



DIAMOND premium BIOCLIMATIC

Diamond Premium Bioclimatic



Ceiling cover open-close movement is provided with remote control.

Motor movement to the mechanism is provided by trigger belt and it is adjustable.

Pillar profiles are aluminium and they are connected to the floor with galvanized and electrostatic painted screws.

Flange application screws should be M12x80 steel dowel with galvanized cover. (in order not to damage floor isolation.)

Silicone should be neutral silicone.

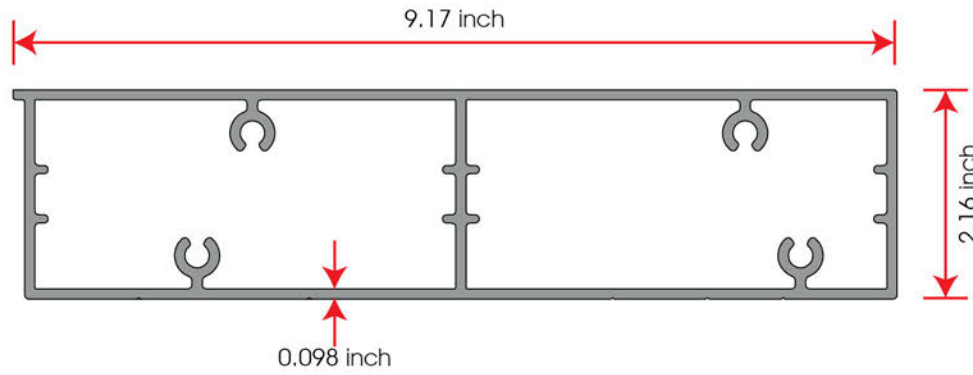
System will have 2 years mechanic and 2 years motor warranty.

Each system consists of vertical and horizontal profile. Vertical profiles are 6.50x6.50, horizontal profiles are in 2.16x9.05 dimensions.

System modules will have 33.60 + 16.80 lb/ft² weight and 33.60 lb/ft² wind effect resistance static feature.

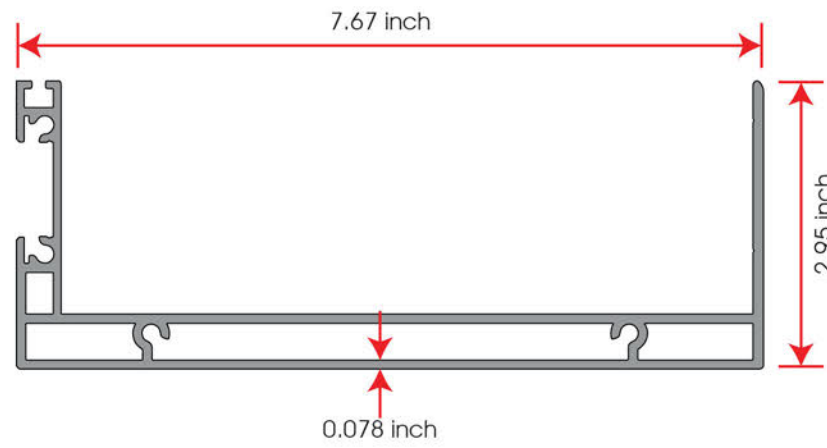
Special panels used in the system modules allow the air circulation in rainy weather and this can be controlled via remote control.





