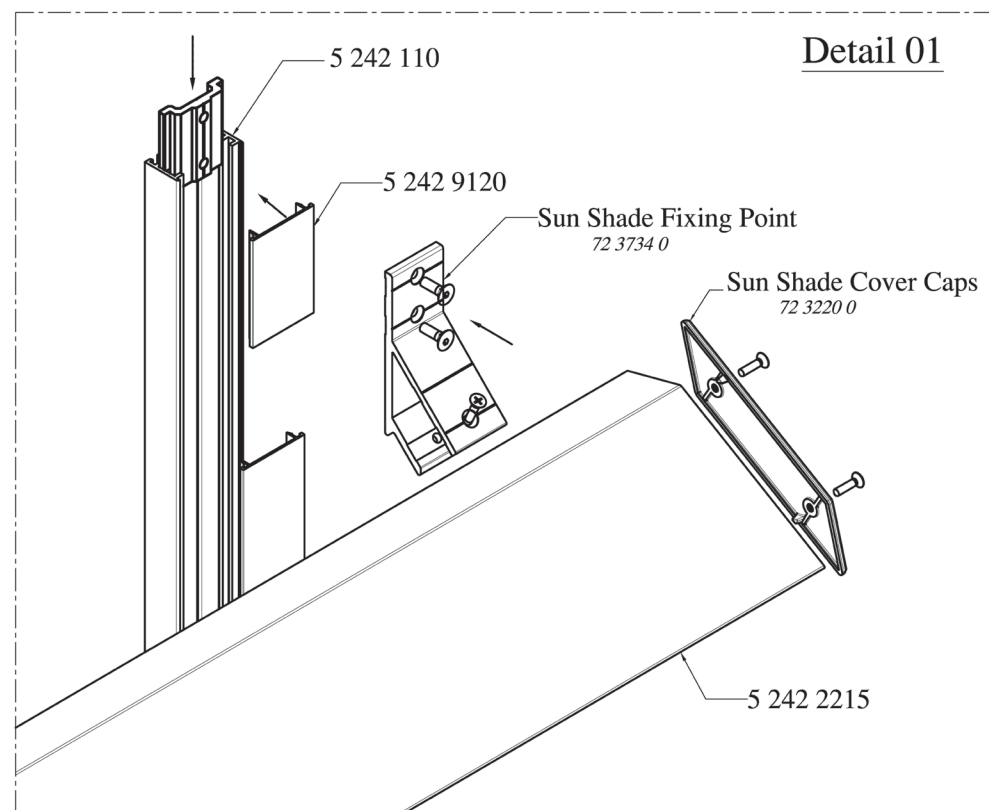
Elevation View  
Scale 1:10



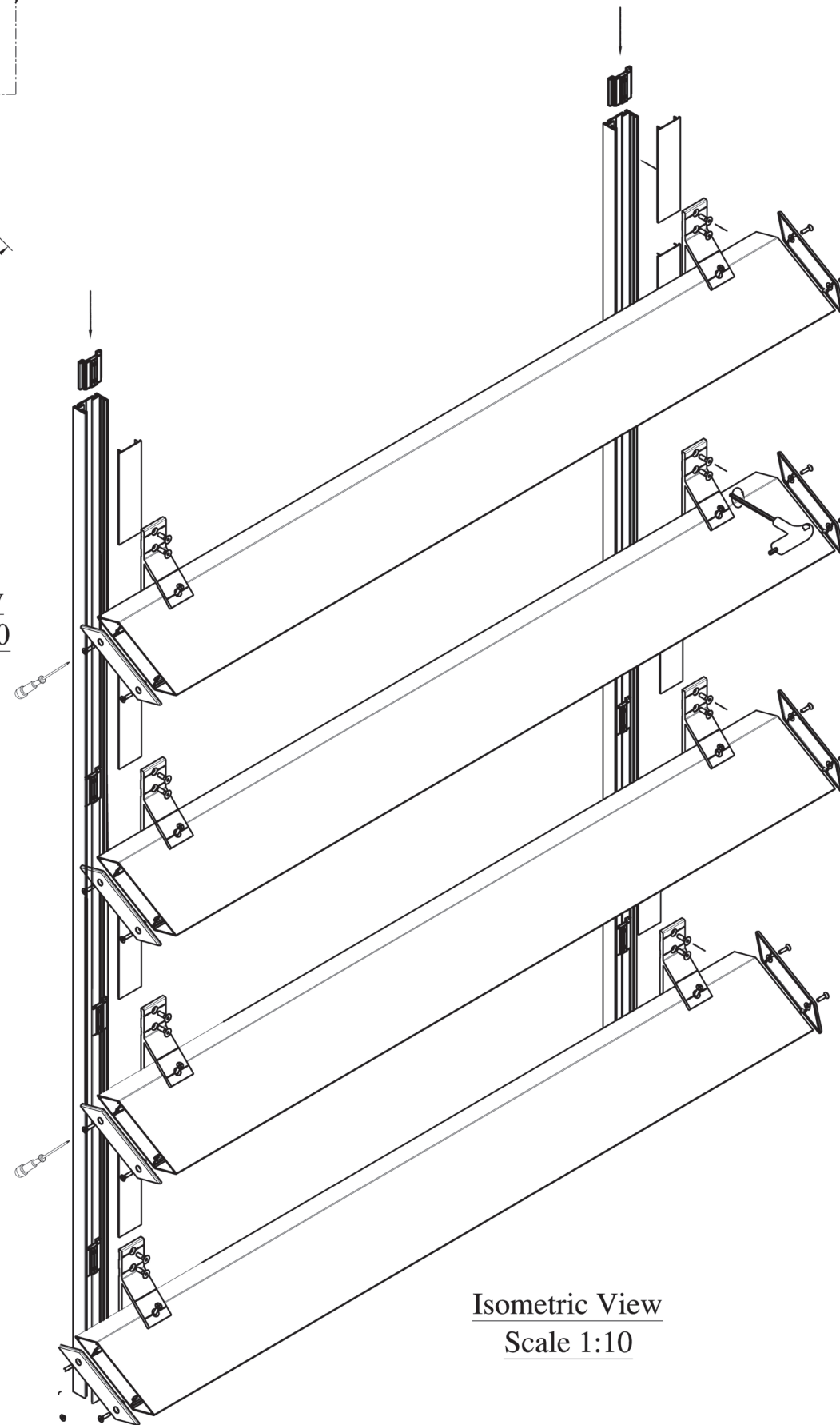
Plan View  
Scale 1:10



Side View  
Scale 1:10

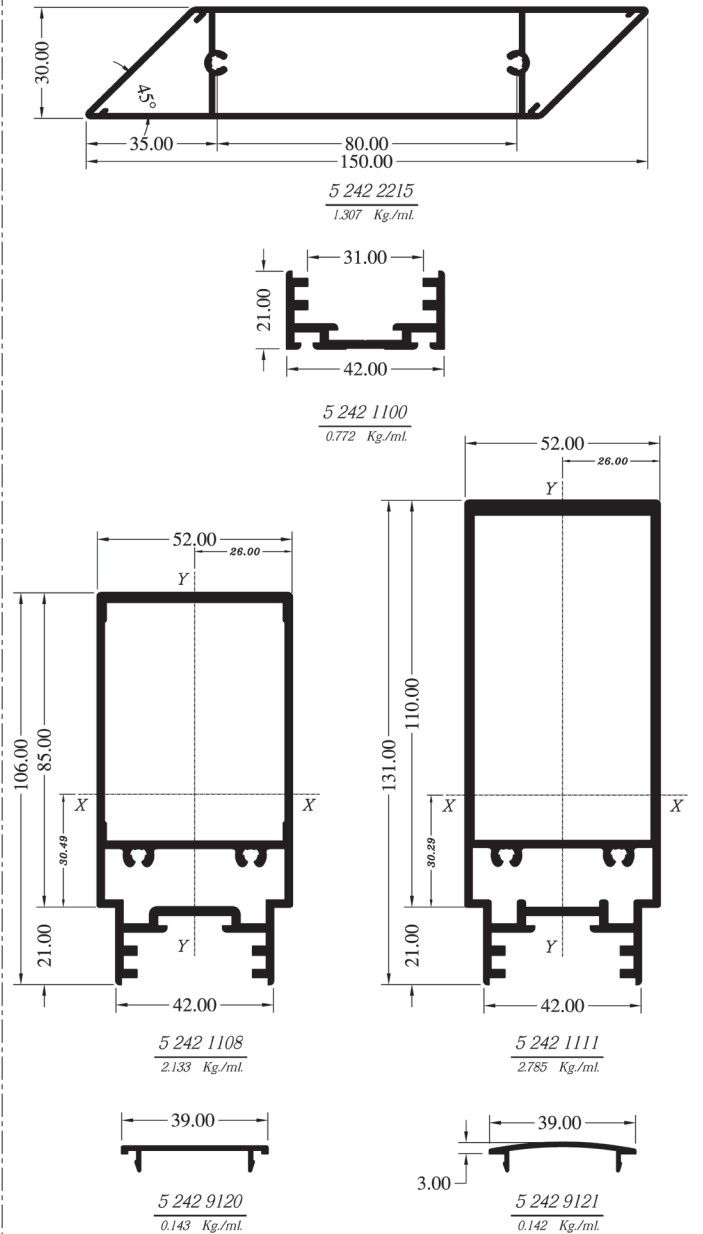


Detail 01



Isometric View  
Scale 1:10

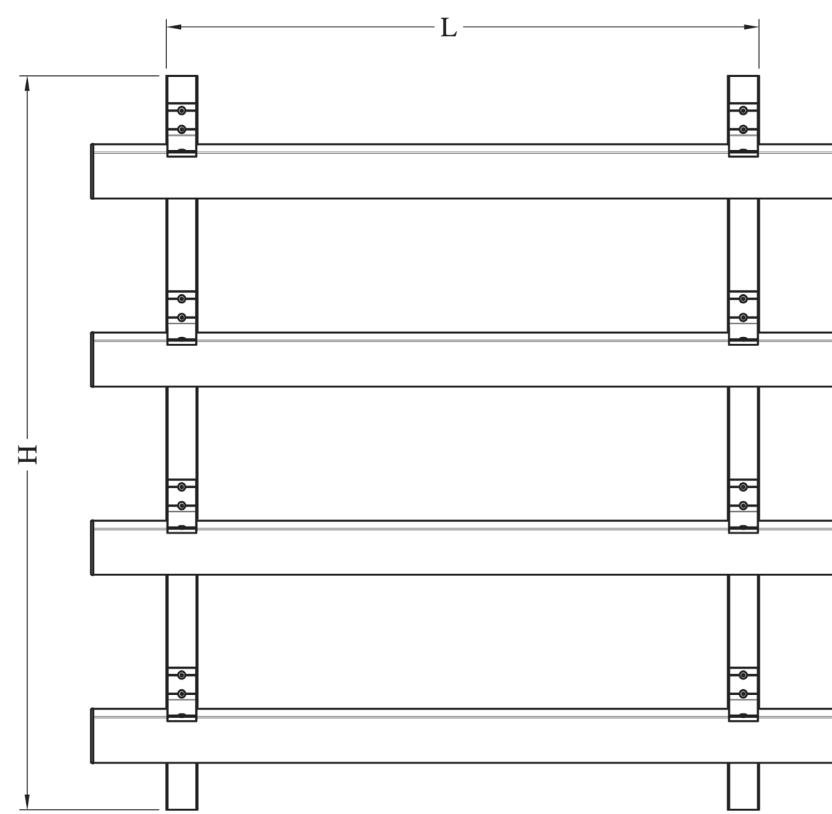
## Profiles:



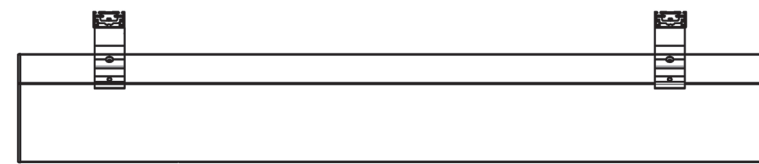
## ACCESSORIES LIST

FIGURE	ACC. NO	DESCRIPTION
	72 3734 0	Sun Shade Fixing point
	72 3220 0	Sun Shade Cover Caps

