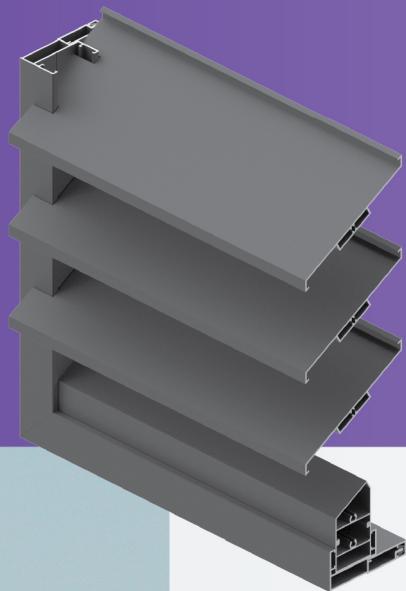


Machines & Aluminium Center
مركز ماكينات ومستلزمات الألومنيوم

ACACIA 50

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.



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The profiles shown in this catalogue are patented.

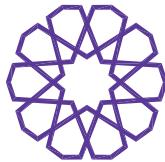
The items shown are the exclusive property of **MACHINES & ALUMINIUM CENTER** and may not be even partially reproduced without **MACHINES & ALUMINIUM CENTER** authorization.

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:

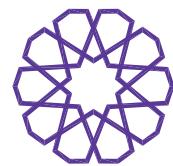
All systems are designed to use most of standard hardware. The hardware should be selected according to the minimum requirements mentioned in the system catalog.

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).

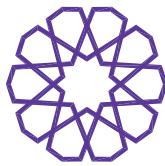


Technical Features

- 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

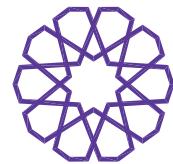
pretreatment and the use of enhanced chemical pretreatment process, with high etching degree, in accordance to QUALICOAT specifications, as well as a full control on the painting processes and polymerization during the whole surface treatment procedure. Therefore, through a unique blending system, stringent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

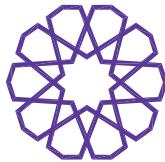
Standard Durable Class 1: Up to 10 years

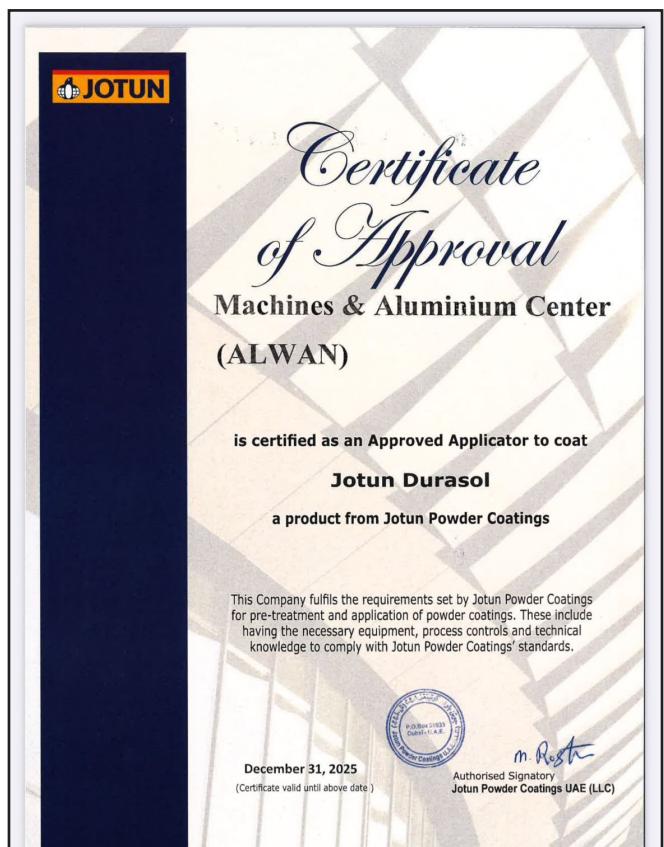
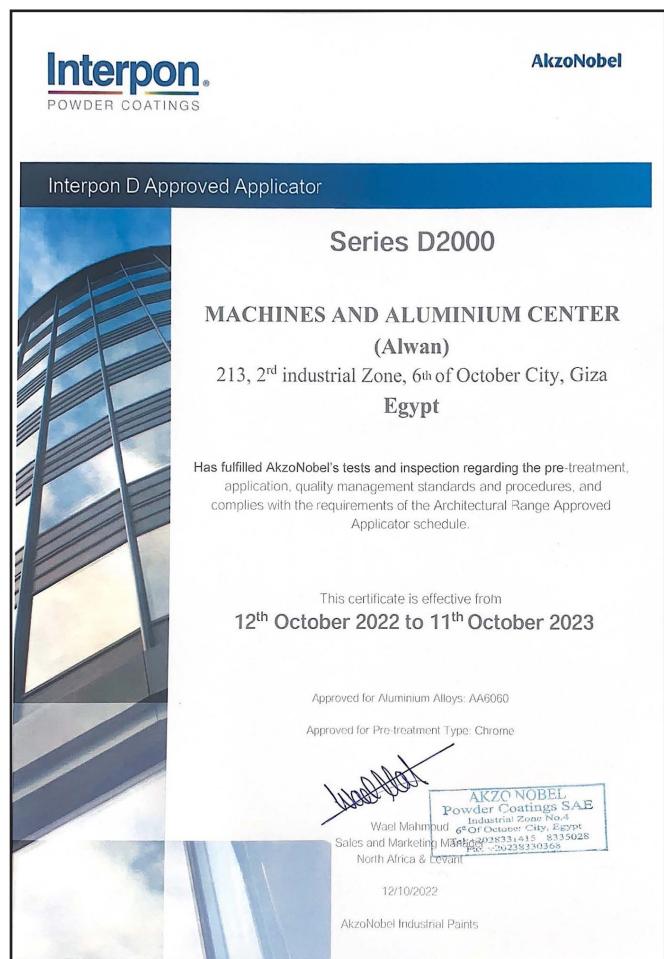
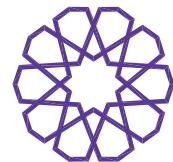
Super Durable Class 2: Up to 25 years

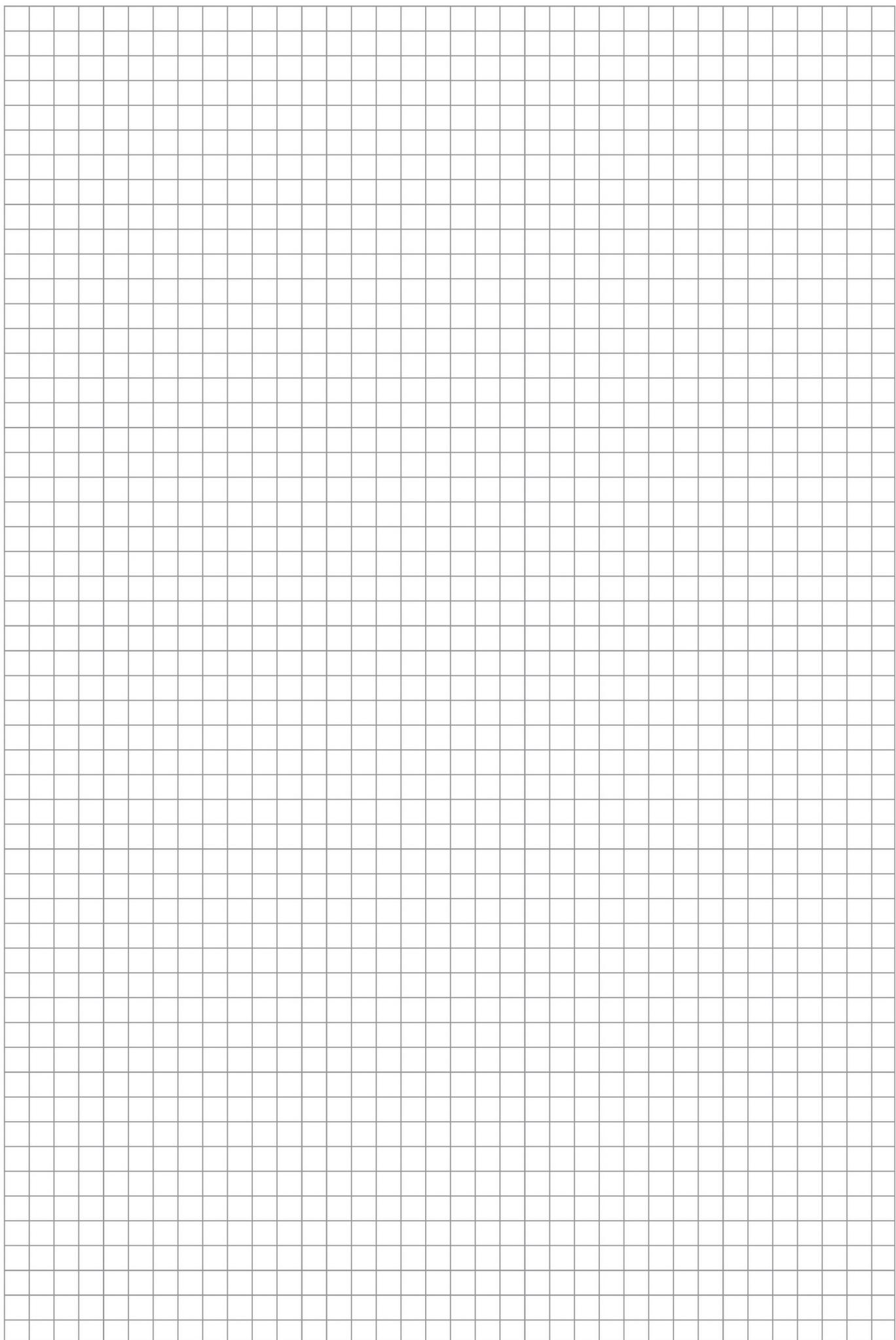
Notes:

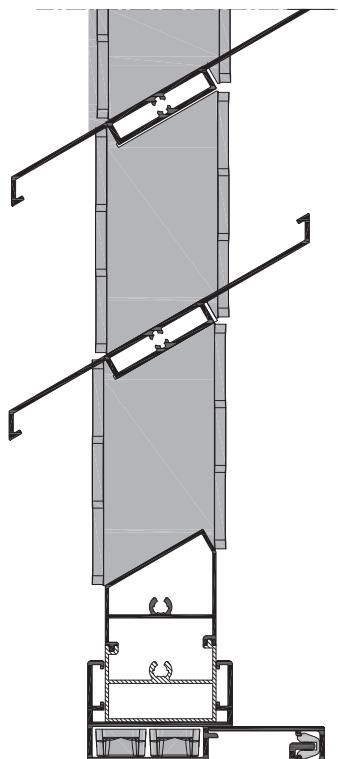
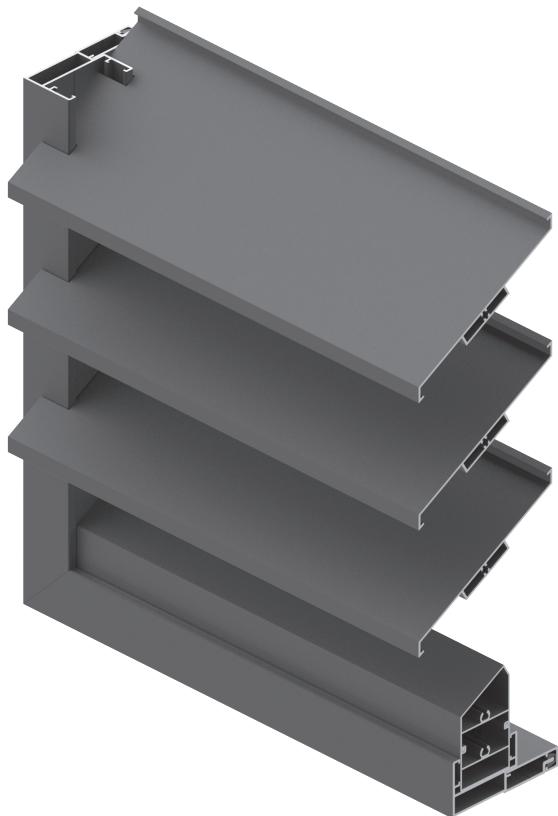
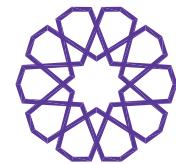
- As the products are very often used under conditions beyond supplier's control, we cannot guarantee anything but the quality of the product itself.
- It is expected that any fading and/or chalking and/or change in gloss retention, either uniform or non-uniform that a color will experience in the field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









- Designed to provide effective natural ventilation solution and create a healthier indoor climate.
- Can be applied in different ways such as natural ventilation, sun shading and simple Fixed-Sliding-Hinged-Folding shutters systems.
- Several types of slats/blades are available vary in shapes, sizes and Installation methods.
- Provides effective protection against unwanted visitors.
- Compatible with most of our systems.