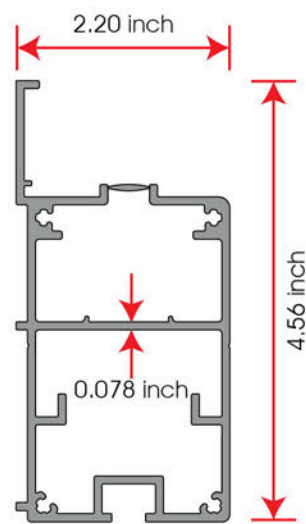
Beam

Profile No	Weight lb/ft
7552	3.587



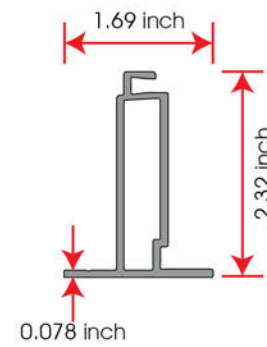
Rain Gutter

Profile No	Weight lb/ft
8160	2.414



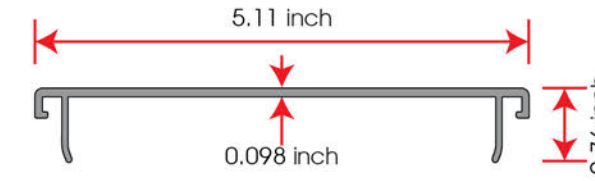
Rail

Profile No	Weight lb/ft
7579	1.782



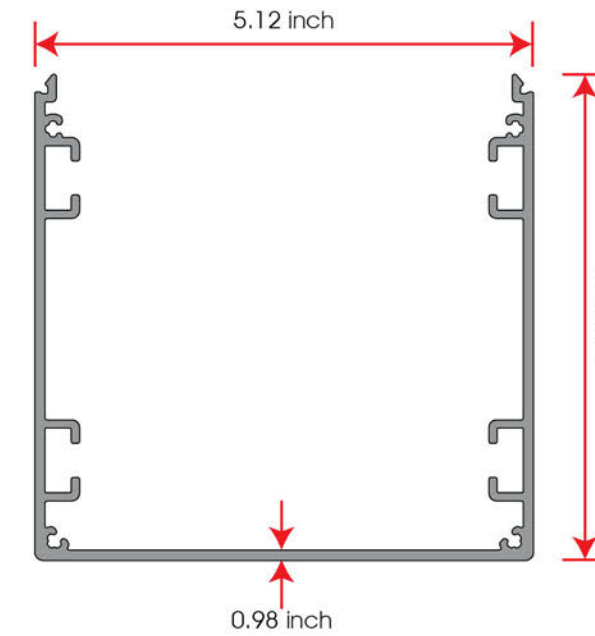
Rail Cover

Profile No	Weight lb/ft
7578	0.662



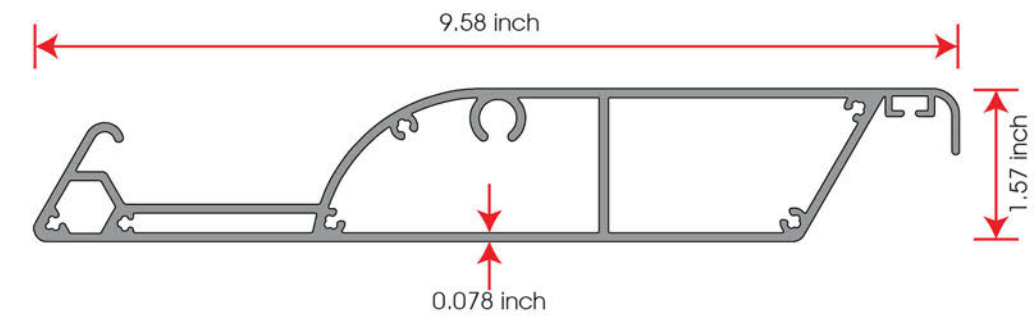
Column Cover

Profile No	Weight lb/ft
7573	0.695



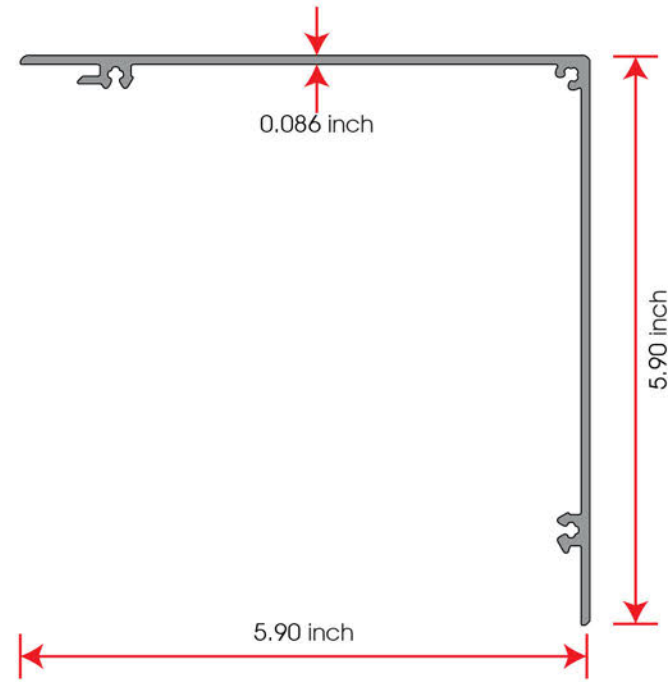
Column

Profile No	Weight lb/ft
7574	2.327



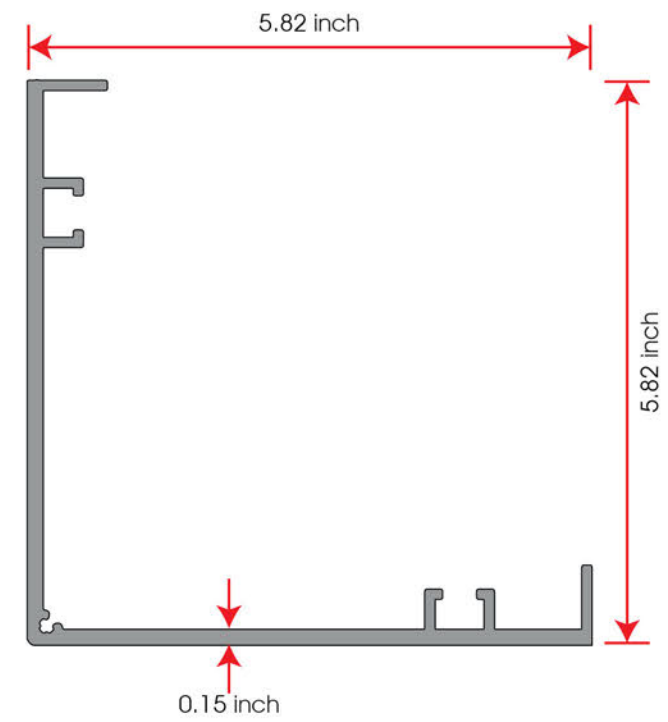
Lamelle

Profile No	Weight lb/ft
8161	2.578



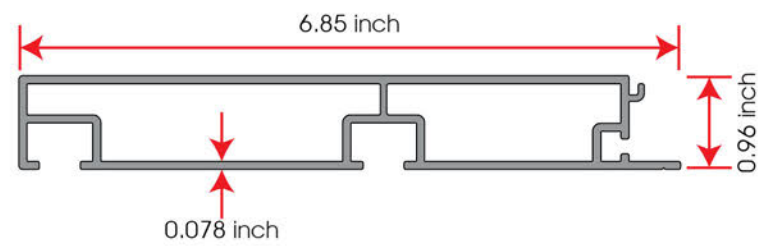
Column Cover

Profile No	Weight lb/ft
7567	1.443



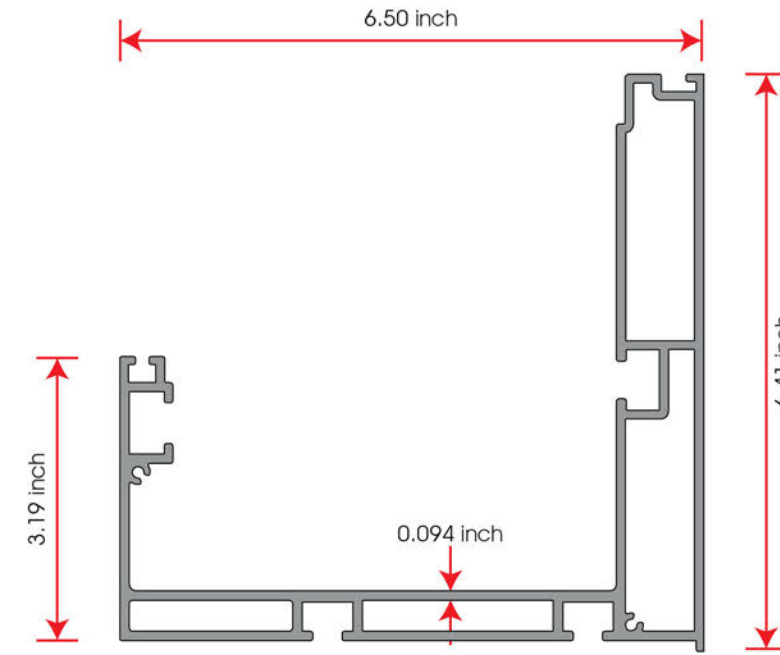
Column

Profile No	Weight lb/ft
7576	2.645



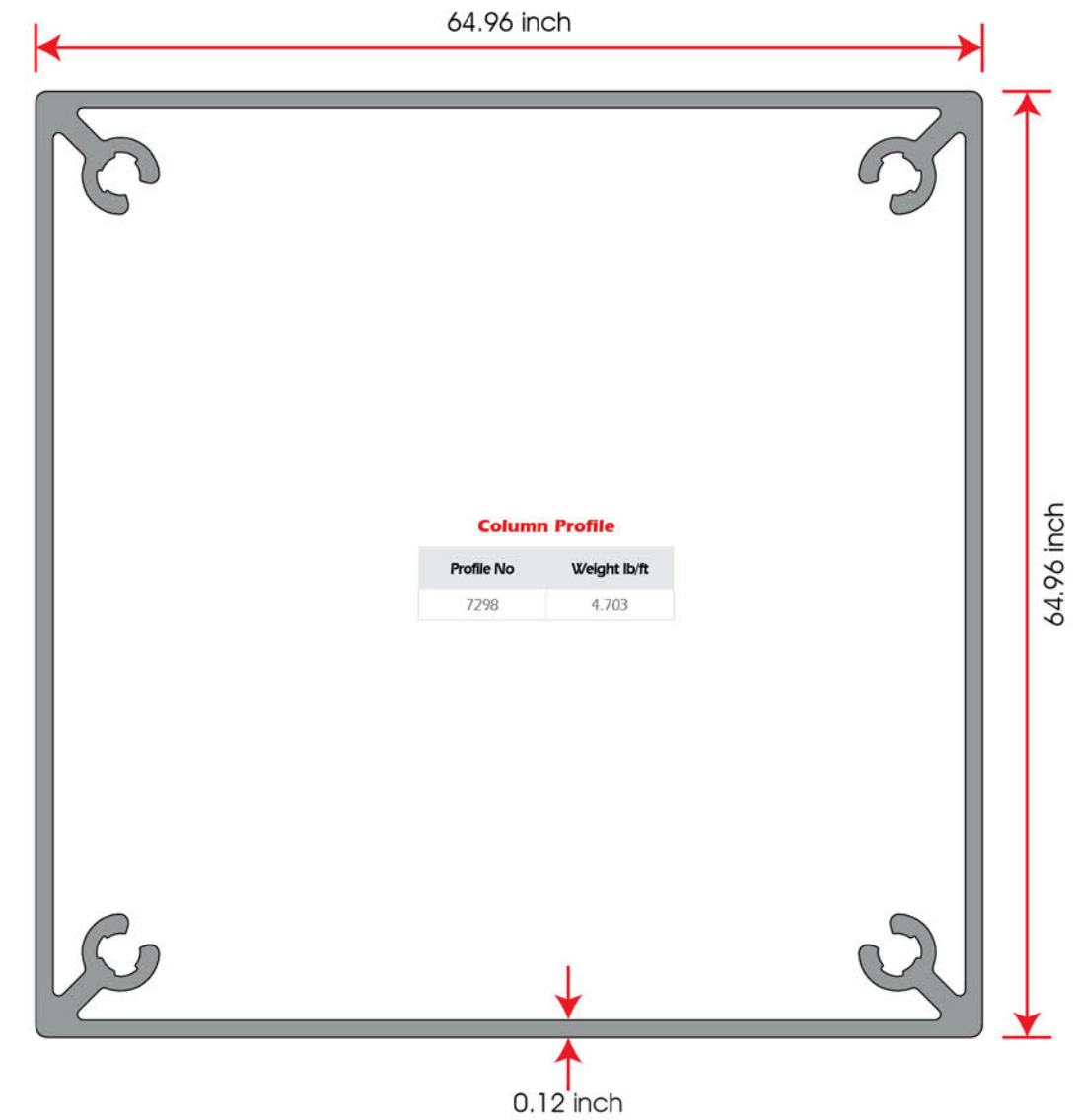
Upper Additional

Profile No	Weight lb/ft
7575	1.714



Groove

Profile No	Weight lb/ft
7554	3.804



Column Profile

Profile No	Weight lb/ft
7298	4.703

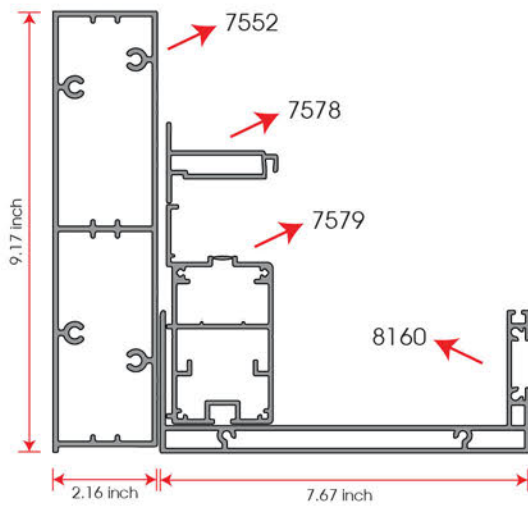
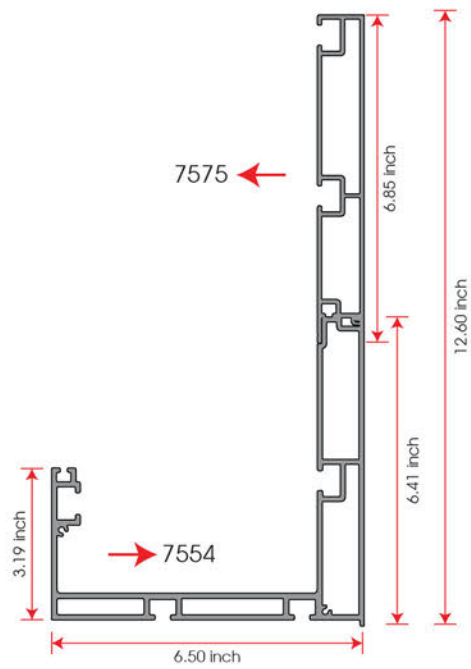
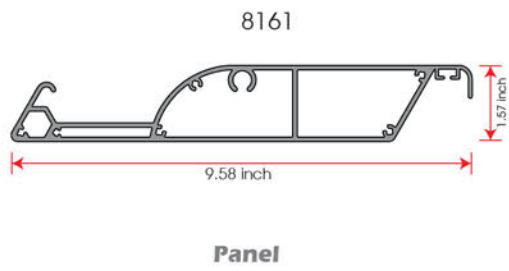
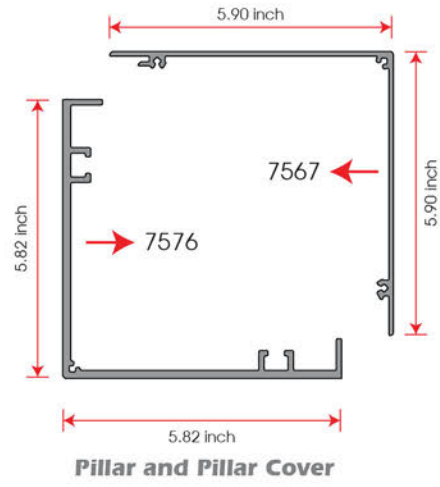
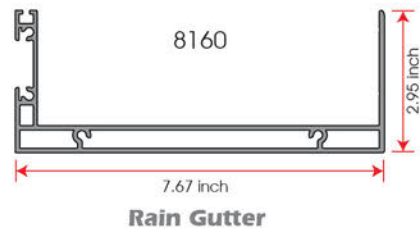
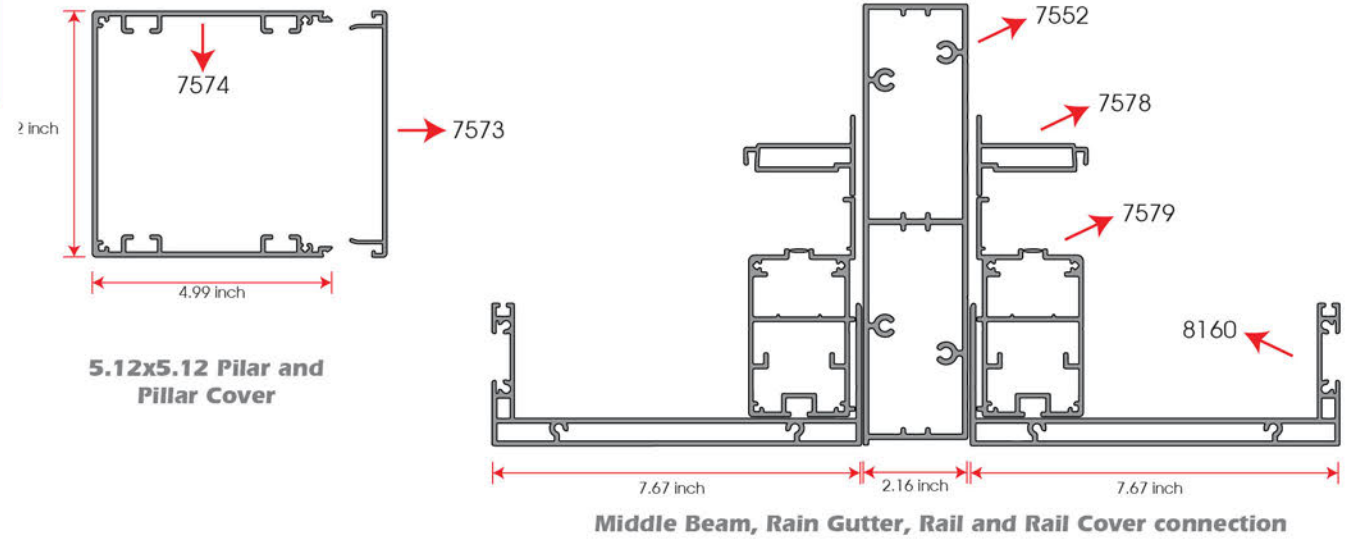
Profile Section

DIAMOND premium

Outdoor Systems®
AluGarden®

DIAMOND PREMIUM
10

Profil Bölümü
Profile Section



The unit weight values of the profiles indicated in the catalogue are theoretical. The real unit weight will be valid and may change ± 10% after production