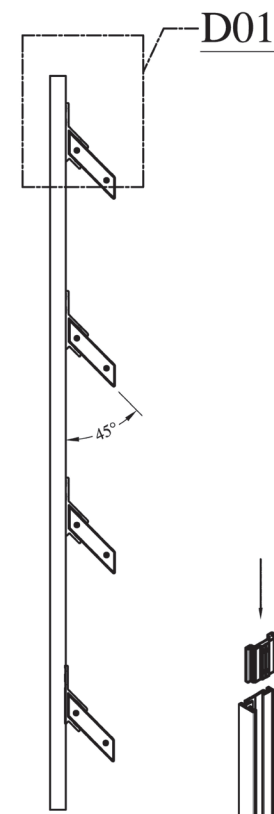




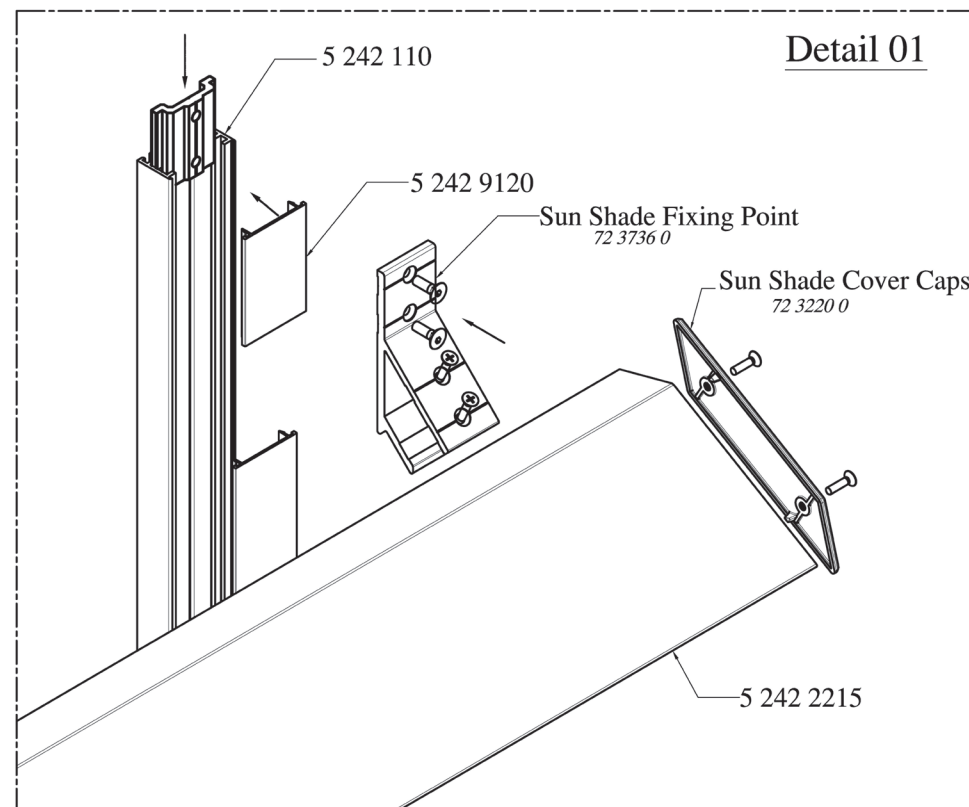
Elevation View  
Scale 1:10



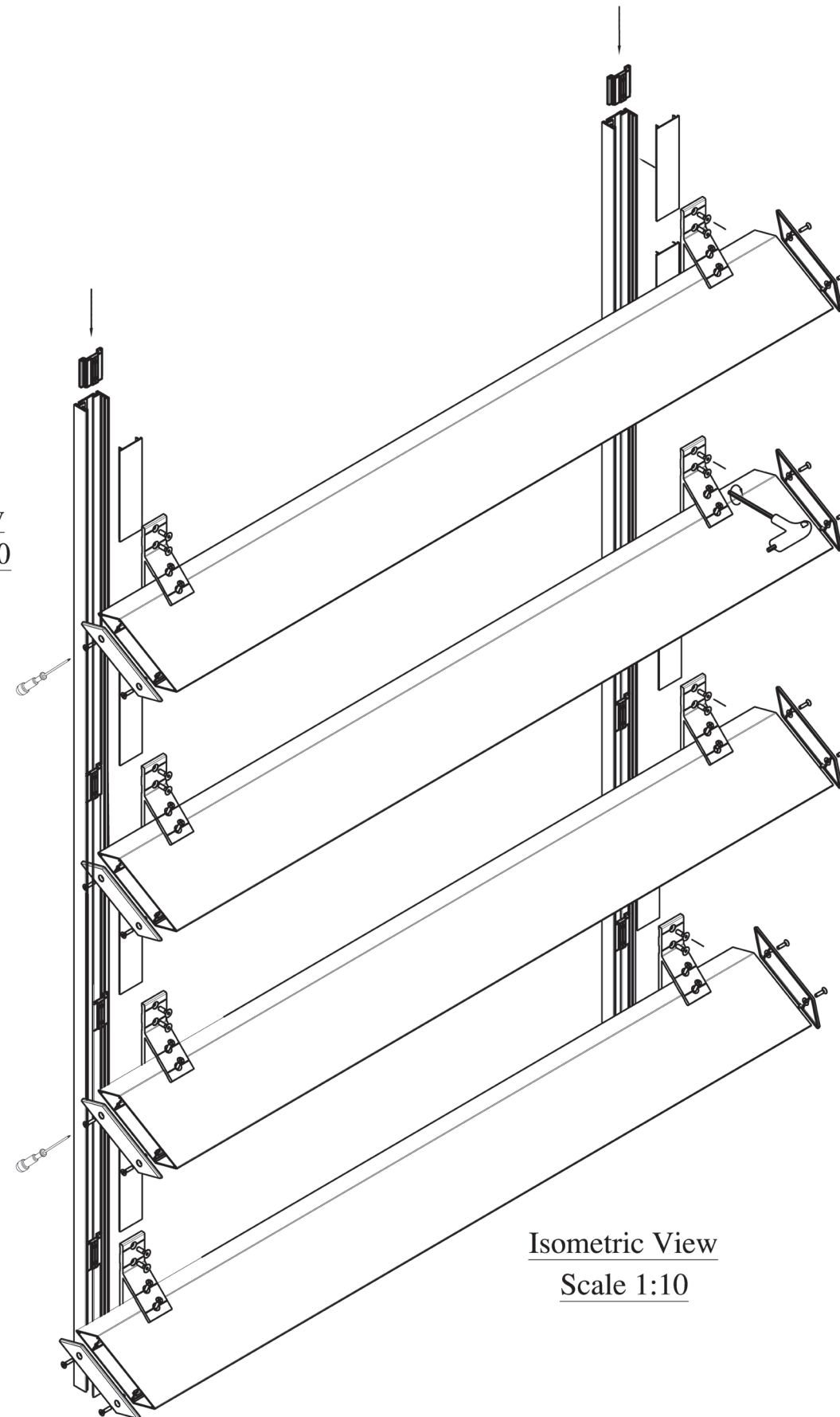
Plan View  
Scale 1:10



Side View  
Scale 1:10

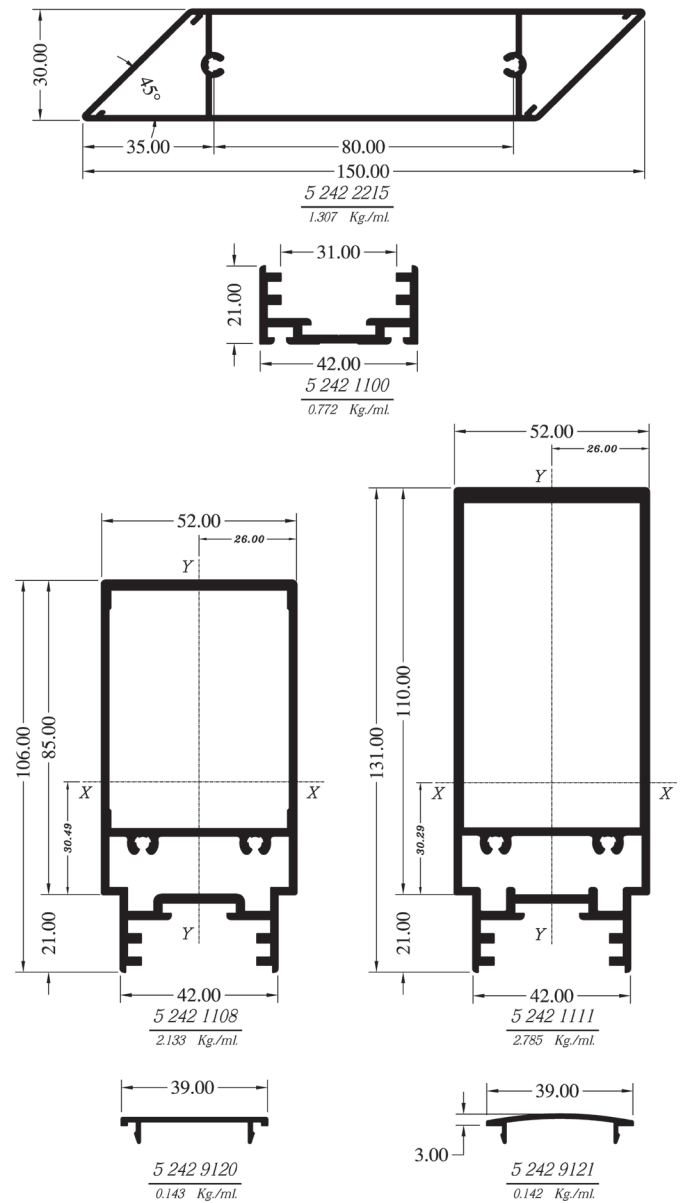


Detail 01





Isometric View  
Scale 1:10

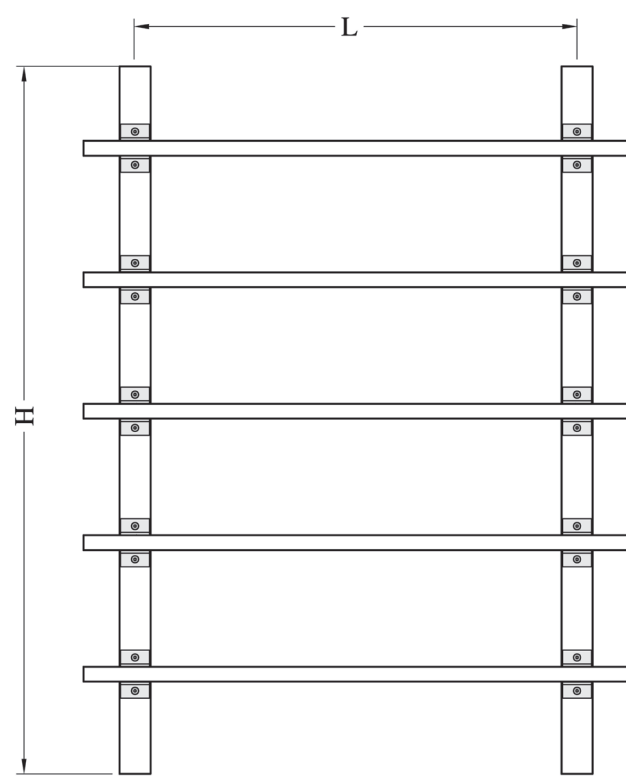
### Profiles:



### ACCESSORIES LIST

FIGURE	ACC. NO	DESCRIPTION
	72 3736 0	Sun Shade Fixing point
	72 3220 0	Sun Shade Cover Caps