Technical Characteristics

Main Profile Depth

42 mm. to 125 mm.

Main Profile Height

21 mm. to 80 mm.

Slat Depth

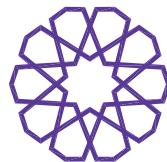
60 mm. to 200 mm.

Slat Height

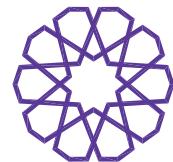
20 mm. to 40 mm.

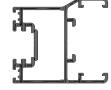
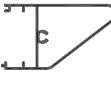
Degree Obtained

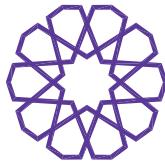
30 - 45 - 60 -90



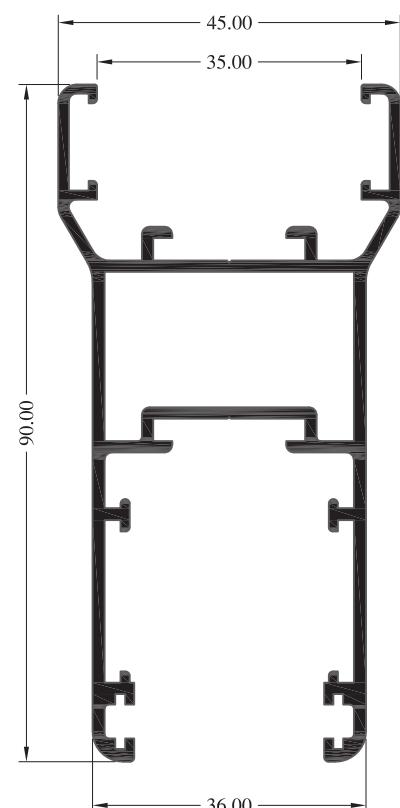
Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					I _x	I _y	
	5 132 1000	Frame Profile	0.794	364	20.08	3.11	14
	5 132 1300	Frame Profile	1.119	504	38.19	4.94	14
	5 132 4238	Leaf Profile	1.341	531	12.55	30.54	14
	5 135 1120	Transom Profile	0.384	181	0.81	2.15	15
	5 135 1310	Slat Profile	0.246	85	0.82	0.34	15
	5 135 1311	Slat Profile	0.459	174	0.00	0.00	15
	5 135 1312	Slat Profile	0.630	271	0.00	0.00	15
	5 135 1830	Slat Profile	0.431	137	2.93	2.93	14
	5 135 1930	Slat Profile	0.810	137	4.20	3.67	14
	5 135 2130	Transom Profile	0.401	160	1.47	2.24	15
	5 135 4128	Leaf Profile	0.955	423	9.81	15.68	16



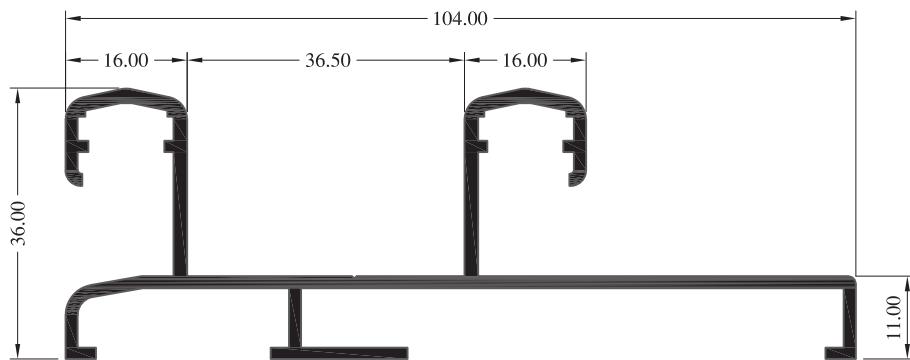
Section	Profile no.	Description	Weight kg/m	Perimeter mm	Inertia		Page No.
					I _x	I _y	
	5 135 4210	Slat Profile	0.292	111	0.00	0.00	16
	5 135 4310	Slat Profile	0.354	111	0.00	0.00	16
	5 135 4410	Transom Profile	0.395	182	3.04	0.34	16
	5 135 4510	Slat Profile	0.517	189	3.18	5.30	16
	5 135 4538	Frame Profile	0.880	360	6.76	8.02	16
	5 135 5160	Transom Profile	0.529	229	5.39	3.20	16
	5 135 5220	Transom Profile	0.619	275	6.81	1.65	17
	5 135 7439	Frame Profile	0.788	318	2.52	12.88	17
	5 135 7460	Frame Profile	0.832	318	11.49	10.70	17
	5 135 9310	Spacer	0.290	117	0.40	1.92	17



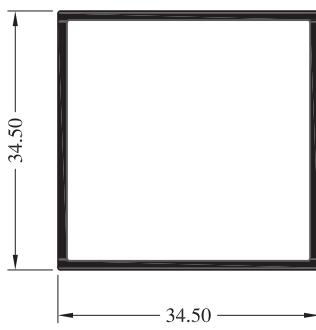
5 132 1000
0.794 Kg./ml.



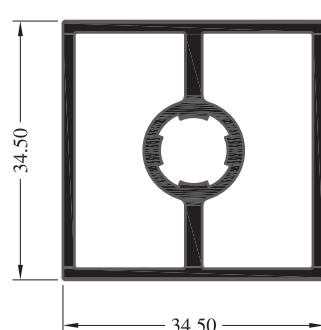
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1.341 Kg./ml.



5 132 1300
1.119 Kg./ml.

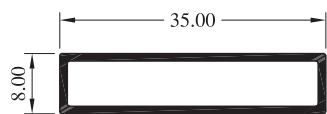
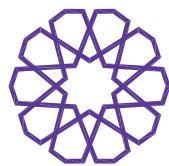


5 135 1830
0.431 Kg./ml.

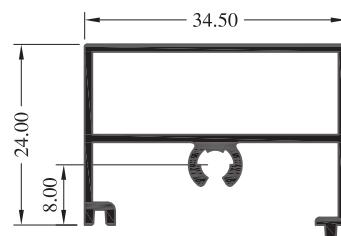


5 135 1930
0.810 Kg./ml.

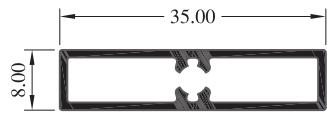
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Profile Old No.	C 5011	C 5012	C 5042	C 5064	C 5069



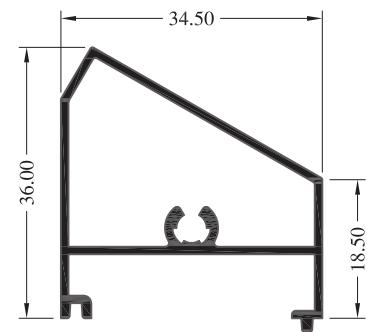
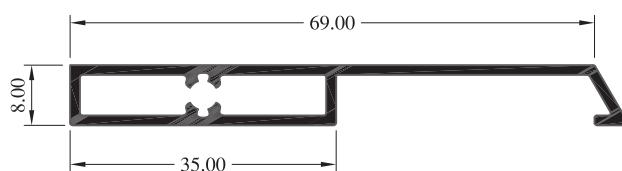
5 135 1210
0.222 Kg./ml.



5 135 1120
0.384 Kg./ml.

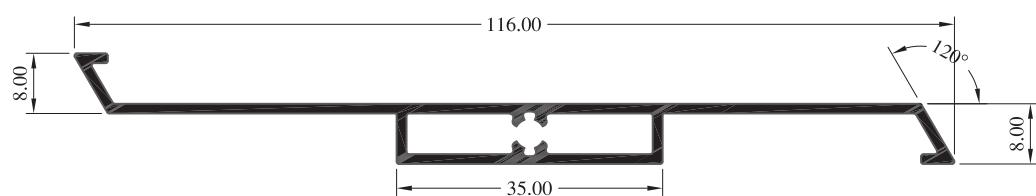


5 135 1310
0.246 Kg./ml.



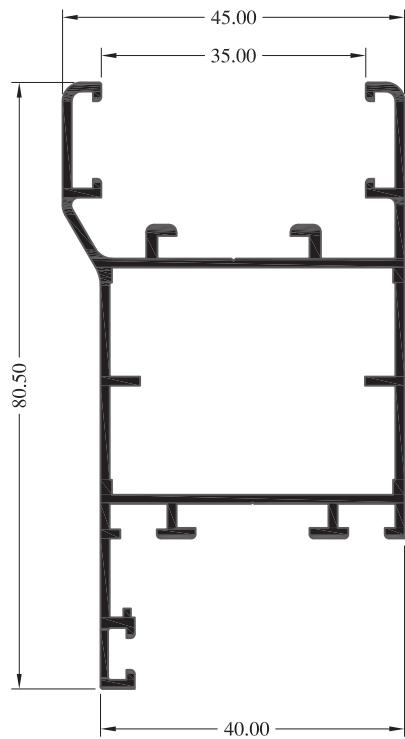
5 135 1311
0.459 Kg./ml.

5 135 2130
0.401 Kg./ml.

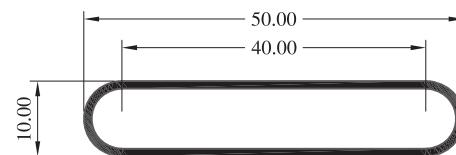


5 135 1312
0.630 Kg./ml.

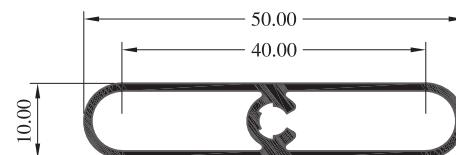
Profile No.	5 135 1120	5 135 2130	5 135 1310	5 135 1311	5 135 1312
Profile Old No.	C 5059	C 5057	C 5067	C 5087	C 5082



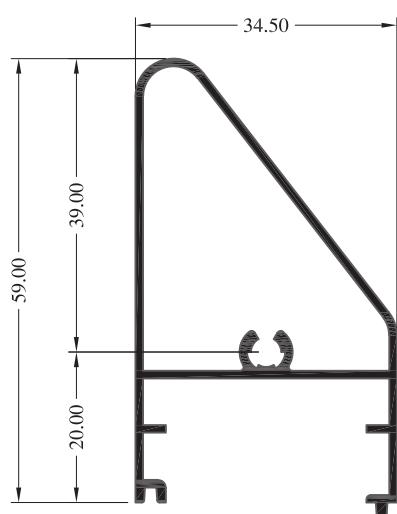
5 135 4128
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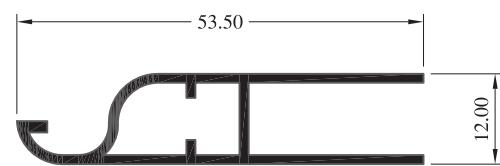
5 135 4210
0.292 Kg./ml.



5 135 4310
0.354 Kg./ml.



5 135 5160
0.529 Kg./ml.

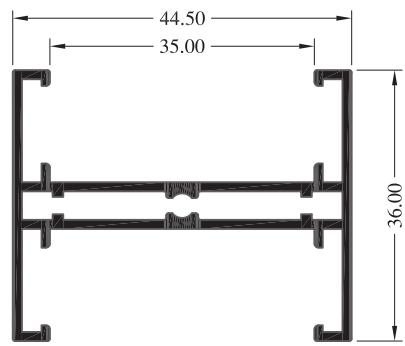
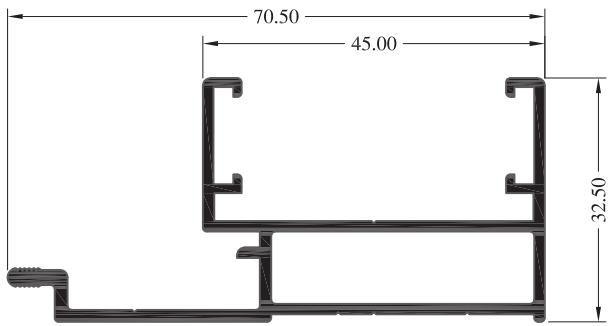
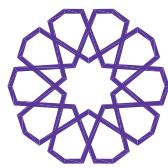


5 135 4410
0.395 Kg./ml.