Katalogda bulunan profillerin ağırlıkları teoriktir. Üretimden sonraki ağırlıklar geçerlidir. ± %10'a kadar fark oluşabilir.

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT
	Ray Dişli Kutusu Ön
	Ray Dişli Kutusu Arka
	Ray Arabası Çekici
	Panel Sabitleme
	Kayış Birleştirme Aparatı
	Motor Kiti (Somfy)
	Şaftlı Motor Mil 14x14
	Panel Rulmanlı Teker
	Panel Yan Kapak Sağ/Sol
	Panel Alum. Makas Sağ/Sol
	Makas Üst Bağlantı

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT
	Panel Orta Pim
	Oluk Köşe Birleştirme
	Oluk Orta Birleştirme
	Oluk 4 Köşe Birleştirme
	Ayak Alt Bağlantı
	Panel Kapak Burç
	Ray Kıl Fırçası
	Şerit Led G.I.
	Difüzör
	10A 24V Dış Mekan Trafo
	Panel Epdm Filti

The unit values of the accessories indicated in the catalogue are theoretical. The unit values indicated in selling are valid.
Katalogda bulunan aksesuarların birim değerleri teoriktir. Satış sırasındaki birimler geçerlidir.

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT
	Oluk Epdm Filti
	16Mm Kayış
	Bioclimatic Panel Köpük
	Somfy Io Tek Kanal
	M12 Çelik Dübel
	M5x40 A2 Havşa Allen Başlı Civata
	M5 Somun A2
	M3x10 Havşa Allen Başlı Civata
	M3 Somun
	M6x10 Mercimek Başlı Allen
	4.8X25 Ysb Matkap Uçlu Vida
	M8x40 Soket Başlı İmbus Civata

The unit values of the accessories indicated in the catalogue are theoretical. The unit values indicated in selling are valid.
Katalogda bulunan aksesuarların birim değerleri teoriktir. Satış sırasındaki birimler geçerlidir.