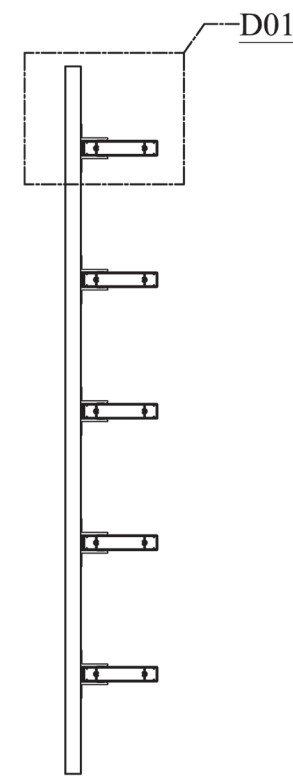




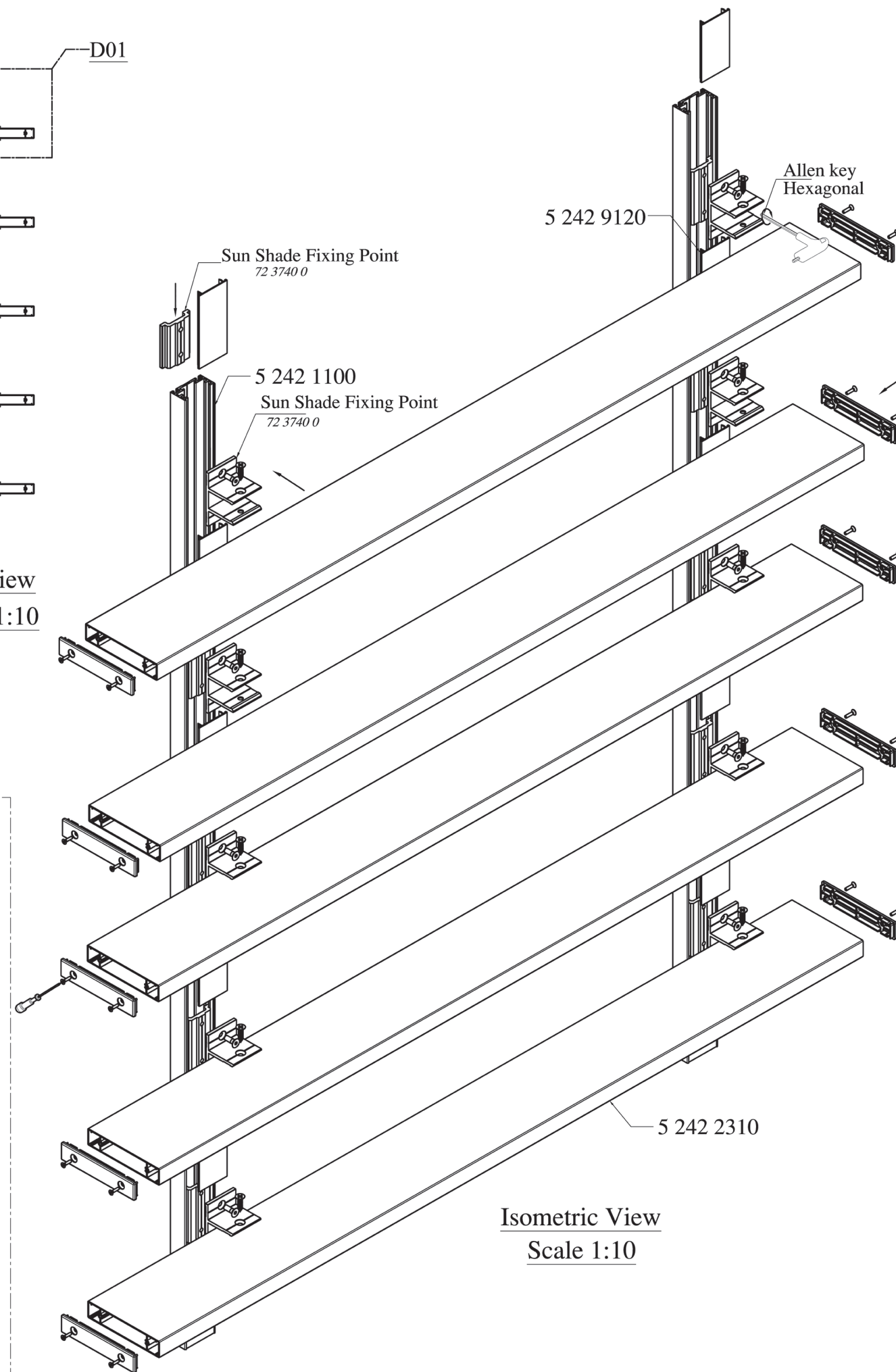
Elevation View  
Scale 1:10



Plan View  
Scale 1:10

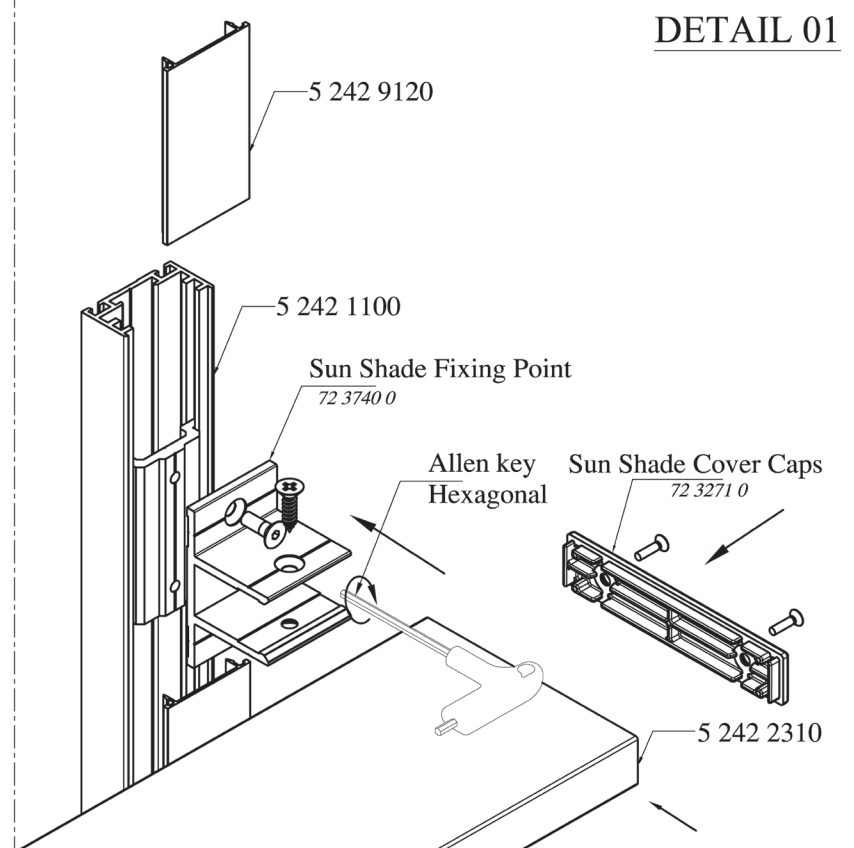


Side View  
Scale 1:10

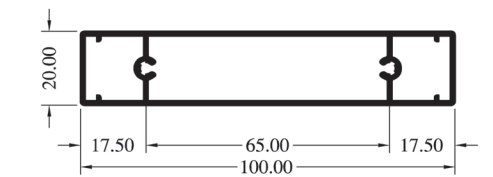


Isometric View  
Scale 1:10

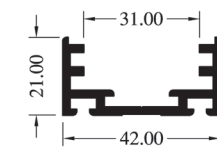
#### DETAIL 01



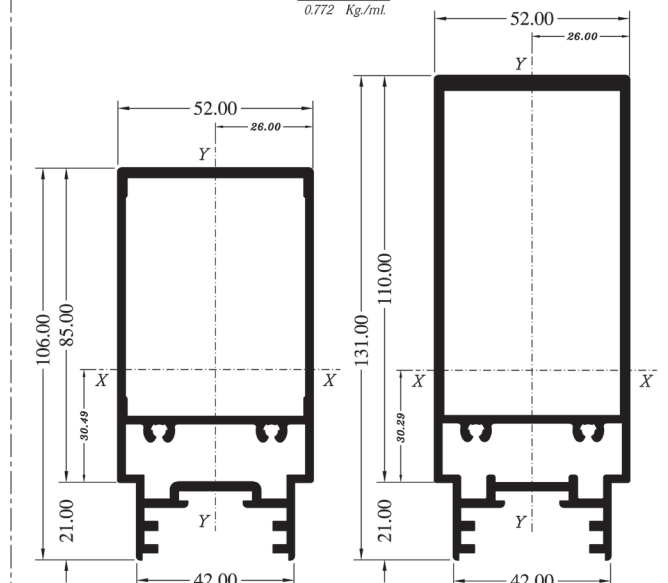
#### Profiles:



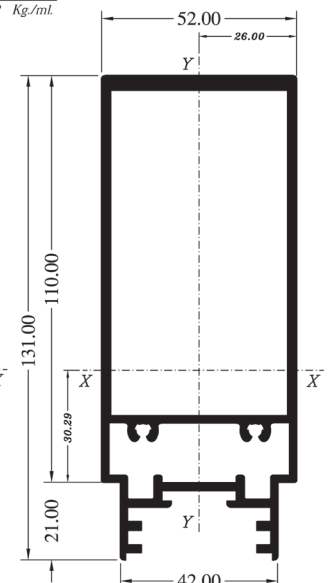
5 242 2310  
0.933 Kg./ml.



5 242 1100  
0.772 Kg./ml.



5 242 1108  
2.133 Kg./ml.



5 242 1111  
2.785 Kg./ml.





5 242 9120  
0.143 Kg./ml.