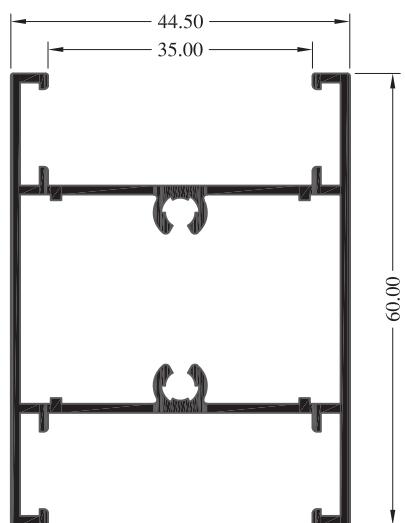
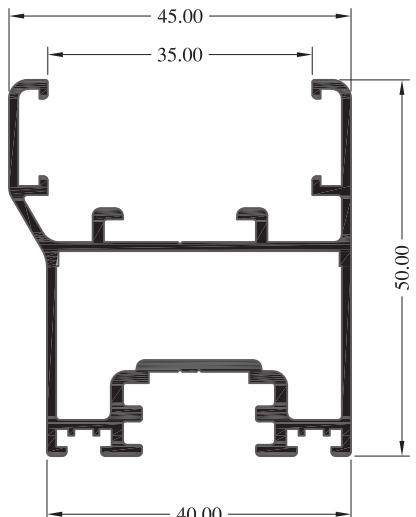
5 135 4510
0.517 Kg./ml.

Profile No.	5 135 4128	5 135 4210	5 135 4310	5 135 4410	5 135 4510	5 132 5160
Profile Old No.	C 5025	C 5061	C 5062	C 5058	C 5068	C 5052

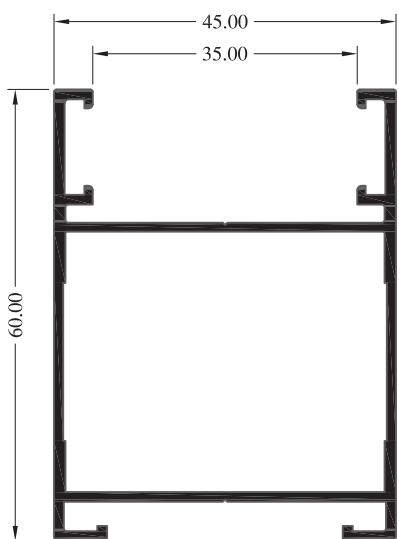


5 135 7439
0.788 Kg./ml.

5 135 5220
0.619 Kg./ml.

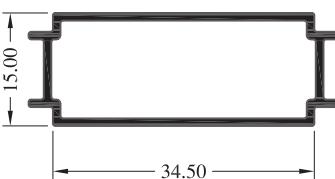


5 135 4538
0.880 Kg./ml.



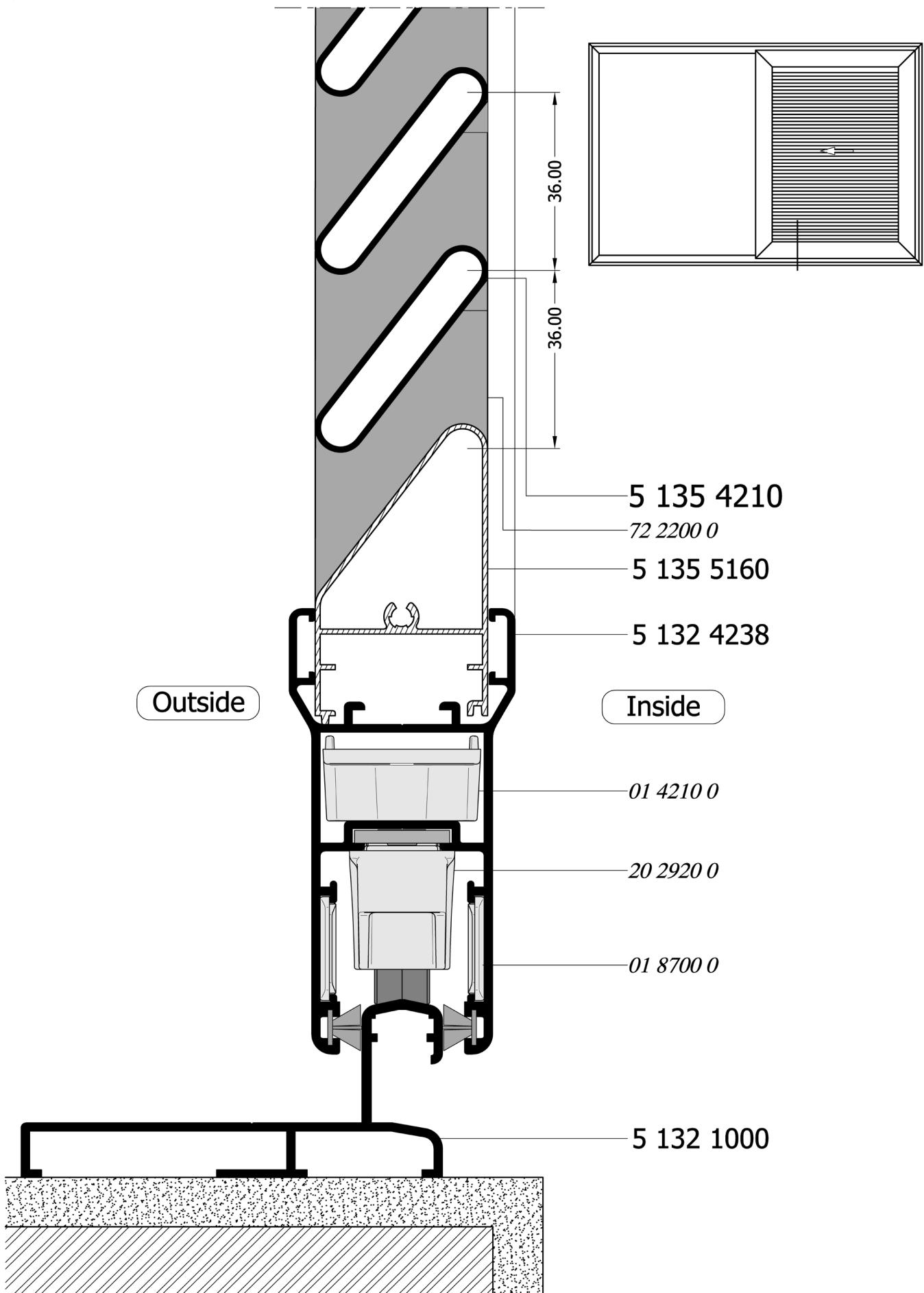
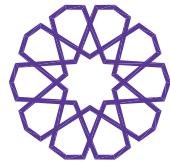
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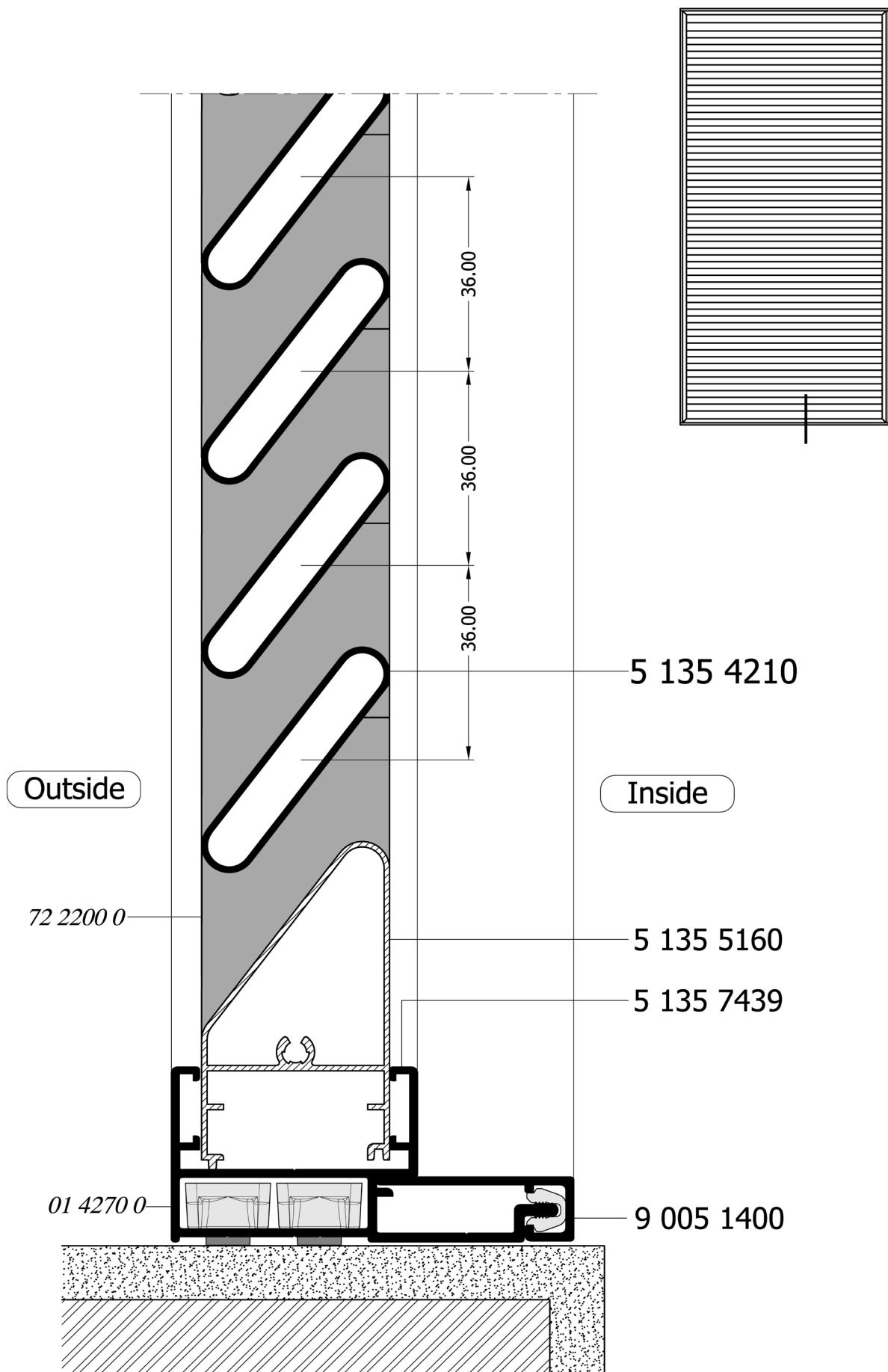
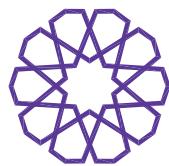
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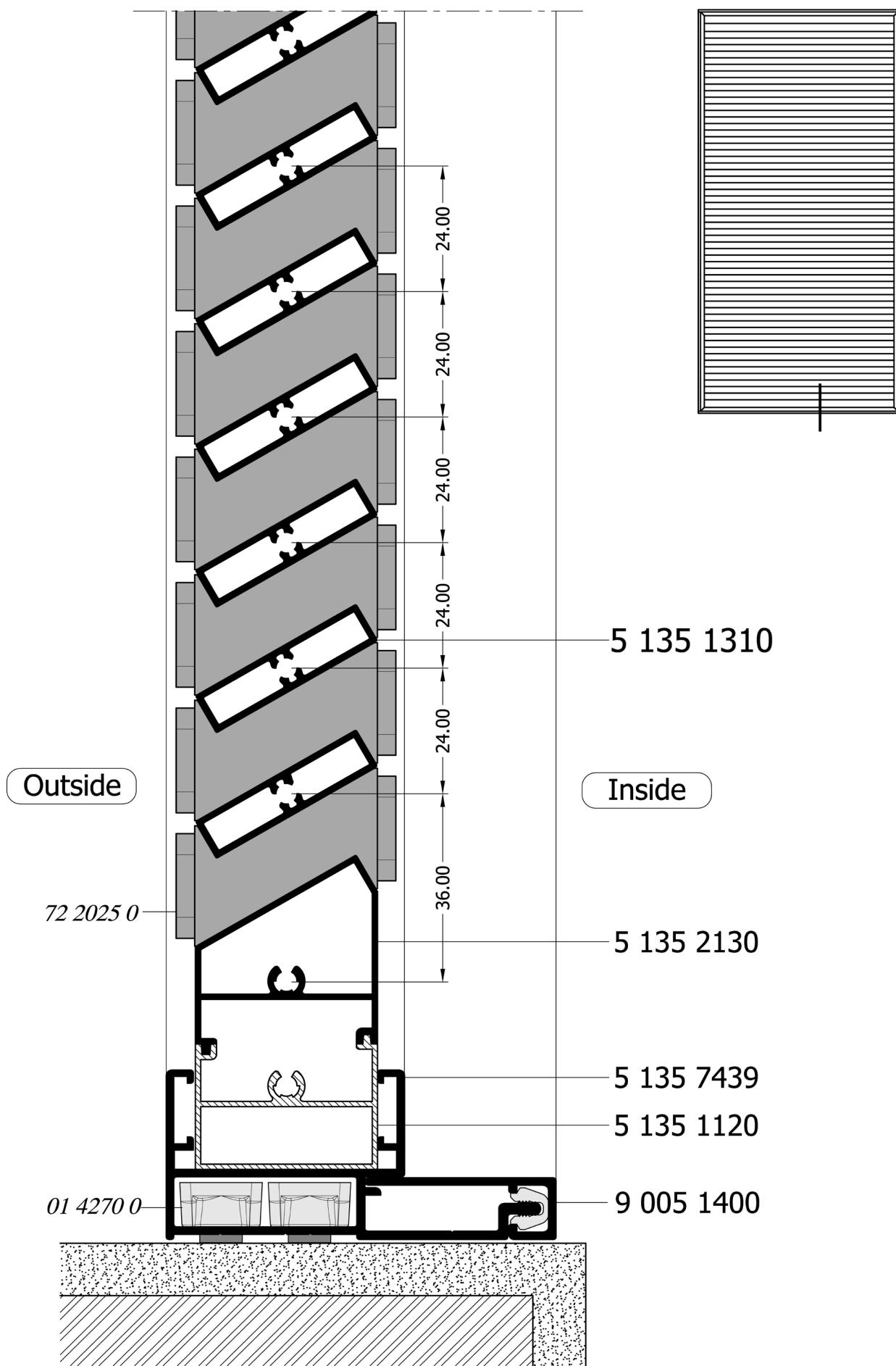
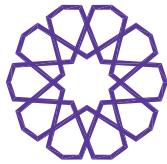