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT
	M6x40 Soket Başlı İmbus Civata
	M8 Pul
	M12 Saplama Rod
	M12 Pul
	M12 Somun
	M5x25 Havşa İmbus Civata
	M5x20 Havşa İmbus Civata
	4.8X70 Yhb Matkap Uçlu
	M8x40 A2 Soket Başlı İmbus Civata
	M8 A2 Fiberli Somun
	4.8X50 Sivri Uçlu Yhb
	Rgb Dimmer + Kumanda

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT	MİKTAR AMOUNT
	Ray Dişli Kutusu Ön	2 Adet
	Ray Dişli Kutusu Arka	2 Adet
	Ray Arabası Çekici	2 Adet
	Panel Sabitleme	2 Adet
	Kayış Birleştirme Aparatı	2 Adet
	Motor Kiti (Somfy)	1 Adet
	Şaftlı Motor Mili 14x14	2,6 Mt
	Panel Rulmanlı Teker	34 Adet
	Panel Yan Kapak Sağ/Sol	34 Adet
	Panel Alum. Makas Sağ/Sol	36 Adet
	Makas Üst Bağlantı	34 Adet

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT	MİKTAR AMOUNT
	Panel Orta Pim	34 Adet
	Oluk Köşe Birleştirme	4 Adet
	Oluk Orta Birleştirme	0 Adet
	Oluk 4 Köşe Birleştirme	0 Adet
	Ayak Alt Bağlantı	4 Adet
	Panel Kapak Burç	216 Adet
	Ray Kıl Fırçası	7,61 mt
	Şerit Led G.I.	13,88 mt
	Difüzör	13,88 mt
	10A 24V Dış Mekan Trafo	1 Adet
	Panel Epdm Fıtlı	62,61 mt

The unit values of the accessories indicated in the catalogue are theoretical. The unit values indicated in selling are valid.
Katalogda bulunan aksesuarların birim değerleri teoriktir. Satış sırasındaki birimler geçerlidir.

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT	MİKTAR AMOUNT
	Oluk Epdm Fıtlı	13,88 mt
	16Mm Kayış	15,16 mt
	Bioclimatic Panel Köpük	62,61 mt
	Somfy İo Tek Kanal	1 Adet
	M12 Çelik Dübel	16 Adet
	M5x40 A2 Havşa Allen Başlı Civata	4 Adet
	M5 Somun A2	4 Adet
	M3x10 Havşa Allen Başlı Civata	16 Adet
	M3 Somun	16 Adet
	M6x10 Mercimek Başlı Allen	4 Adet
	4.8X25 Ysb Matkap Uçlu Vida	224 Adet
	M8x40 Soket Başlı İmbus Civata	48 Adet

The unit values of the accessories indicated in the catalogue are theoretical. The unit values indicated in selling are valid.
Katalogda bulunan aksesuarların birim değerleri teoriktir. Satış sırasındaki birimler geçerlidir.

ÜRÜN RESMİ PRODUCT IMAGE	ÜRÜN ADI NAME OF THE PRODUCT	MİKTAR AMOUNT
	M6x40 Soket Başlı İmbus Civata	24 Adet
	M8 Pul	16 Adet
	M12 Saplama Rod	16 Adet
	M12 Pul	16 Adet
	M12 Somun	16 Adet
	M5x25 Havşa İmbus Civata	36 Adet
	M5x20 Havşa İmbus Civata	108 Adet
	4.8X70 Yhb Matkap Uçlu	30 Adet
	M8x40 A2 Soket Başlı İmbus Civata	36 Adet
	M8 A2 Fiberli Somun	36 Adet
	4.8X50 Sivri Uçlu Yhb	8 Adet
	Rgb Dimmer + Kumanda	0 Adet

Kurulum Detayları Installation Details



1 – First beam and pillar connection is done.



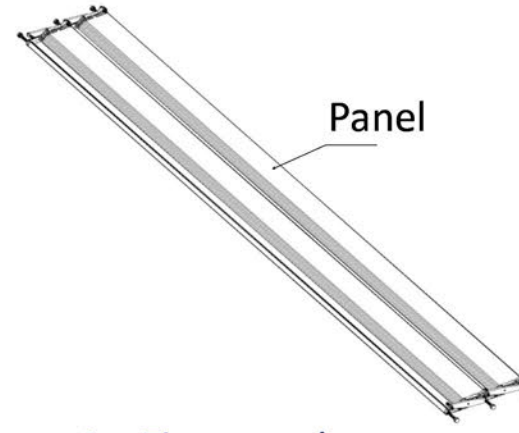
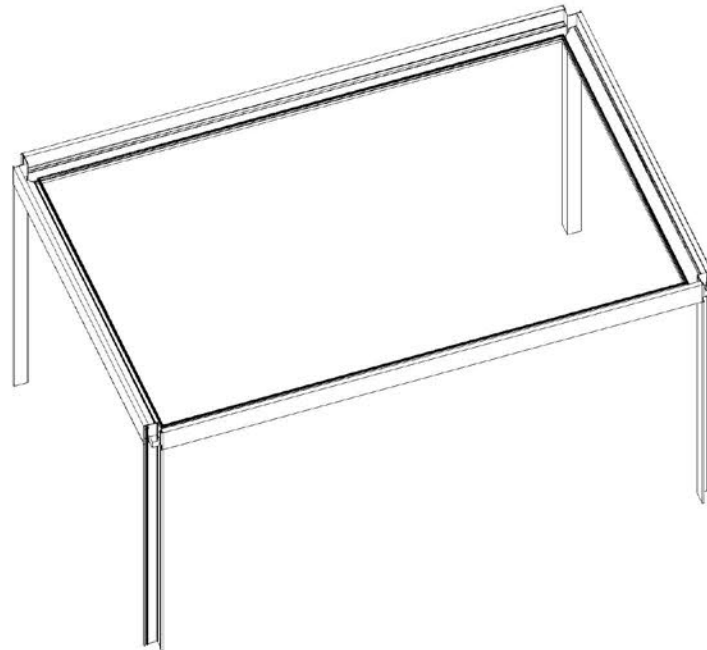
Typical beam and pillar connection detail.



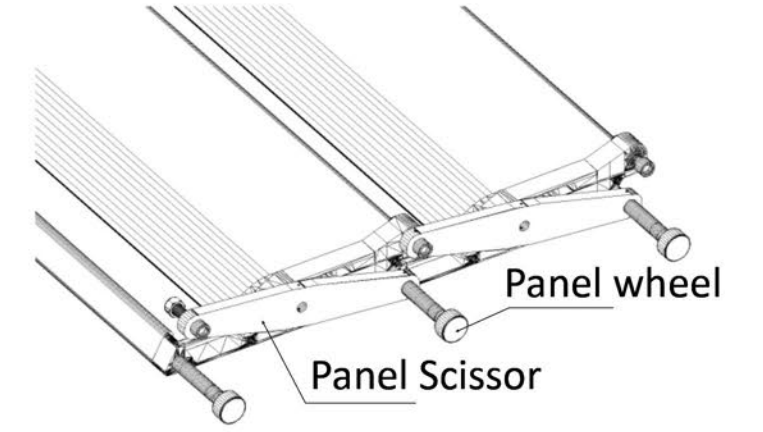
3 – Beam and pillar connections are completed.



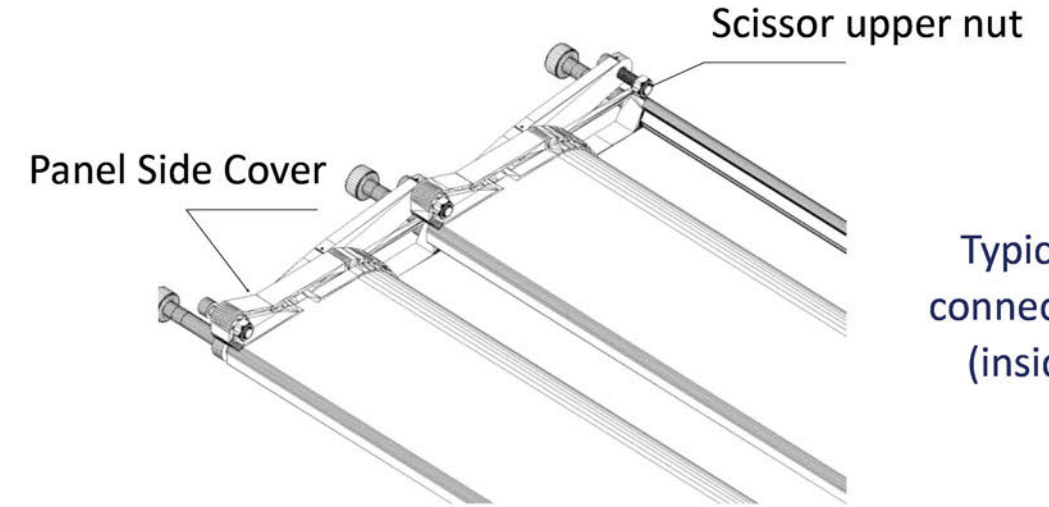
2 – Other beam and pillar connections are done.