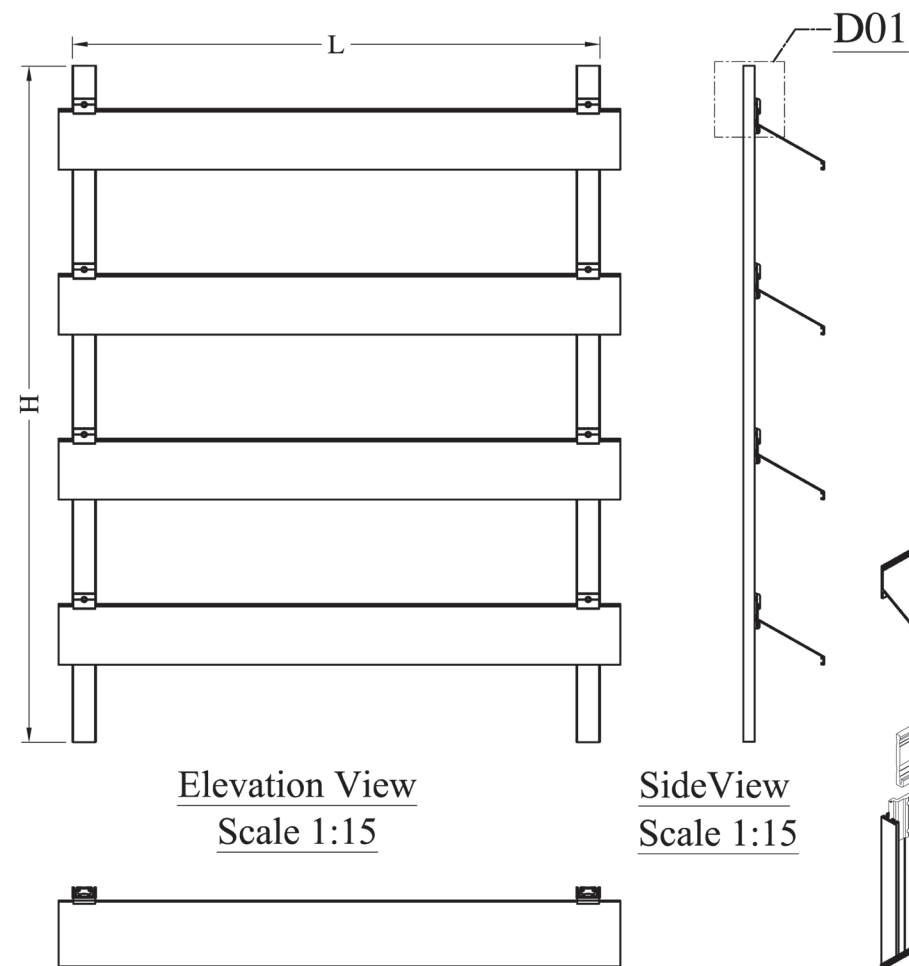
5 242 9121  
0.142 Kg./ml.

#### ACCESSORIES LIST

FIGURE	ACC. NO	DESCRIPTION
	72 3740 0	Sun Shade Fixing point
	72 3271 0	Sun Shade Cover Caps