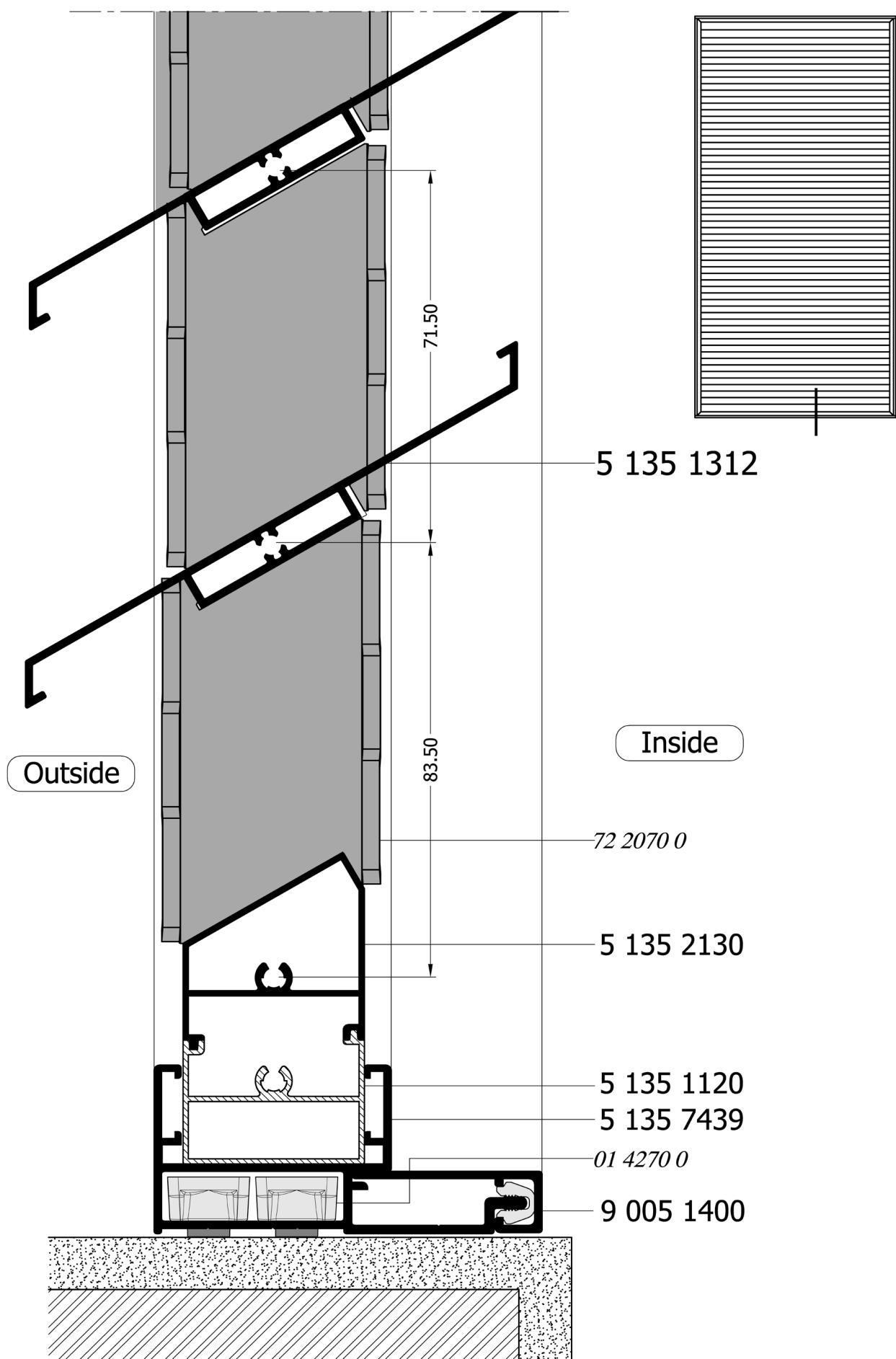
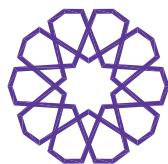
5 135 9310
0.290 Kg./ml.

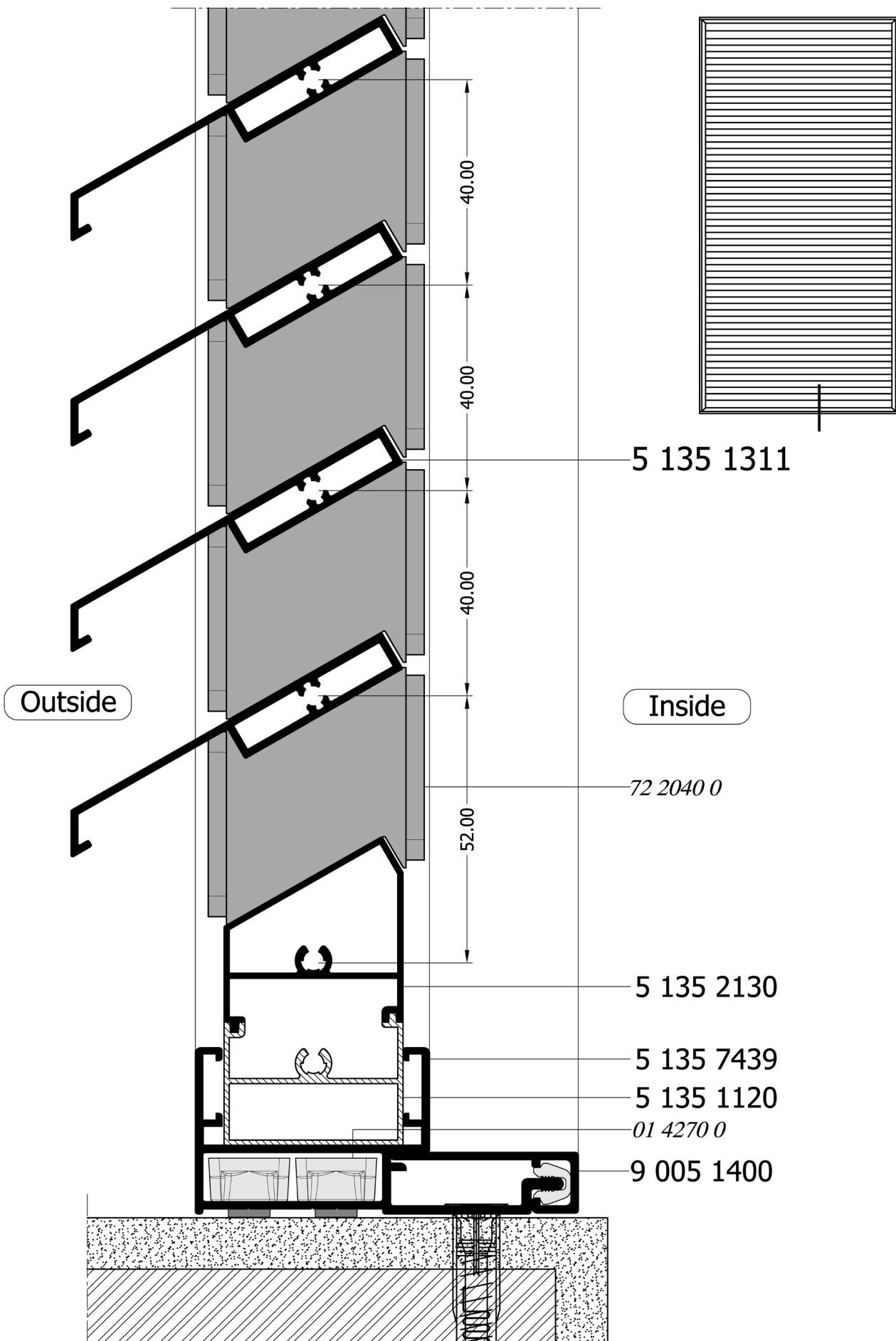
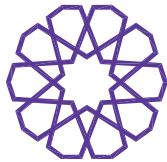
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Profile Old No.	C 5091	C 5051	C 5096	C 5007	C 5003

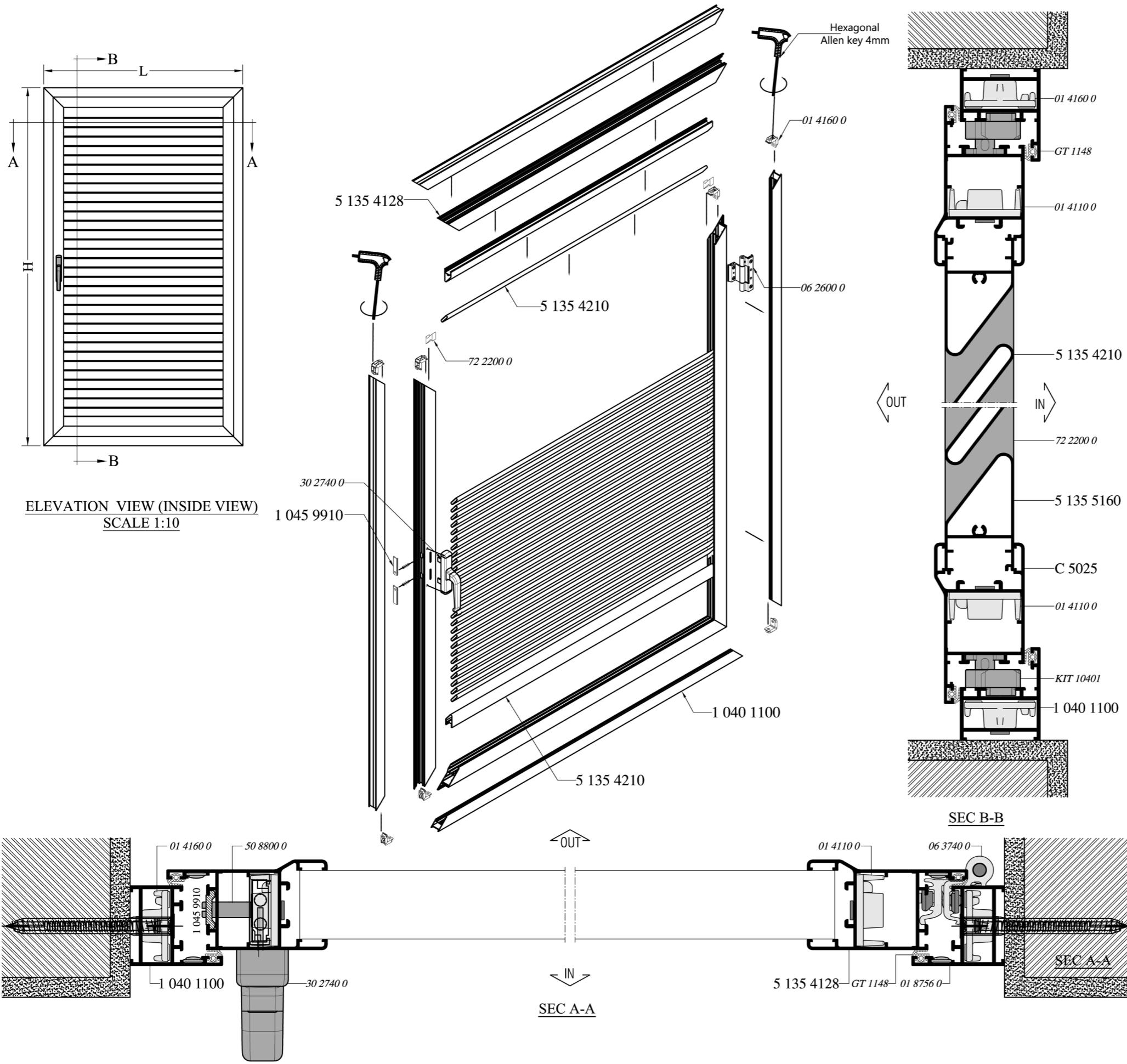










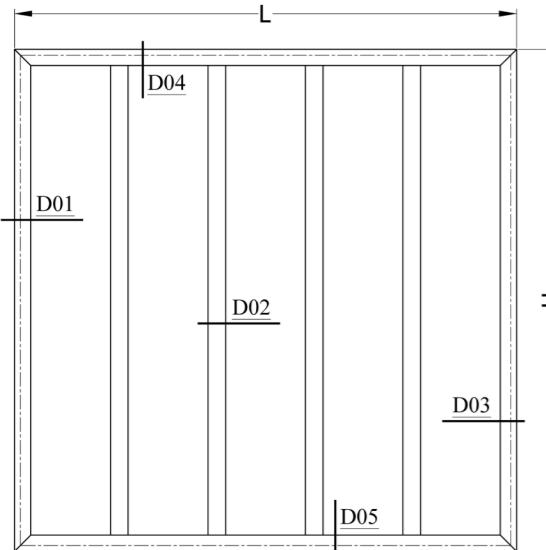


PROFILES CUTTING LIST			
FIGURE	PROF. NO	QTY.	CUTTING LENGTH
	1 040 1100	2	
		2	
	5 135 4128	2	
		2	
	5 135 5160	2	
	5 135 4210	$\frac{H}{36}$	