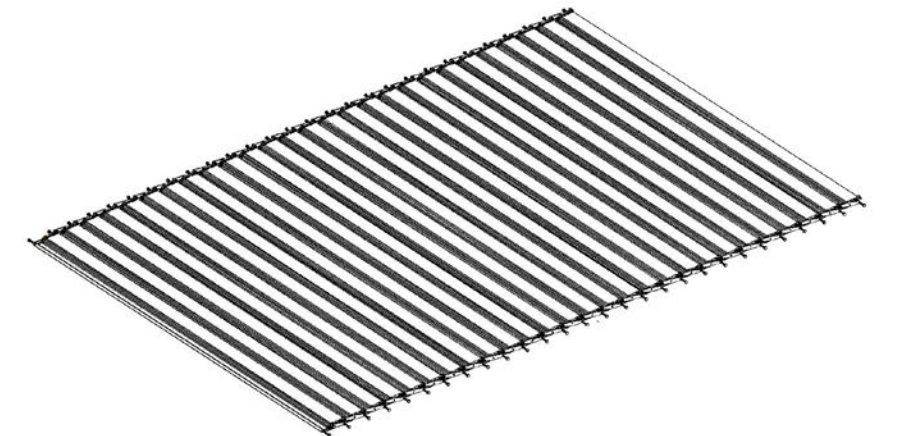
4 – First panel connection is done.



Typical panel connection detail.

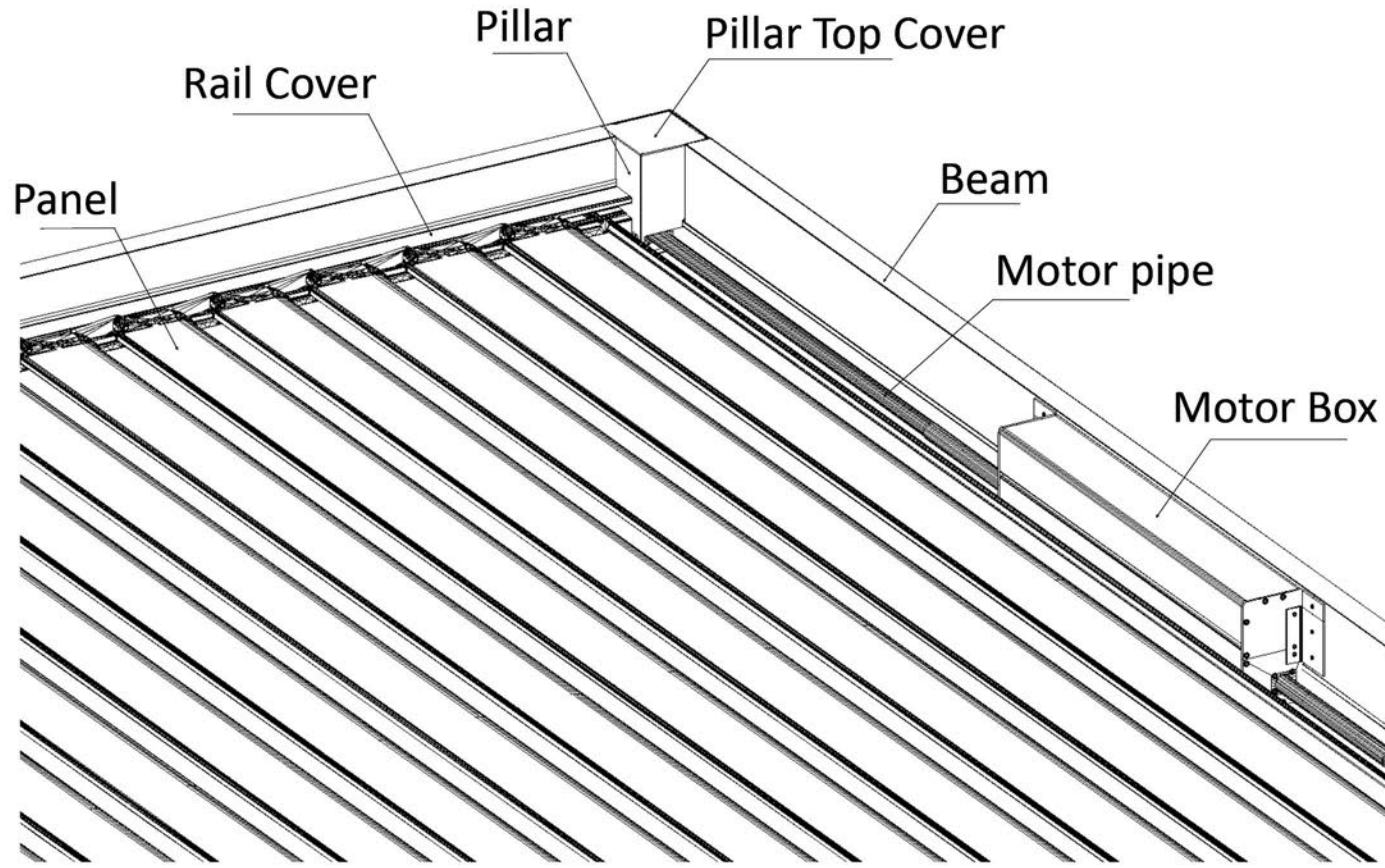


5 – Other panel connections are completed.

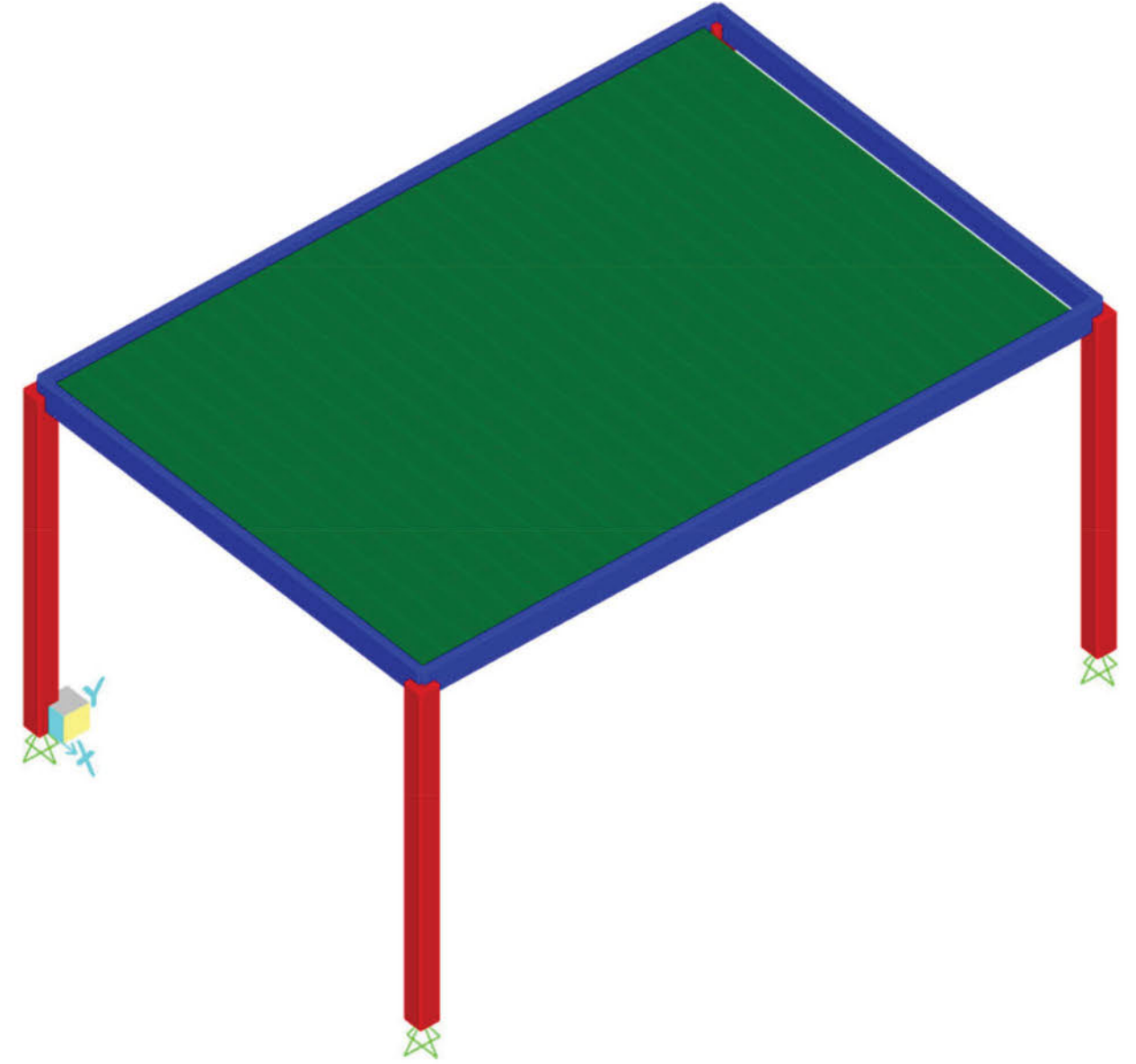


Typical panel connection detail (inside look)