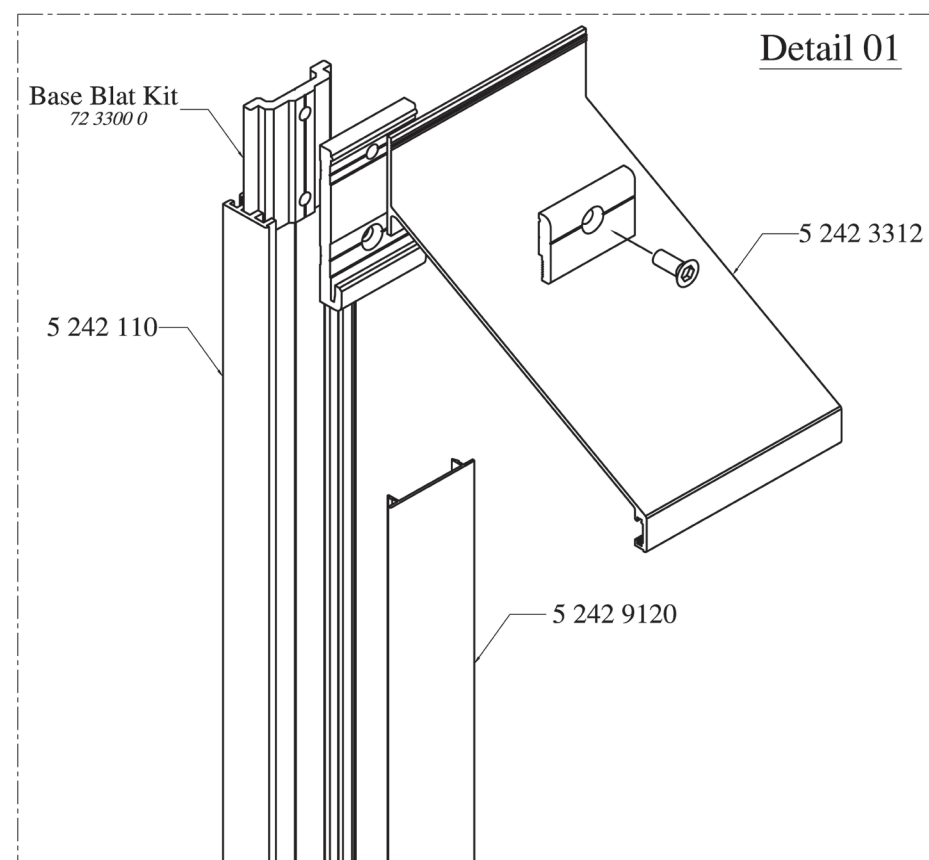




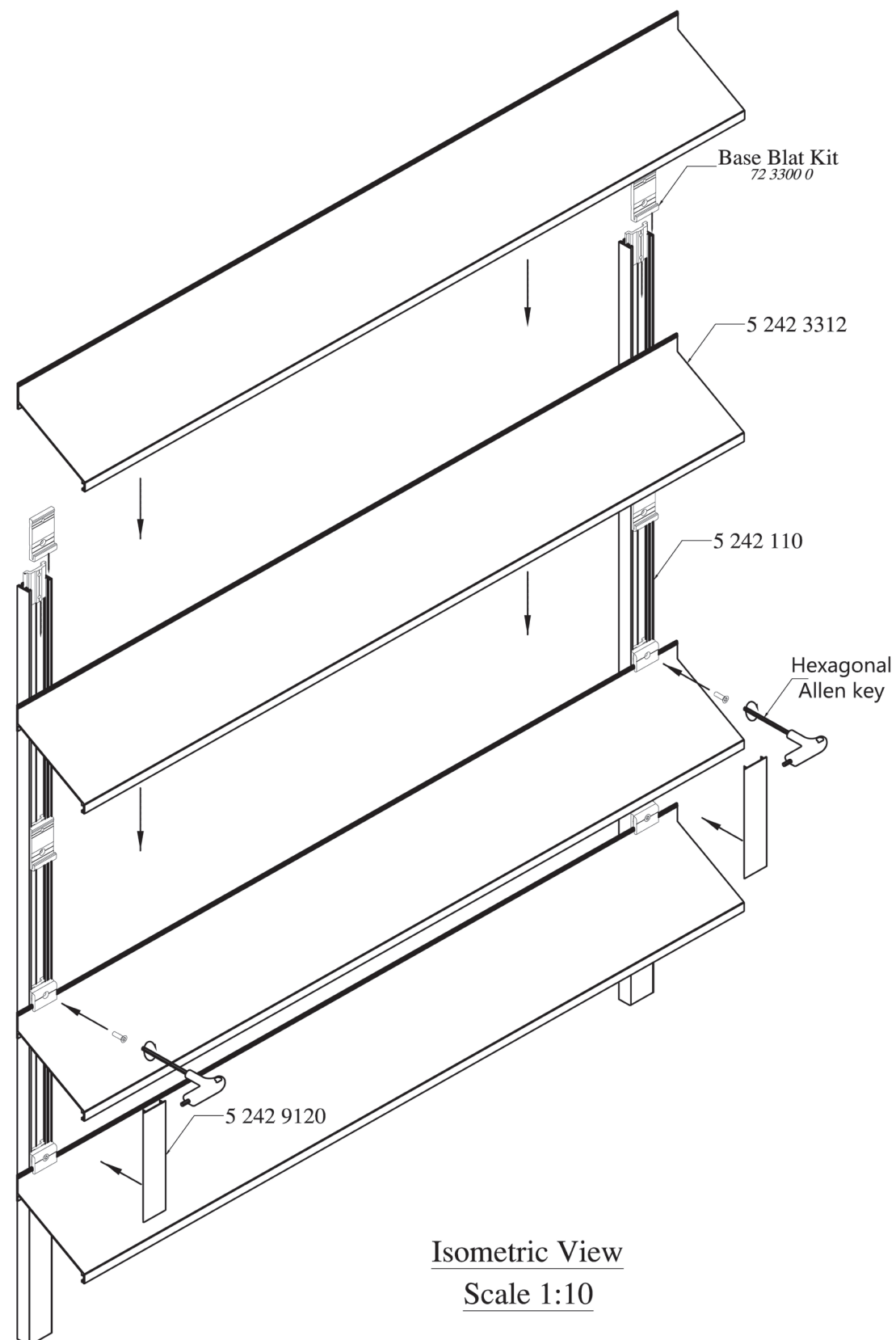
**Elevation View**  
Scale 1:15

**Side View**  
Scale 1:15

**Plan View**  
Scale 1:15



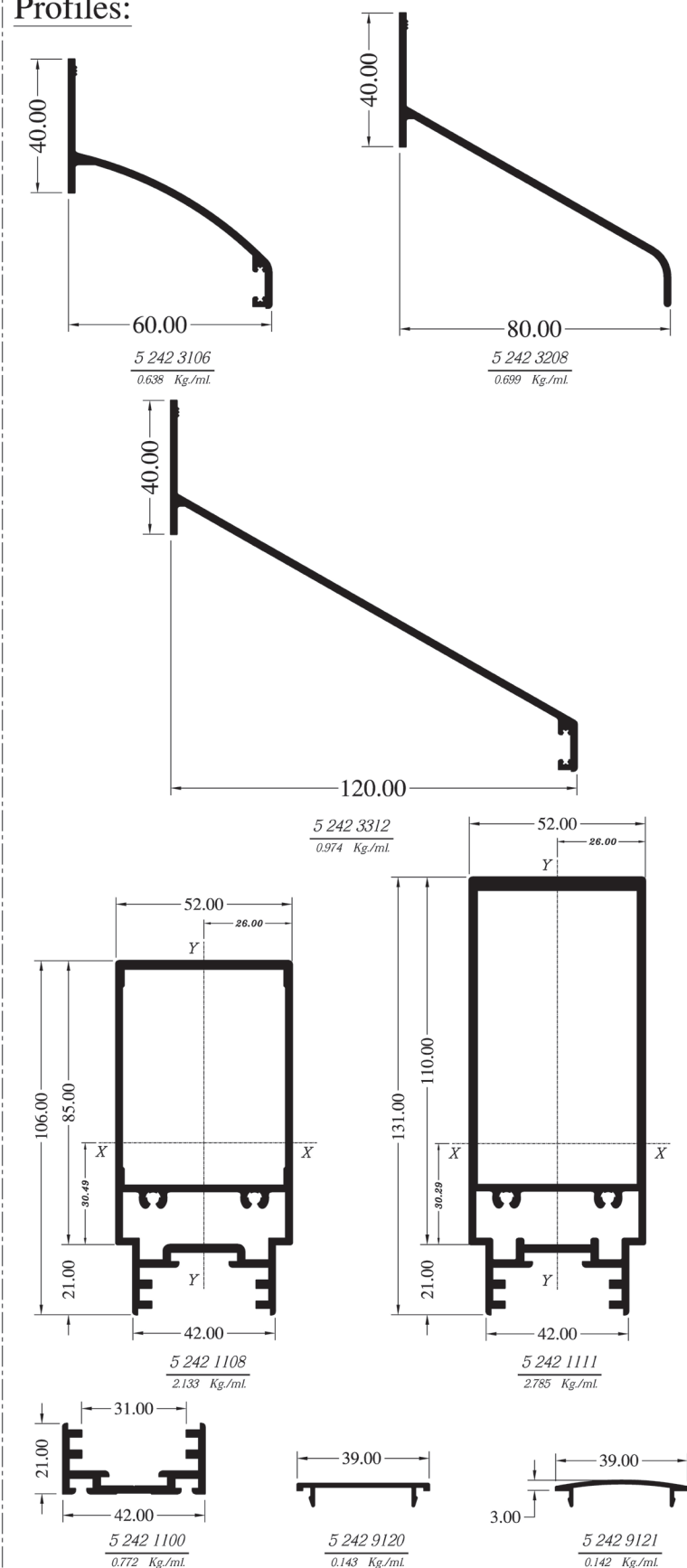