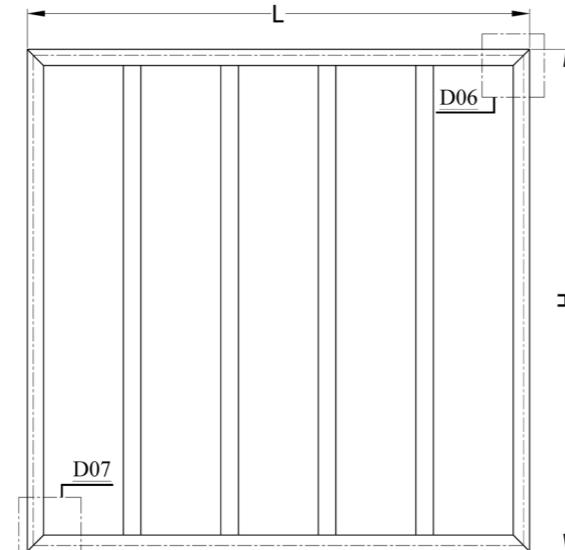
ALL DIMENSIONS IN mm.

ACCESSORIES LIST			
FIGURE	ACC. NO	QTY.	DESCRIPTION
	01 4160 0	4	Frame Corner Joint
	01 4110 0	4	Corner Joint
	06 3740 0	2	Hinges
	30 2740 0	1	Handle
	72 2200 0	$\frac{H}{36}$	Slat Spacer Kit
	GT 1148	4L+4H	Striker Gasket
	50 8800 0	1	Connection Kit

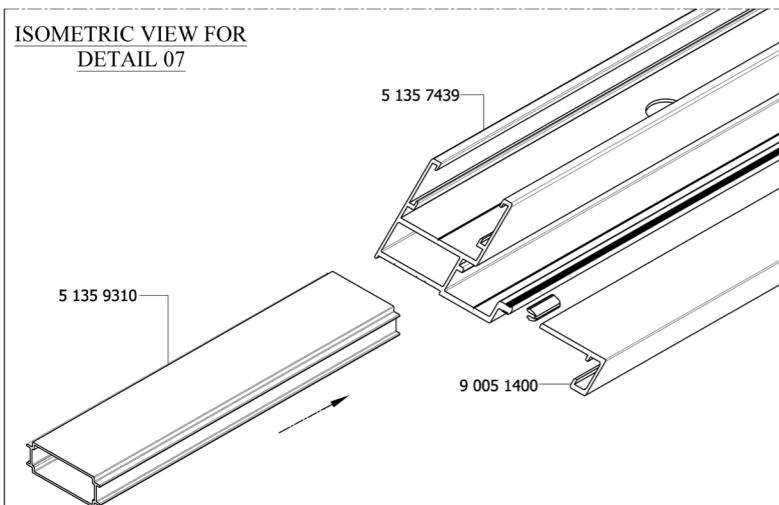
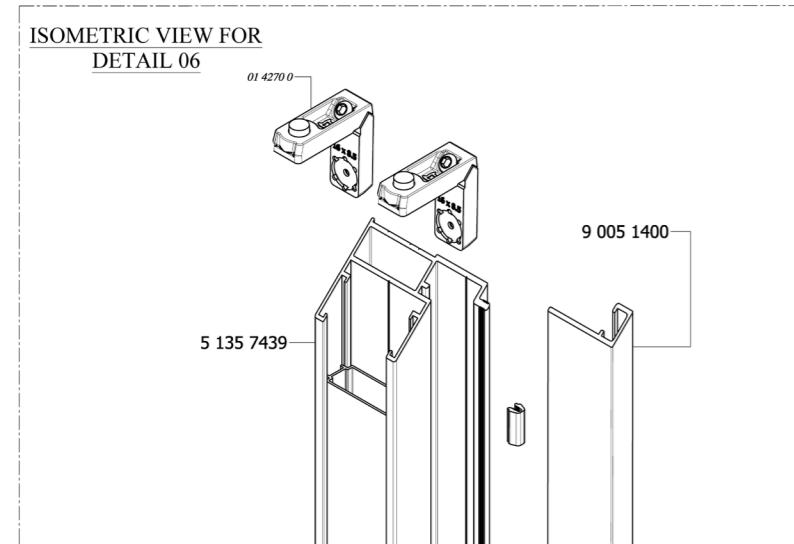




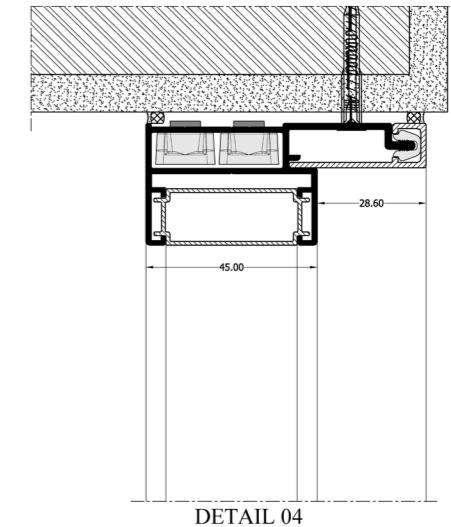
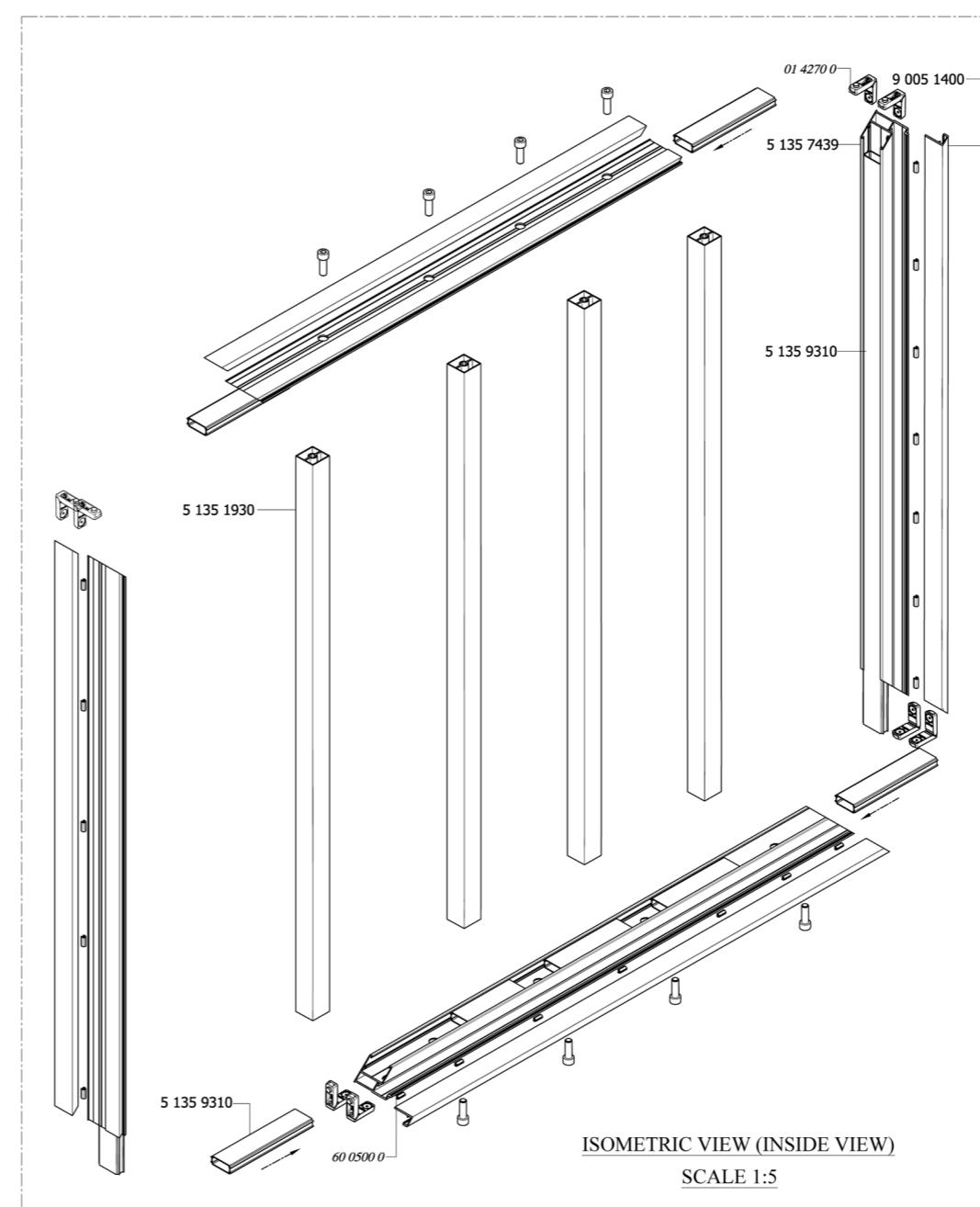
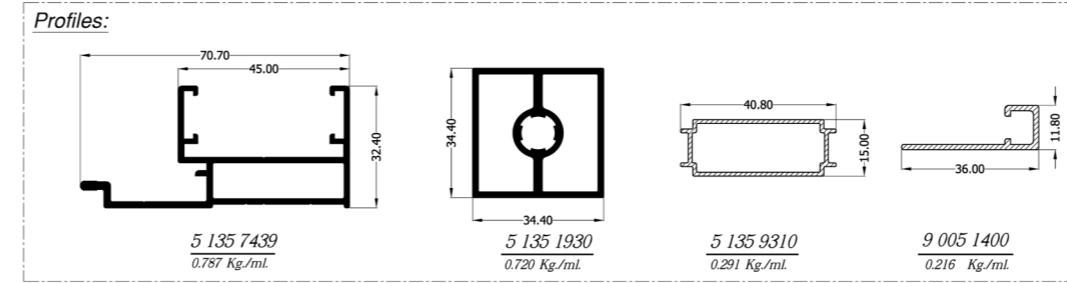
L01-ELEVATION {INSIDE VIEW}
SCALE 1:15



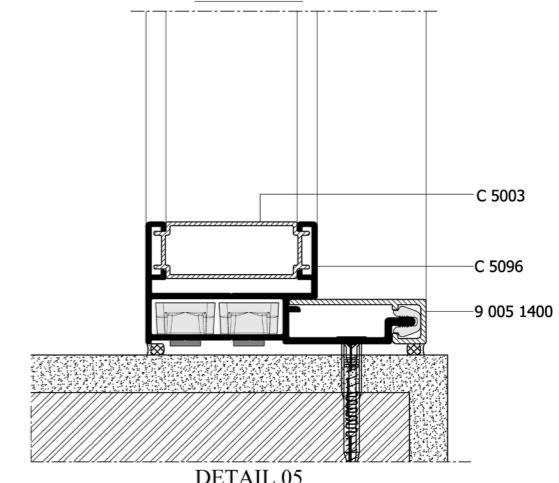
L01-ELEVATION {OUTSIDE VIEW}
SCALE 1:15



ACCESSORIES LIST				
NO.	FIGURE	ACC. NO	QTY.	DESCRIPTION
1		01 4270 0	8	Frame Corner Joint
2		60 0500 0	$\frac{2L+2H}{250}$	Clip
3		301-1030	8	Fixing Screw



DETAIL 04

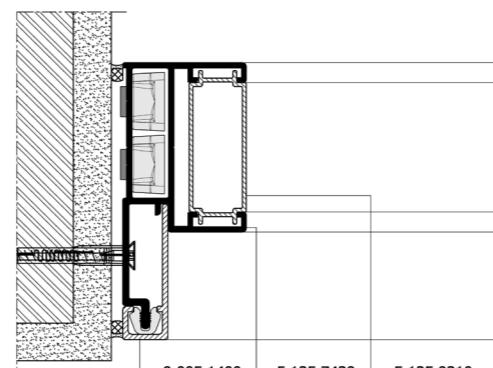


DETAIL 05

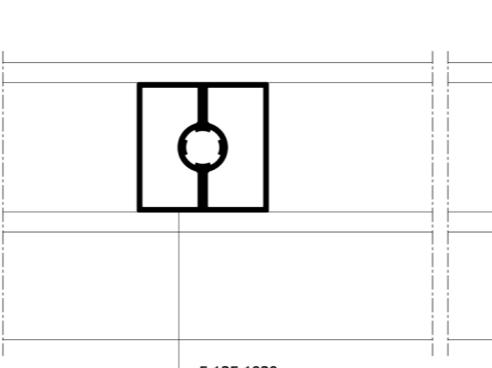
PROFILES CUTTING LIST

FIGURE	PROF. NO	QTY.	CUTTING LENGTH
	C 5096	2	
		2	
	9 005 1400	2	
		2	
	5 135 1930	NW	
	5 135 9310	NW +1	$L - \{27 + (NW \cdot 35)\} / (NW + 1)$
		2	

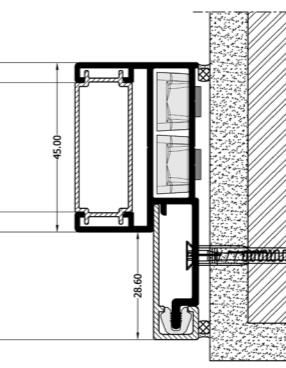
NH = Number of Slats in Height & NW = Number of Slats in Width
ALL DIMENSIONS IN mm.