Kurulum Detayları
Installation Details



BIOCLIMATIC PERGOLA



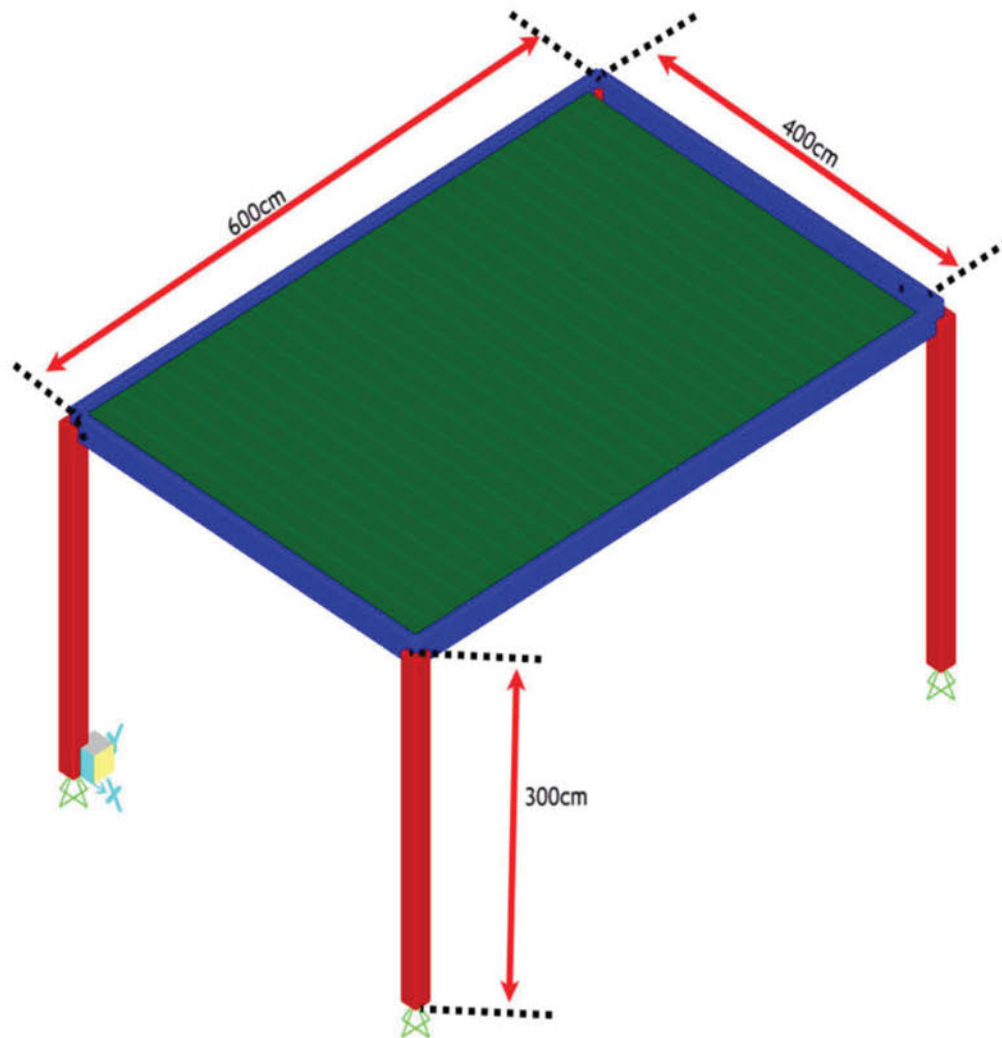
STRUCTURAL ENGINEERING REPORT

For Pillar 6.50x6.50

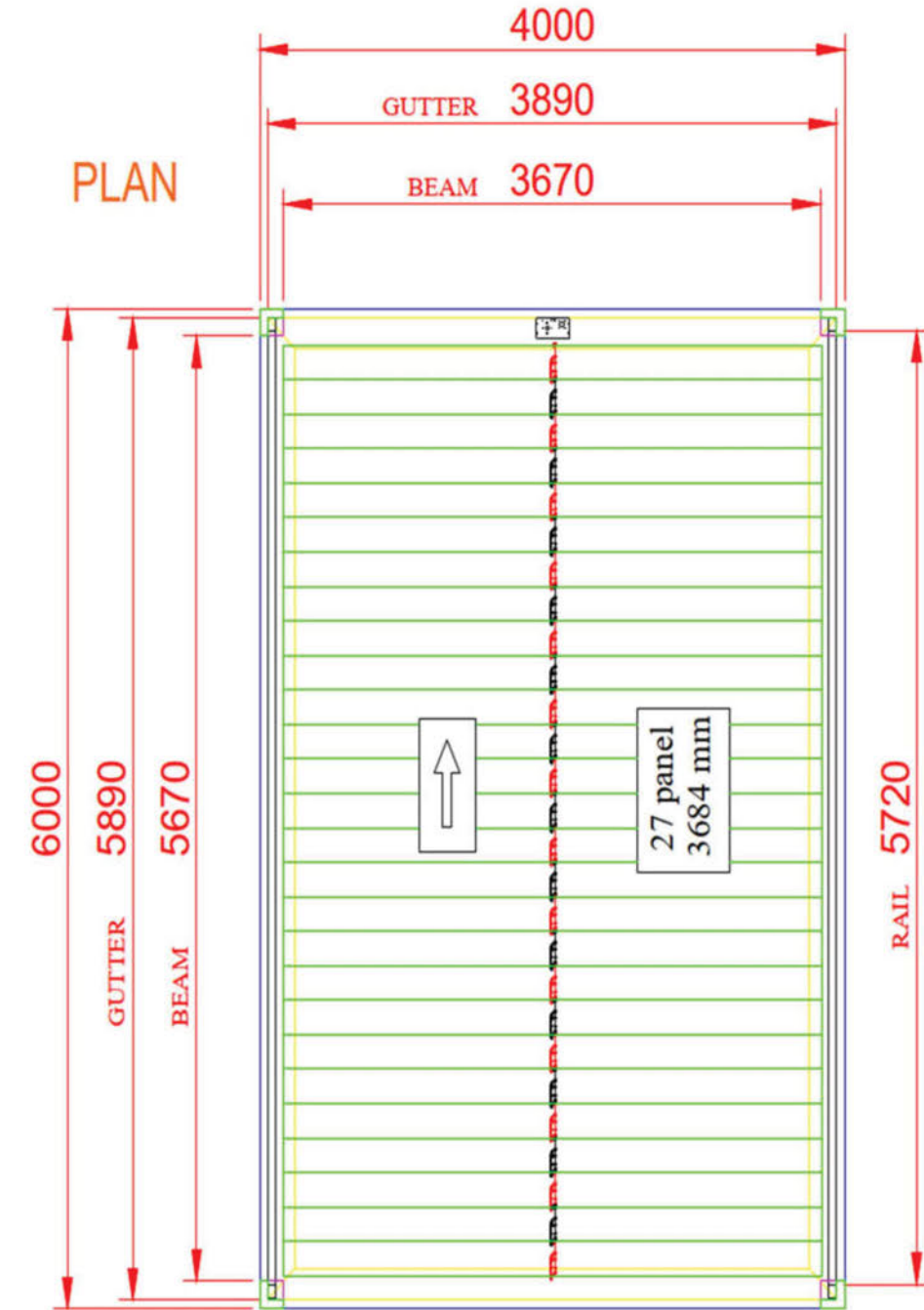
1. INTRODUCTION

1.1 BASE INFORMATION

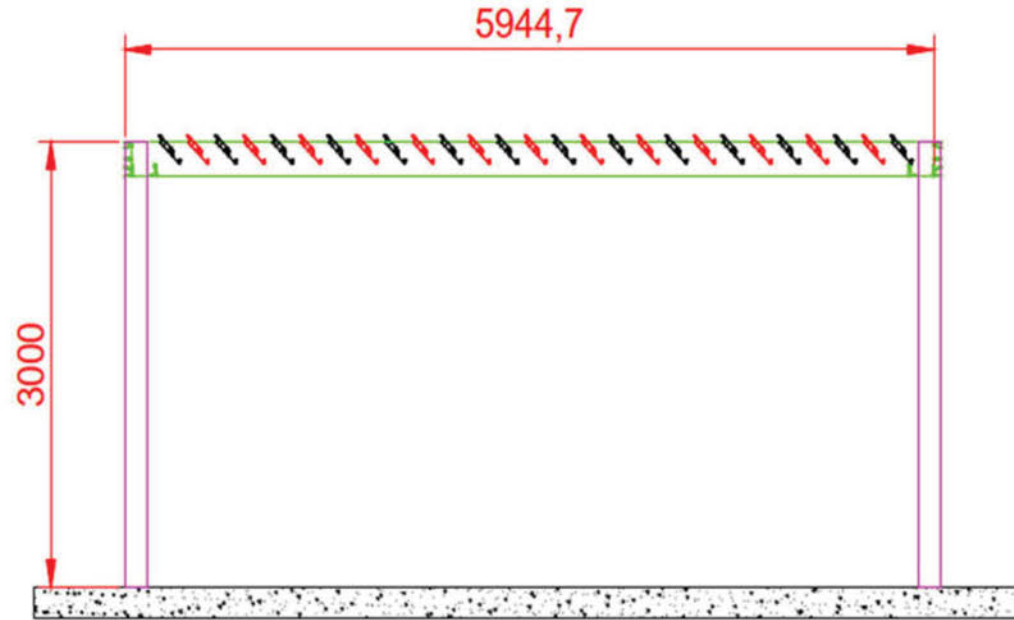
- Location : Denver / USA
- Structure Type : Structural Aluminium
- Floors : -
- Base : RC Foundation
- Horizontal Bearing System : Moment Frame
- Floor System : -
- Dimensions : As indicated below.



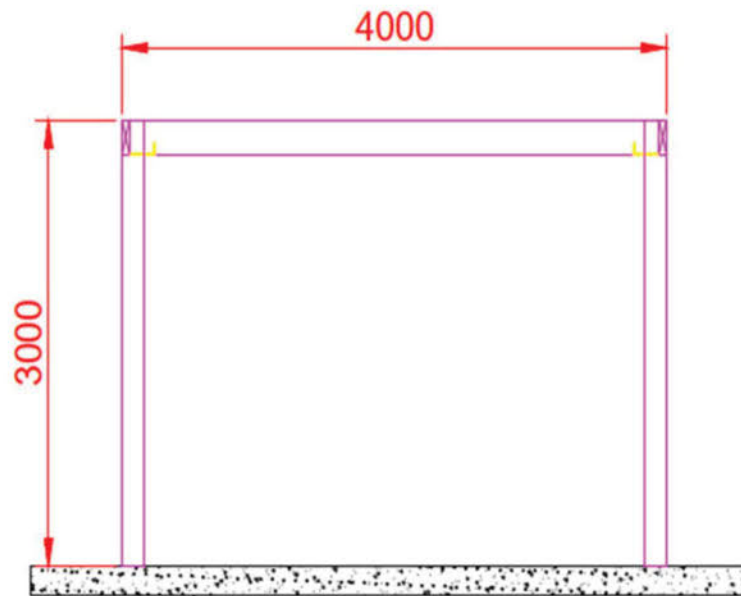
1.2 ARCHITECTURAL DRAWINGS



SIDE VIEW



FRONT VIEW



2 CODES AND REFERENCES

2.1 DESIGN PRINCIPALS

Structural calculations and design of the building frame and system details have been done according to relevant National Codes and in coordination with the other engineering disciplines.

2.2 CODES AND REGULATIONS

Dynamic and Statical Analysis of the building will be made according to following national engineering design codes;

- **ASCE 7-16** : Minimum Design Loads and Associated Criteria for Buildings and Other Structures
- **AA-2020** : Specification for Structural Steel Buildings

2.3 ALTERNATIVE INTERNATIONAL CODES AND REGULATIONS

- **IBC 2012**, International Building Code
- **BS EN 1990** : Basis of structural design
- **BS EN 1991 Eurocode 1** : Actions on structures
- **BS EN 1999 Eurocode 9** : Design of aluminium structures
- **UBC 97**

2.4 COMPUTER DESIGN SOFTWARES

Dynamic and Statical Analysis of the building will be made by using following finite elements method based computer programs;

- **SAP2000 Computers and Structures, Inc. Berkeley, California USA v.21**

3 DESIGN PARAMETERS

3.1 MATERIALS

BS EN 1999-1-1:2007+A1:2009
EN 1999-1-1:2007+A1:2009 (E)

Table 3.2a - Characteristic values of 0,2% proof strength f_0 , ultimate tensile strength f_u (unwelded and for HAZ), min elongation A , reduction factors $\rho_{0, haz}$ and $\rho_{u, haz}$ in HAZ, buckling class and exponent n_p for wrought aluminium alloys - Sheet, strip and plate