**Detail 01**

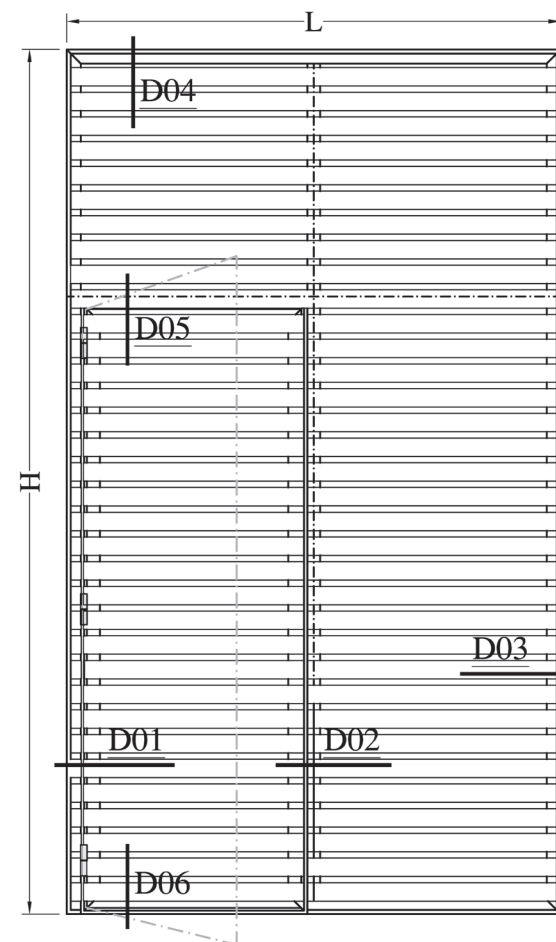


**Isometric View**  
Scale 1:10

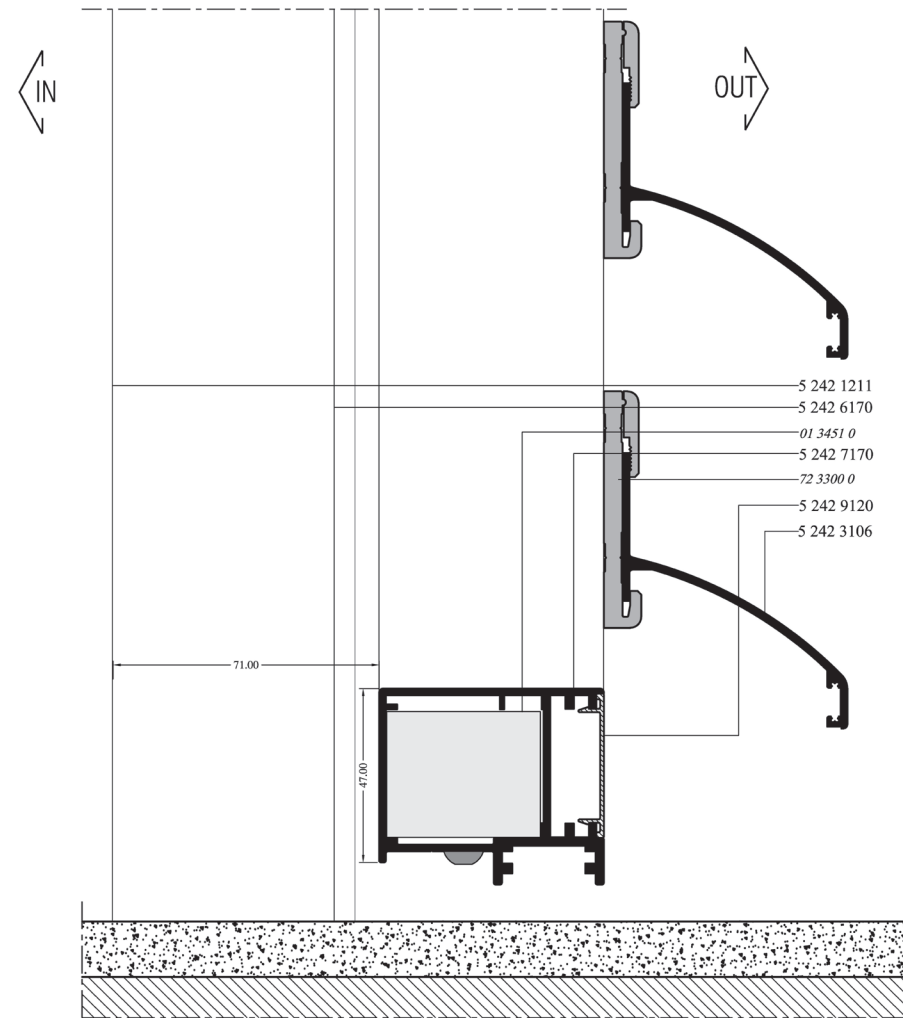
ACCESSORIES LIST		
FIGURE	ACC. NO	DESCRIPTION
	72 3300 0	Base Blat Kit For Sun Shade