DETAIL 01

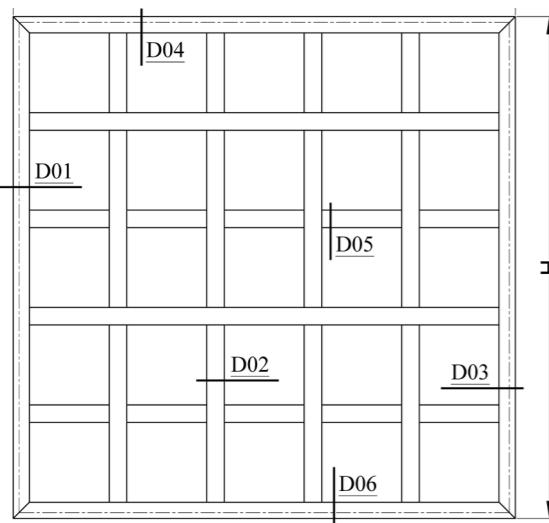


DETAIL 02

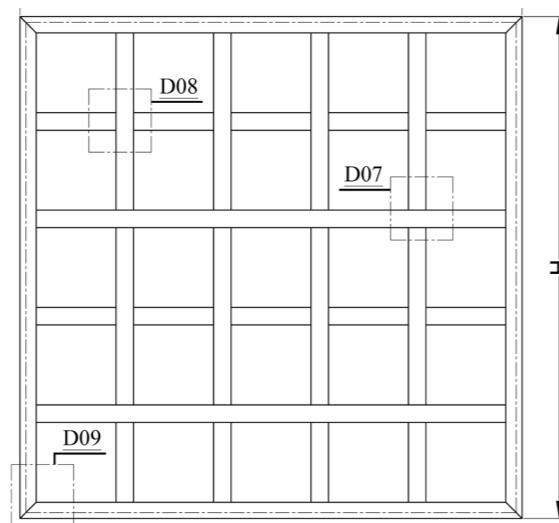


DETAIL 03

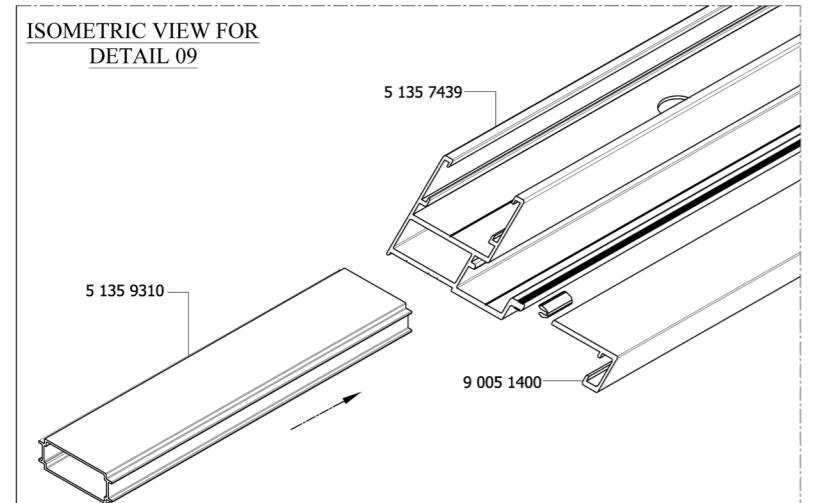
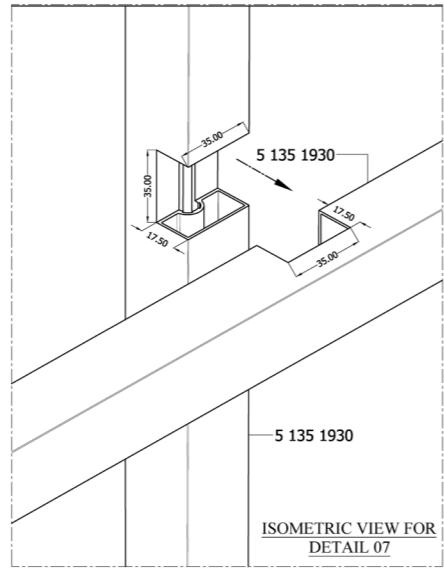
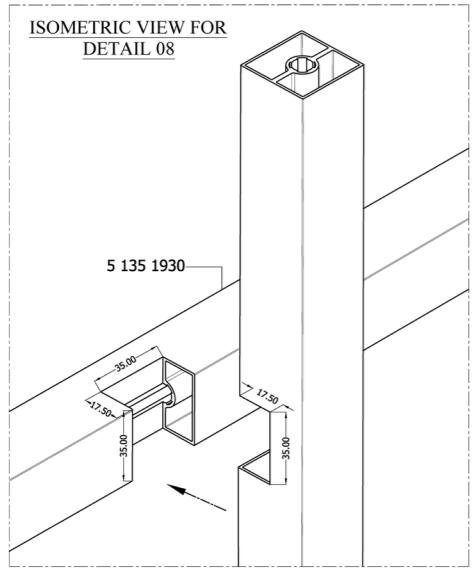




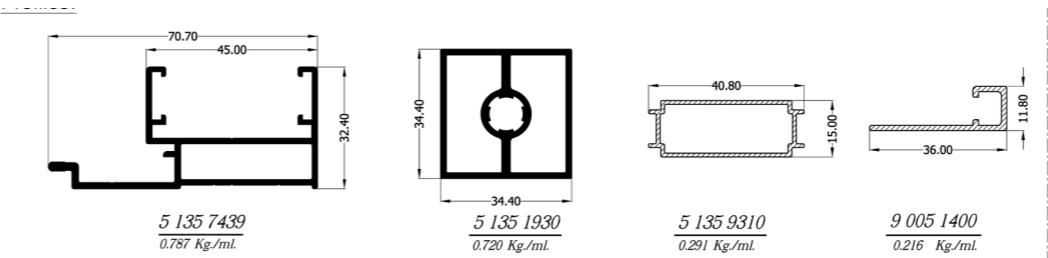
L01-ELEVATION {INSIDE VIEW}
SCALE 1:15



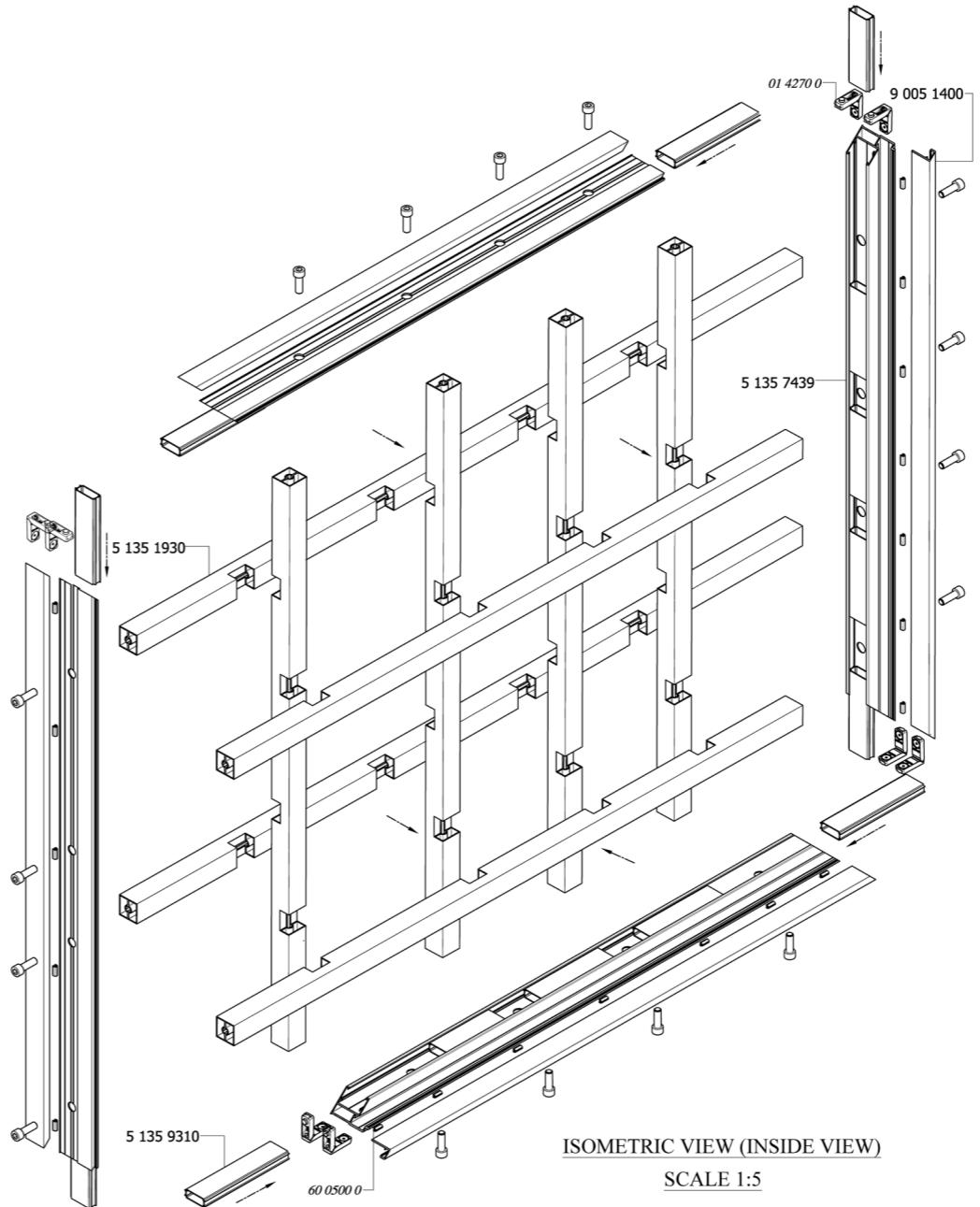
L01-ELEVATION {OUTSIDE VIEW}
SCALE 1:15



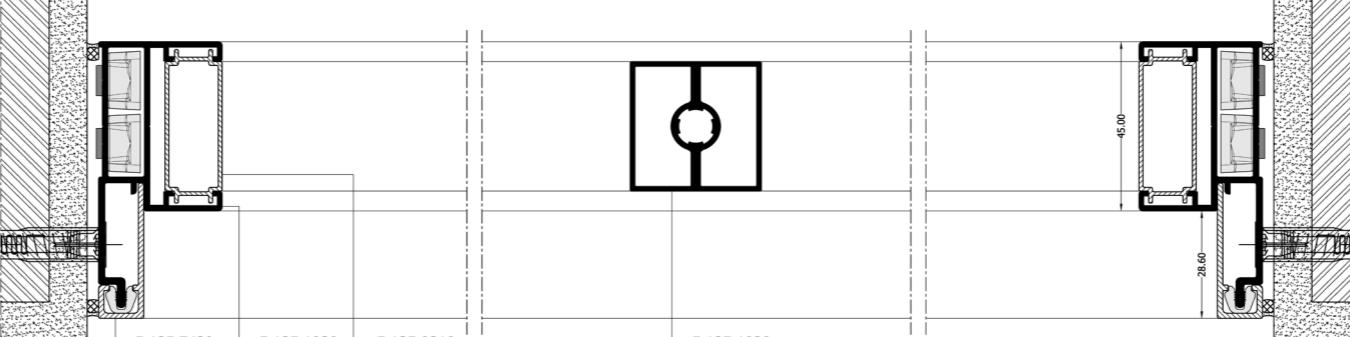
ACCESSORIES LIST				
NO.	FIGURE	ACC. NO	QTY.	DESCRIPTION
1		01 4270 0	8	Frame Corner Joint
2		60 0500 0	$\frac{2L+2H}{250}$	Clip
3		301-1030	16	Fixing Screw