Alloy EN-AW	Temper ¹⁾	Thick-ness ¹⁾ mm	f_0 ¹⁾	f_u	A_{50} ^{1) 6)}	$f_{0, haz}$ ²⁾	$f_{u, haz}$ ²⁾	HAZ-factor ²⁾		BC ⁴⁾	n_p ^{1), 5)}
			N/mm ²		%	N/mm ²		$\rho_{0, haz}$ ¹⁾	$\rho_{u, haz}$		
3004	H14 H24/H34	≤ 6 3	180 170	220	1 3	75	155	0,42 0,44	0,70	B	23 18
	H16 H26/H36	≤ 4 3	200 190	240	1 3			0,38 0,39	0,65	B	25 20
3005	H14 H24	≤ 6 3	150 130	170	1 4	56	115	0,37 0,43	0,68	B	38 18
	H16 H26	≤ 4 3	175 160	195	1 3			0,32 0,35	0,59	B	43 24
3103	H14 H24	≤ 25 12,5	120 110	140	2 4	44	90	0,37 0,40	0,64	B	31 20
	H16 H26	≤ 4	145 135	160	1 2			0,30 0,33	0,56	B	48 28
5005/5005A	O/H111	≤ 50	35	100	15	44	100	1	1	B	5
	H12 H22/H32	≤ 12,5	95 80	125	2 4			0,46 0,55	0,80	B	18 11
	H14 H24/H34	≤ 12,5	120 110	145	2 3			0,37 0,40	0,69	B	25 17
5052	H12 H22/H32	≤ 40	160 130	210	4 5	80	170	0,50 0,62	0,81	B	17 10
	H14 H24/H34	≤ 25	180 150	230	3 4			0,44 0,53	0,74	B	19 11
5049	O/H111	≤ 100	80	190	12	80	190	1	1	B	6
	H14 H24/H34	≤ 25	190 160	240	3 6			100	190	0,53 0,63	0,79
5454	O/H111	≤ 80	85	215	12	85	215	1	1	B	5
	H14 H24/H34	≤ 25	220 200	270	2 4			105	215	0,48 0,53	0,80
5754	O/H111	≤ 100	80	190	12	80	190	1	1	B	6
	H14 H24/H34	≤ 25	190 160	240	3 6			100	190	0,53 0,63	0,79
5083	O/H111	≤ 50	125	275	11	125	275	1	1	B	6
		50 < t ≤ 80	115	270	14 ³⁾						
	H12 H22/H32	≤ 40	250 215	305	3 5						
H14 H24/H34	≤ 25	280 250	340	2 4	0,55 0,62	0,81	A	22 14			
6061	T4 / T451	≤ 12,5	110	205	12	95	150	0,86	0,73	B	8
	T6 / T651	≤ 12,5	240	290	6						
	T651	12,5 < t ≤ 80	240	290	6 ³⁾						
6082	T4 / T451	≤ 12,5	110	205	12	100	160	0,91	0,78	B	8
	T61/T6151	≤ 12,5	205	280	10						
	T6151	12,5 < t ≤ 100	200	275	12 ³⁾						
	T6/T651	≤ 6	260	310	6						
		6 < t ≤ 12,5	255	300	9						
T651	12,5 < t ≤ 100	240	295	7 ³⁾							
7020	T6	≤ 12,5	280	350	7	205	280	0,73	0,80	A	19
	T651	≤ 40									
8011A	H14 H24	≤ 12,5	110 100	125	2 3	37	85	0,34 0,37	0,68	B	37 22
	H16 H26	≤ 4	130 120	145	1 2			0,28 0,31	0,59		33 33