## Profiles:

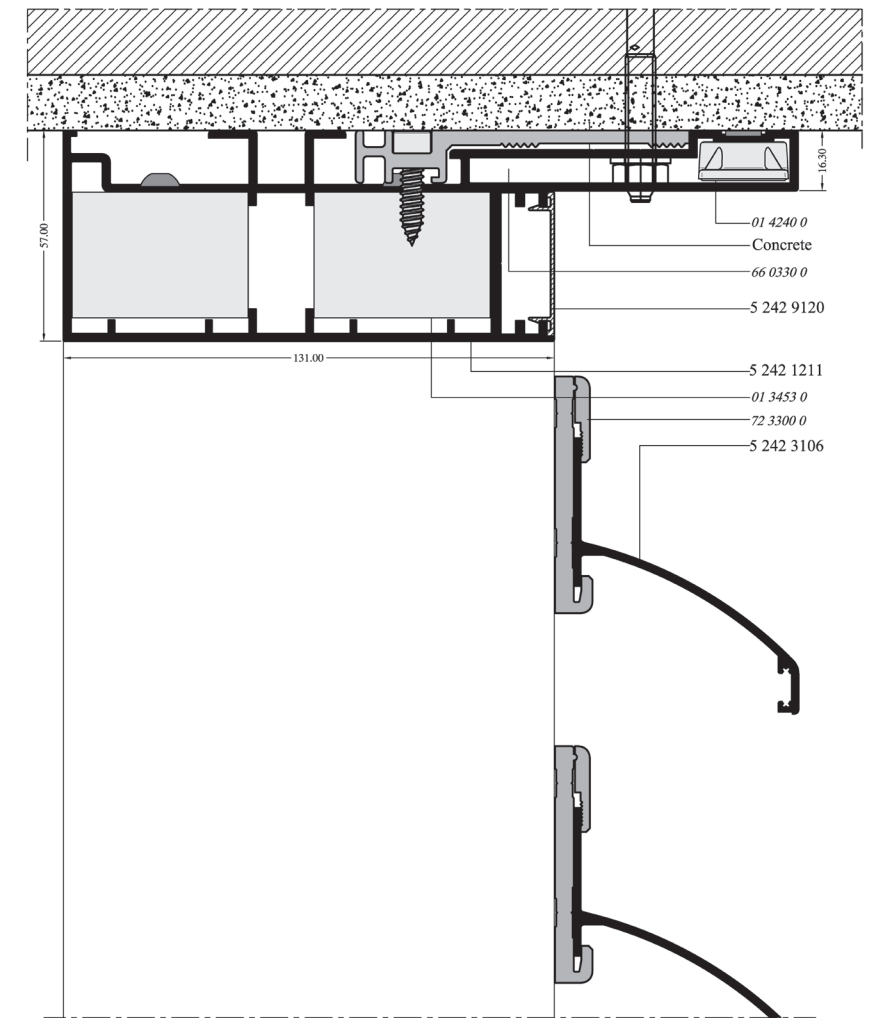




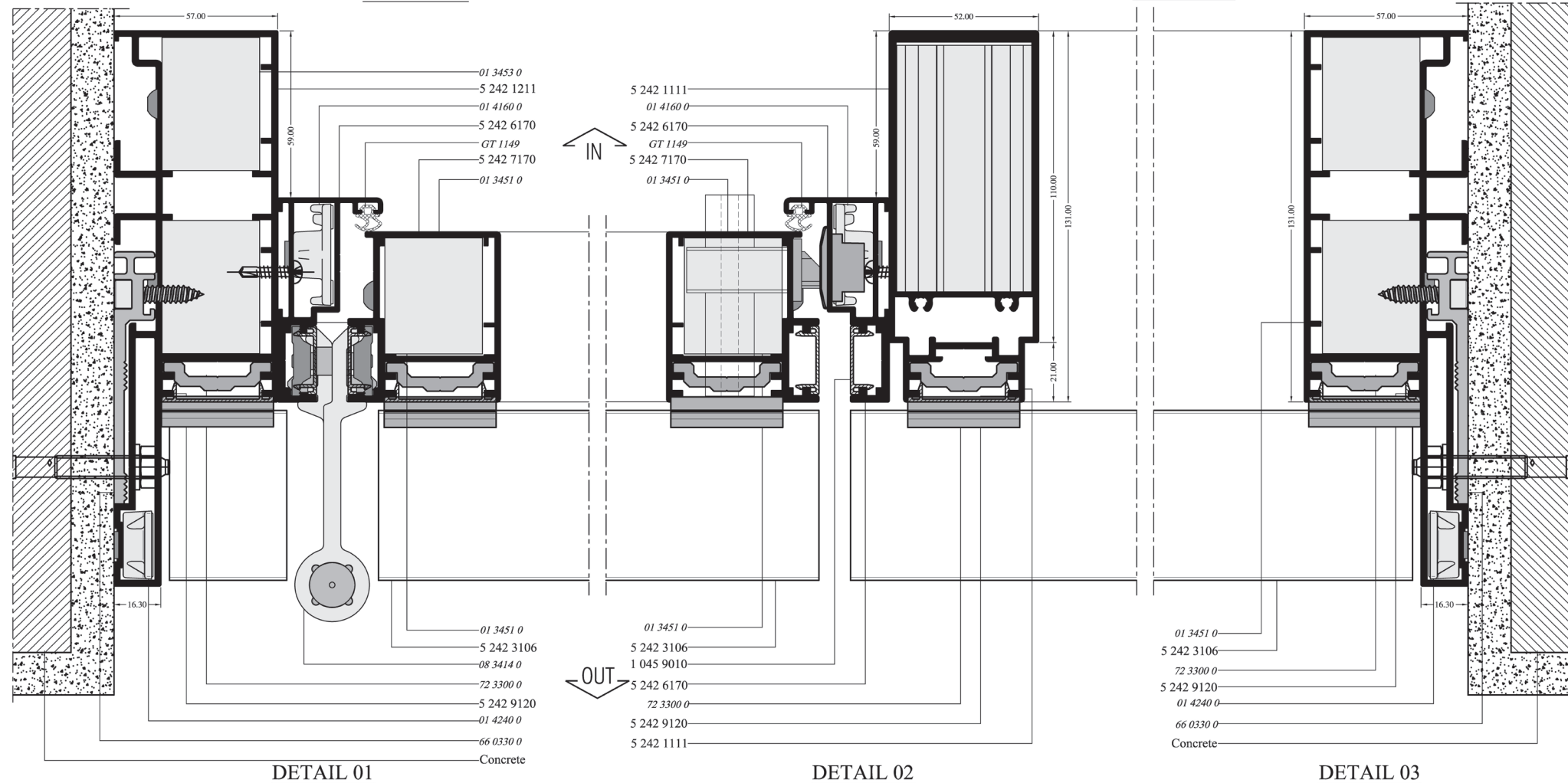
L01-ELEVATION VIEW (OUTSIDE VIEW)  
Scale 1:30