5 135 7439 0.787 Kg./mL
5 135 1930 0.720 Kg./mL
5 135 9310 0.291 Kg./mL
9 005 1400 0.216 Kg./mL



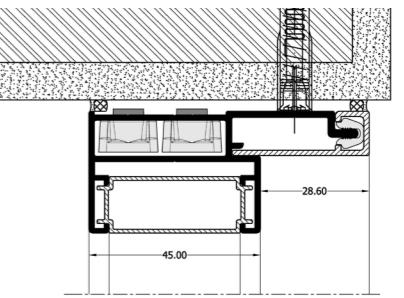
ISOMETRIC VIEW (INSIDE VIEW)
SCALE 1:5



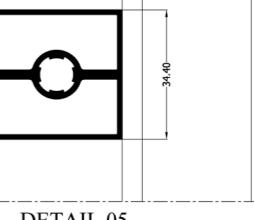
DETAIL 01

DETAIL 02

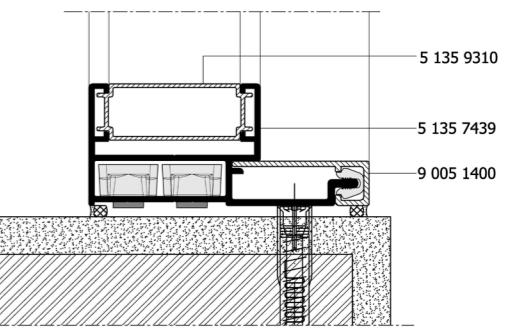
DETAIL 03



DETAIL 04



DETAIL 05



DETAIL 06

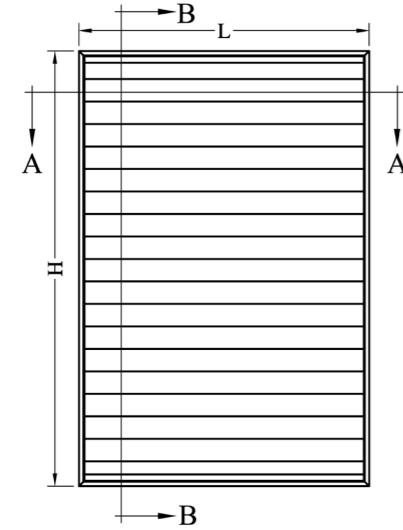
PROFILES CUTTING LIST

FIGURE	PROF. NO	QTY.	CUTTING LENGTH
	5 135 7439	2	
		2	
	9 005 1400	2	
		2	
	5 135 1930	NH	
		NW	
	5 135 9310	NH +1	$L - \{27 + (NH \cdot 35)\} / (NH + 1)$
		NW +1	$H - \{65 + (NW \cdot 35)\} / (NW + 1)$

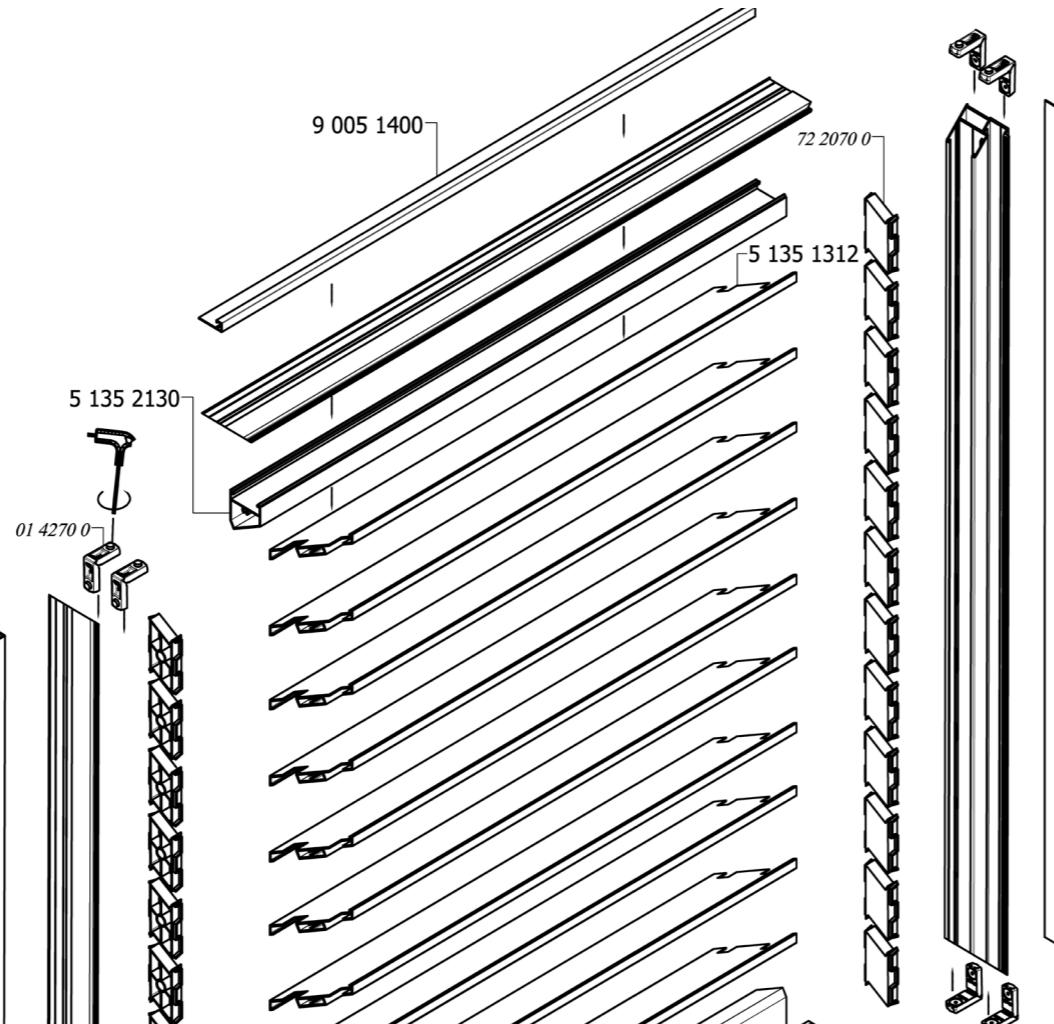
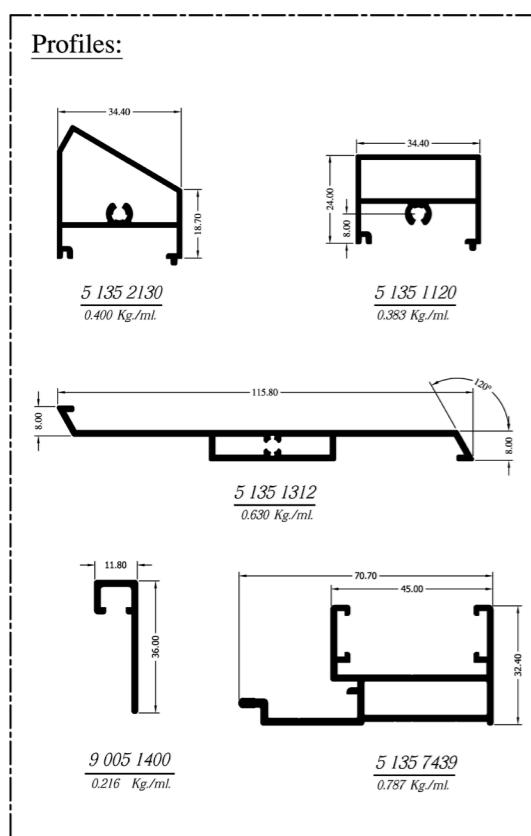
NH = Number of Slats in Height & NW = Number of Slats in Width

ALL DIMENSIONS IN mm.

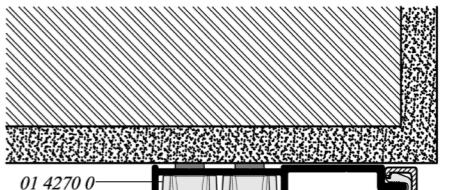
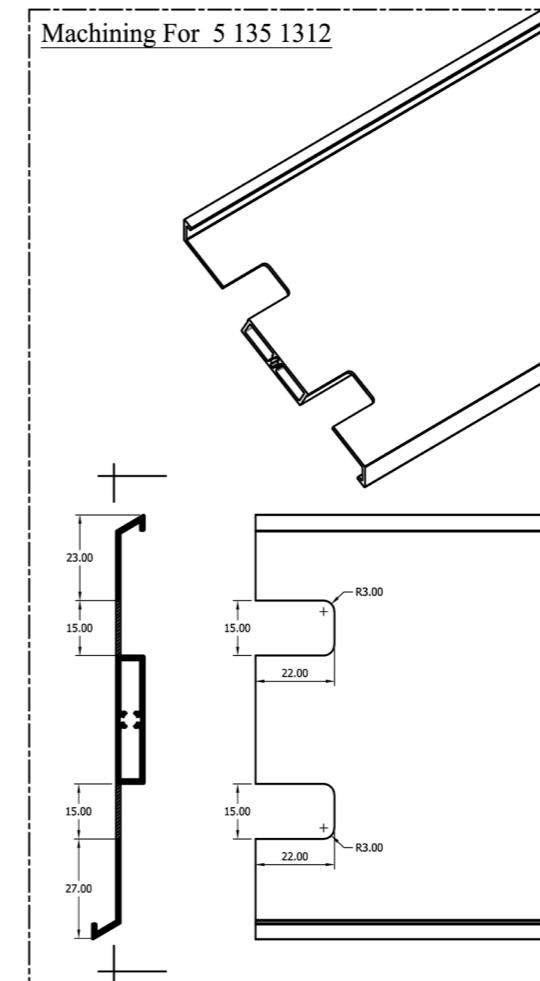