DETAIL 06



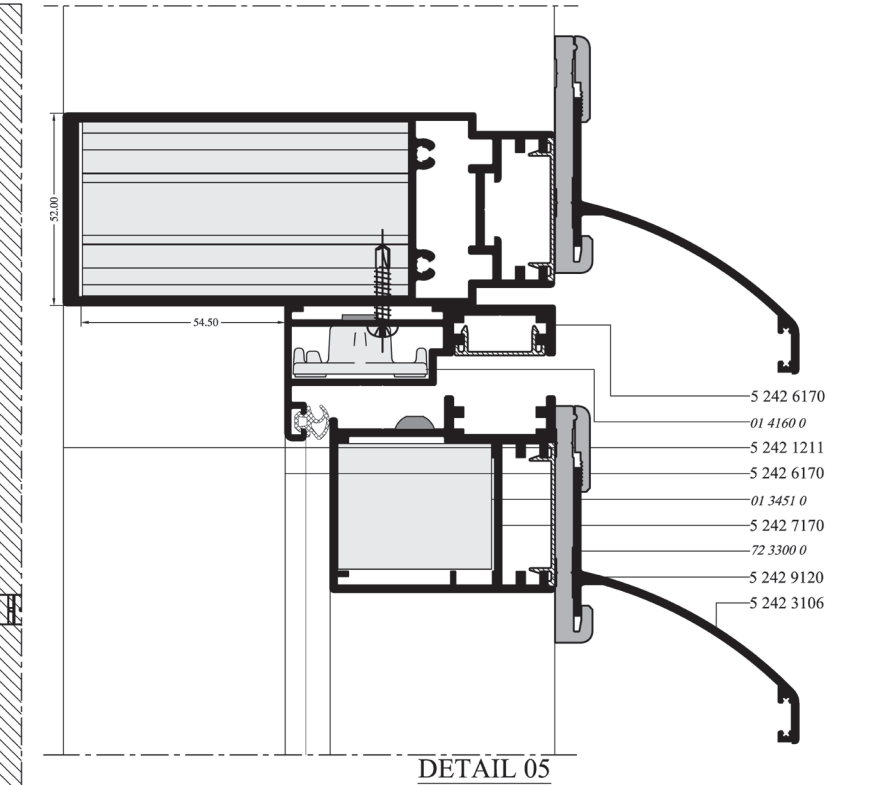
DETAIL 04



DETAIL 01

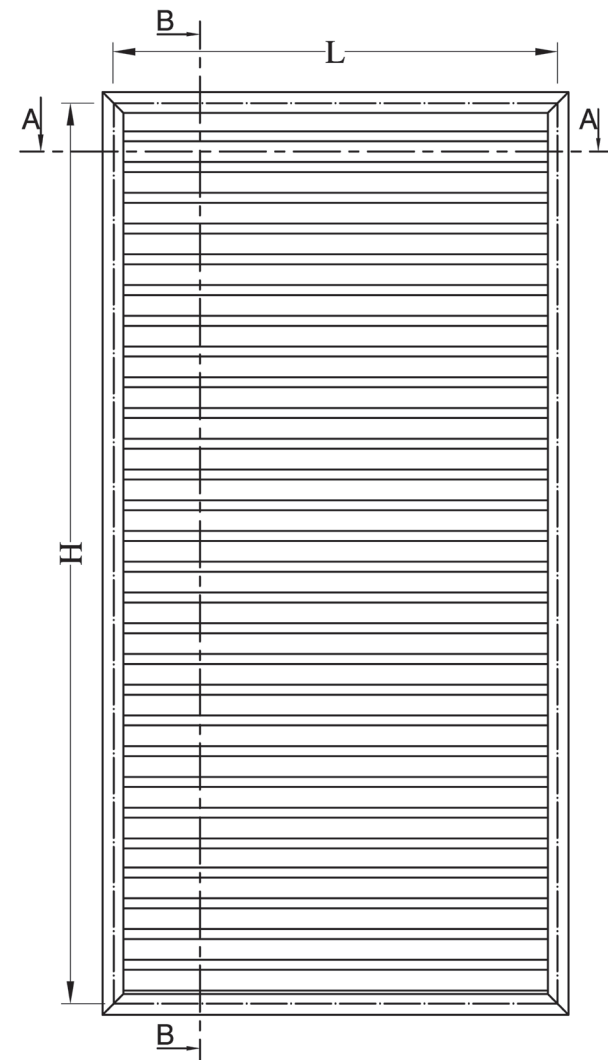
DETAIL 02

DETAIL 03

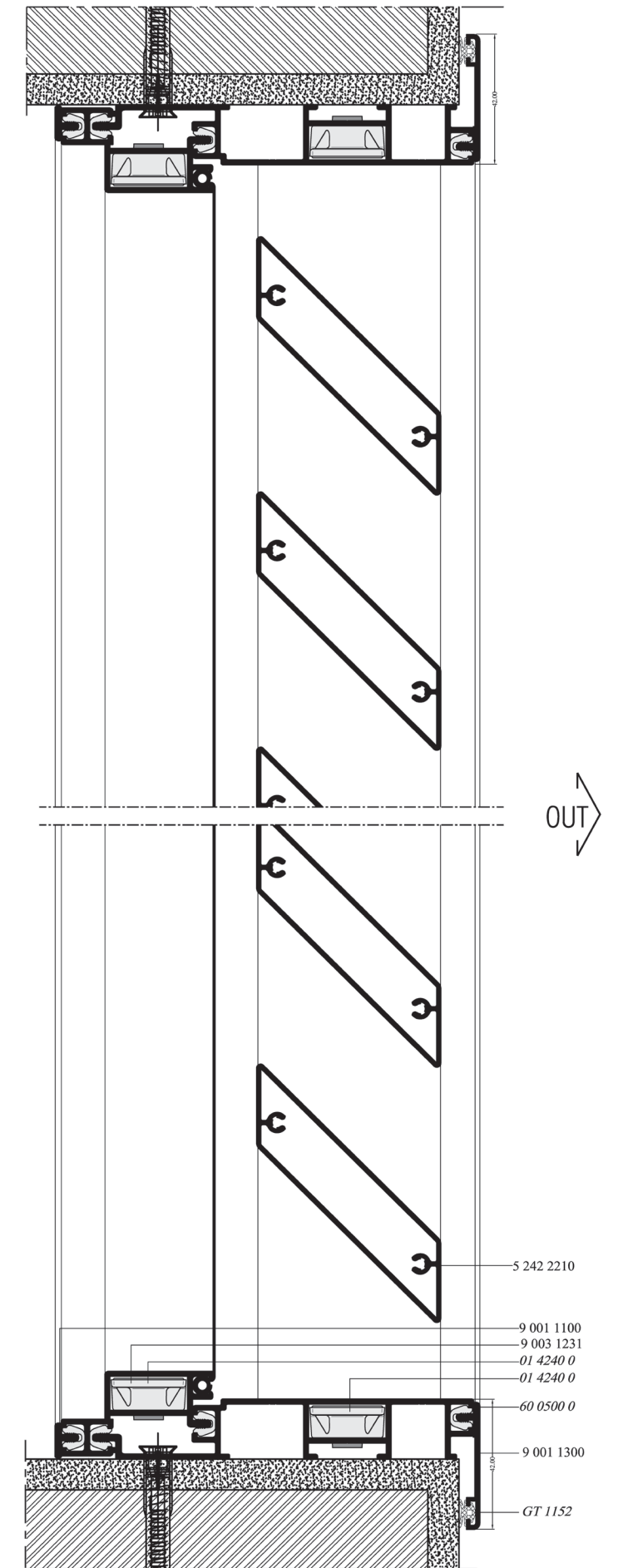
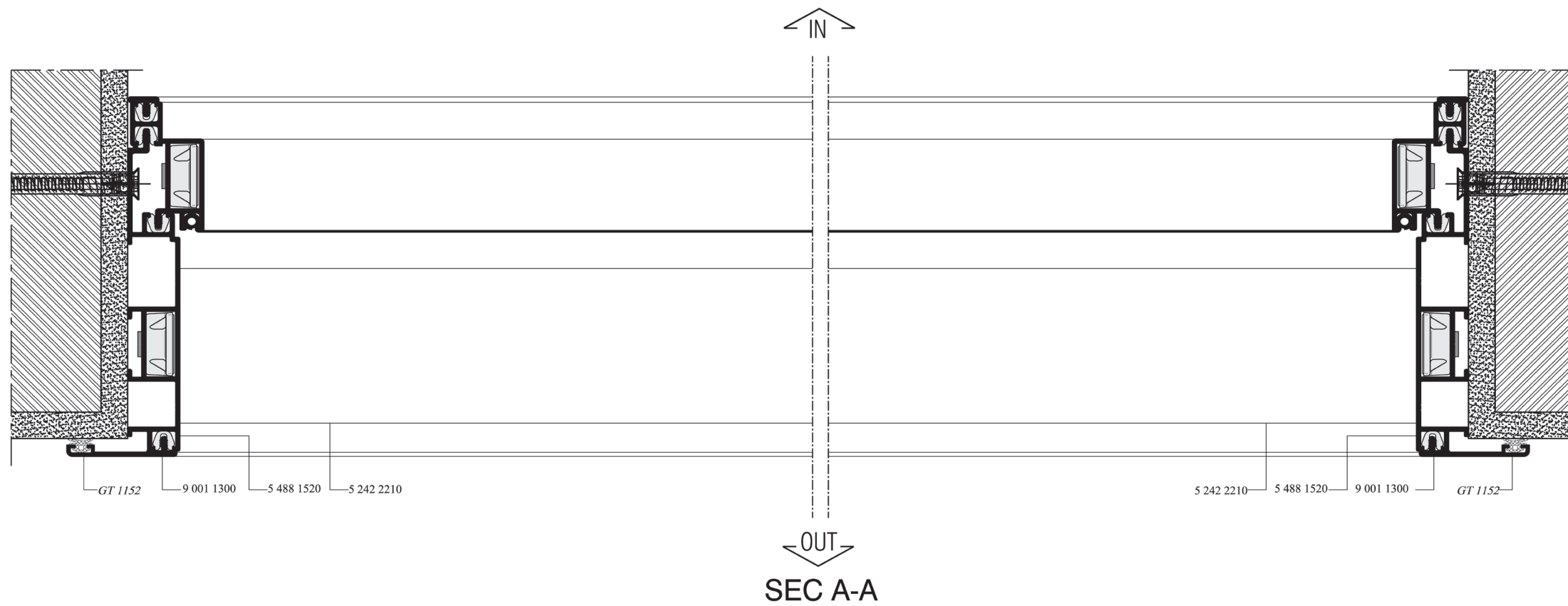


DETAIL 05





Elevation View {Outside View}  
Scale 1:10



All profiles are registered as the property of

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