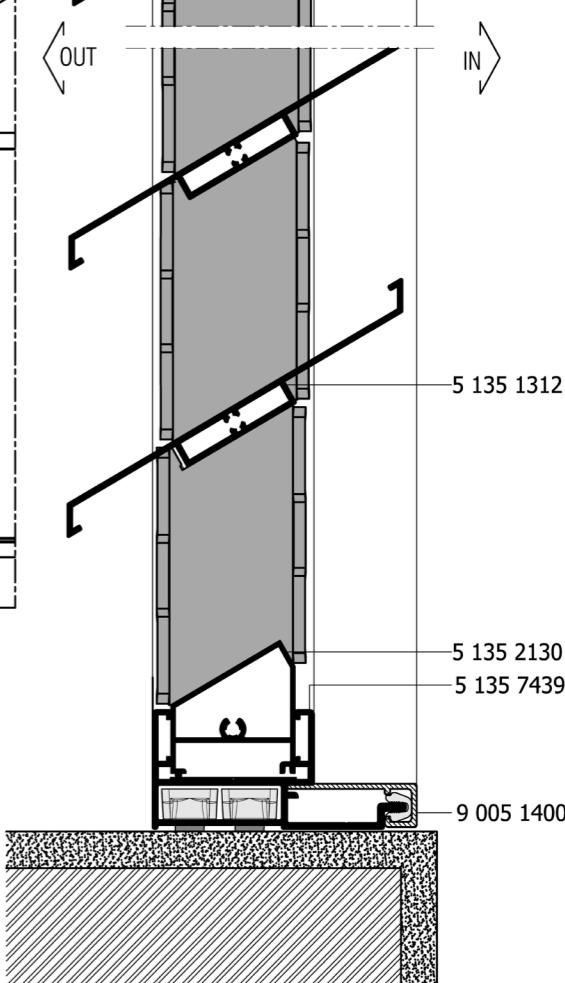
ELEVATION VIEW (INSIDE VIEW)
SCALE 1:20



ISOMETRIC VIEW



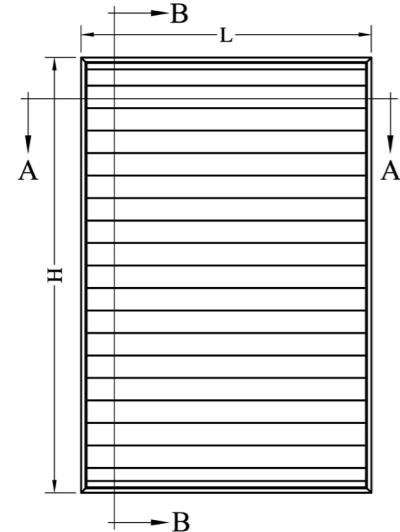
SEC A-A



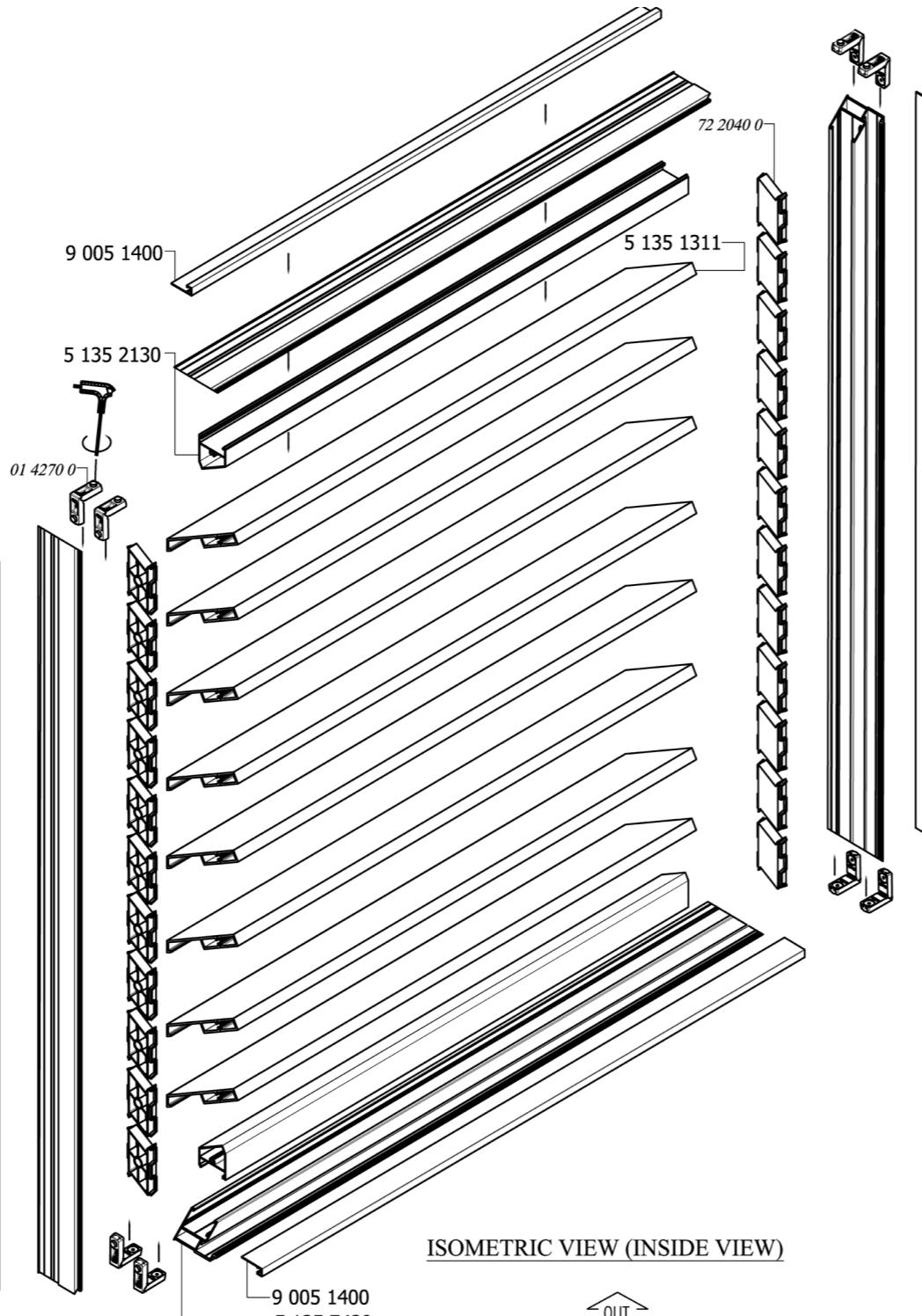
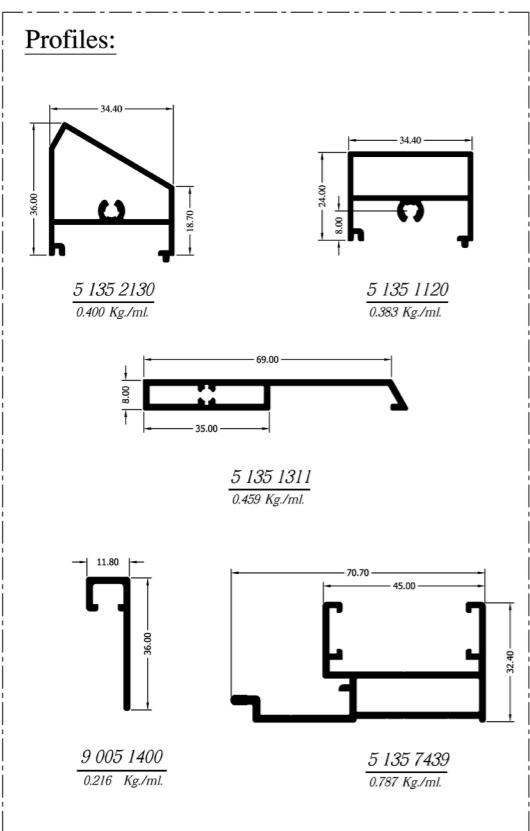
SEC B-B

ACCESSORIES LIST				
NO.	FIGURE	ACC. NO	QTY.	DESCRIPTION
1		01 4270 0	8	Frame Corner Joint
2		72 2070 0	$\frac{H}{72}$	Slat spacer Kit
3		60 0500 0	$\frac{2L+2H}{250}$	Clip

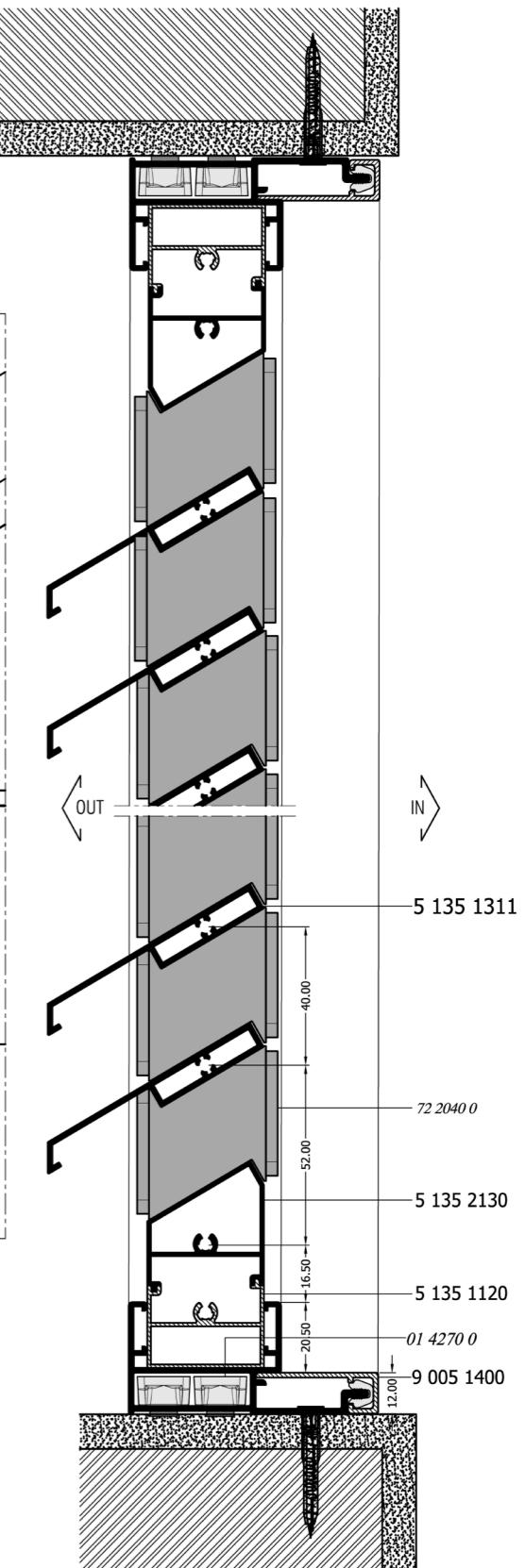
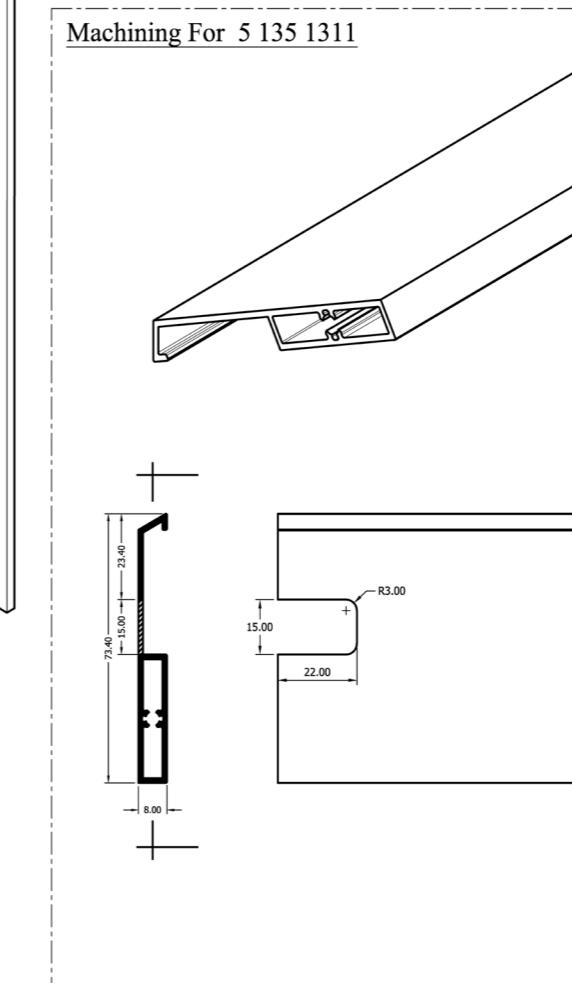




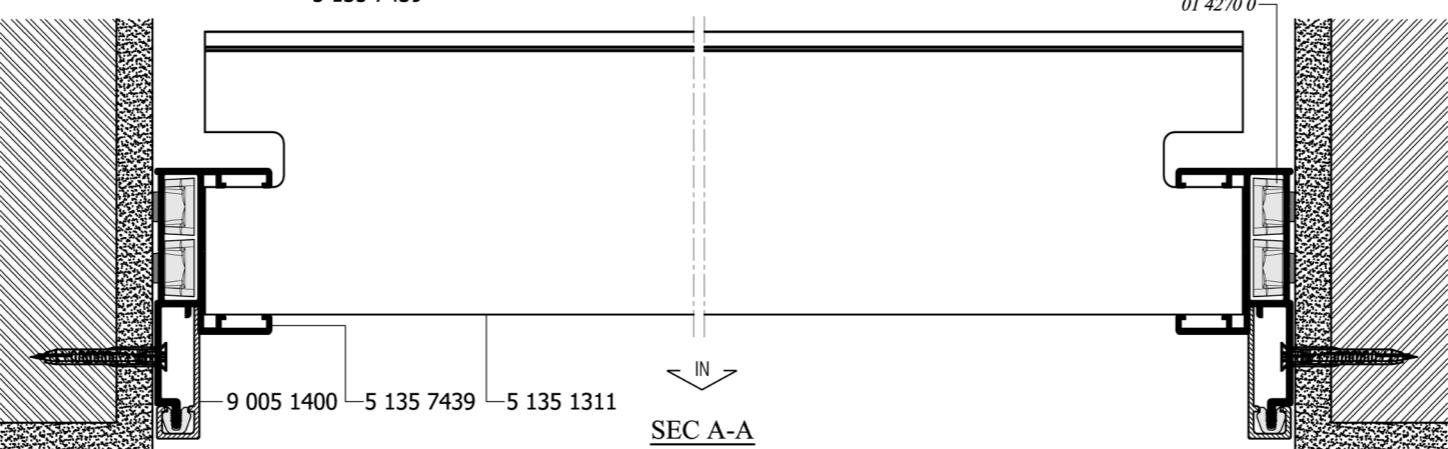
ELEVATION VIEW (INSIDE VIEW)
SCALE 1:20



ISOMETRIC VIEW (INSIDE VIEW)



ACCESSORIES LIST				
NO.	FIGURE	ACC. NO	QTY.	DESCRIPTION
1		01 4270 0	8	Frame Corner Joint
2		72 2040 0	$\frac{H}{40}$	Slat spacer Kit
3		60 0500 0	$\frac{2L+2H}{250}$	Clip



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