1) If two (three) tempers are specified in one line, tempers separated by " | " have different technological values but separated by " / " have same values. (The tempers show differences for f_0 , A and n_p .)
 2) The HAZ-values are valid for MIG welding and thickness up to 15mm. For TIG welding strain hardening alloys (3xxx, 5xxx and 8011A) up to 6 mm the same values apply, but for TIG welding precipitation hardening alloys (6xxx and 7xxx) and thickness up to 6 mm the HAZ values have to be multiplied by a factor 0,8 and so the ρ -factors. For higher thickness - unless other data are available - the HAZ values and ρ -factors have to be further reduced by a factor 0,8 for the precipitation hardening alloys (6xxx and 7xxx) and by a factor 0,9 for the strain hardening alloys (3xxx, 5xxx and 8011A). These reductions do not apply in temper O.
 3) Based on A ($= A_{5,65\sqrt{A_p}}$), not A_{50} .
 4) BC = buckling class, see 6.1.4.4, 6.1.5 and 6.3.1.
 5) n -value in Ramberg-Osgood expression for plastic analysis. It applies only in connection with the listed f_0 -value.
 6) The minimum elongation values indicated do not apply across the whole range of thickness given, but mostly to the thinner materials. In detail see EN 485-2.

Material grade is **6061-T6** for all section shapes

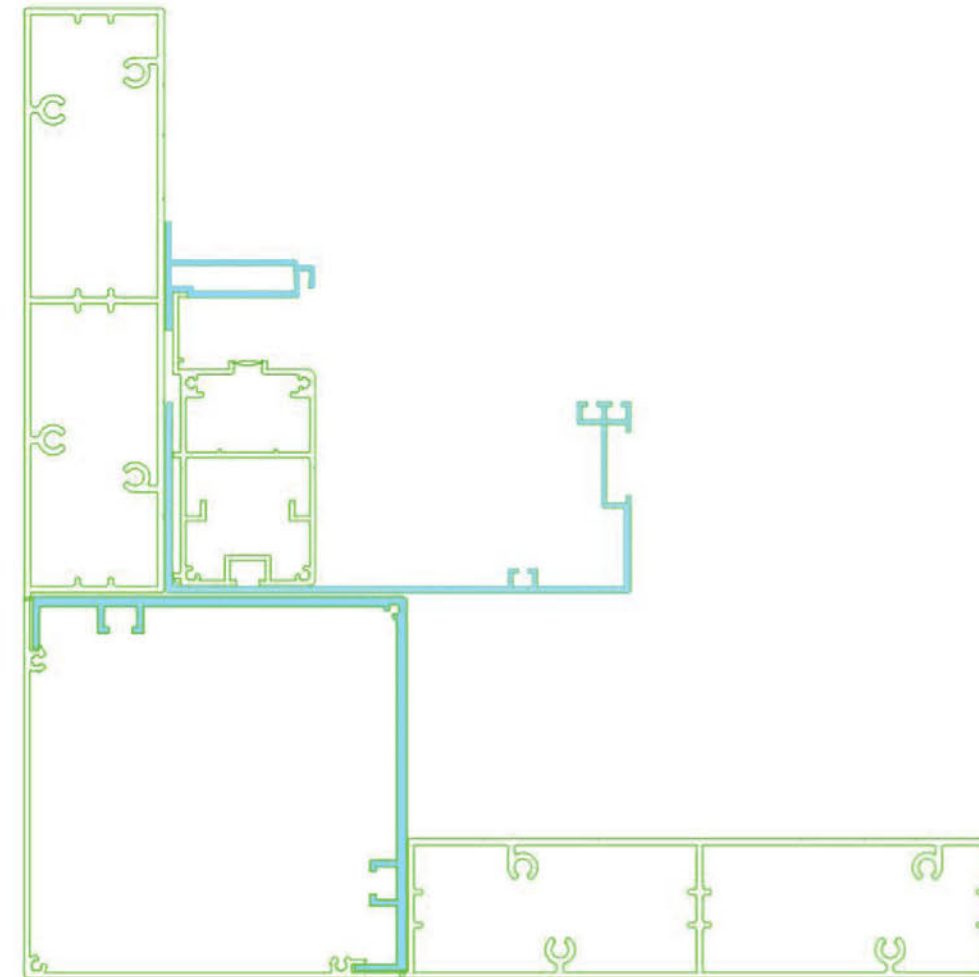
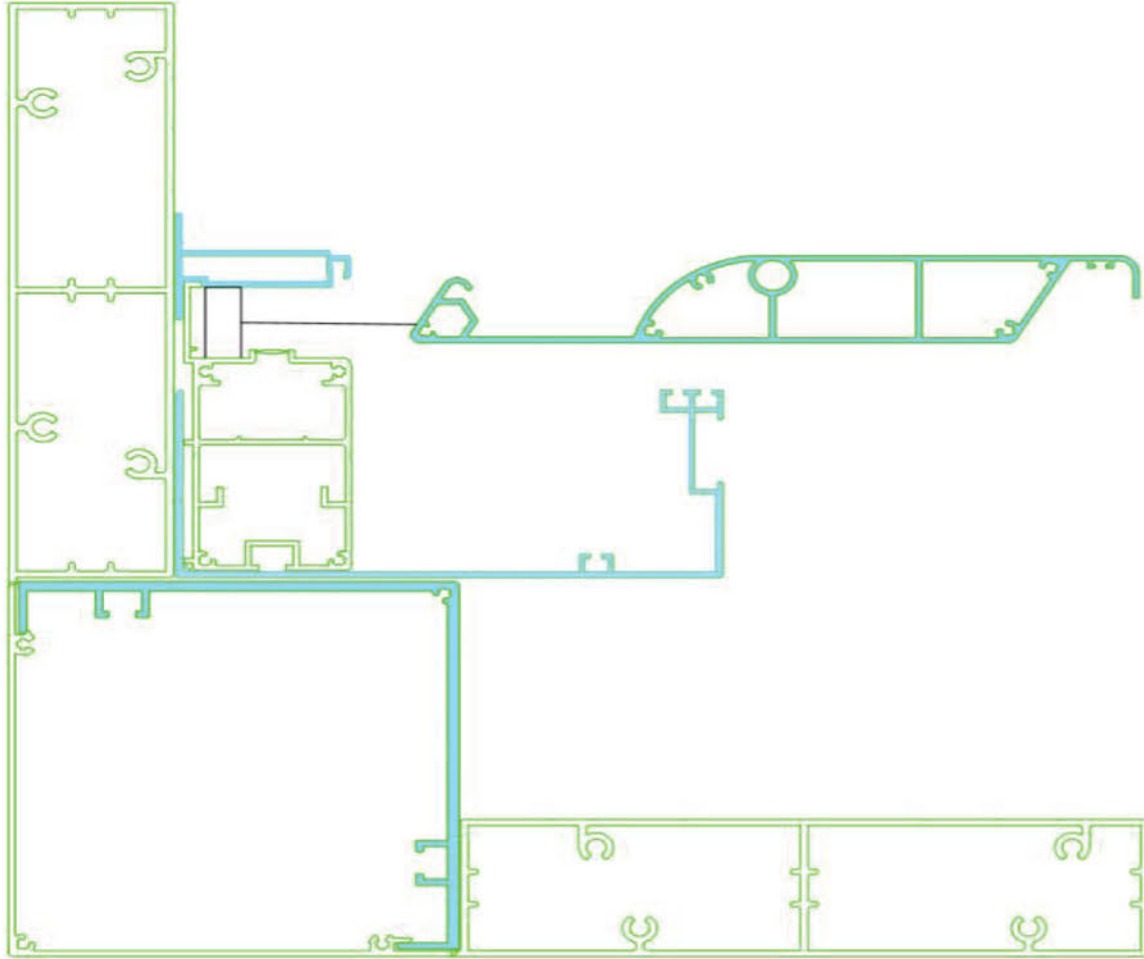
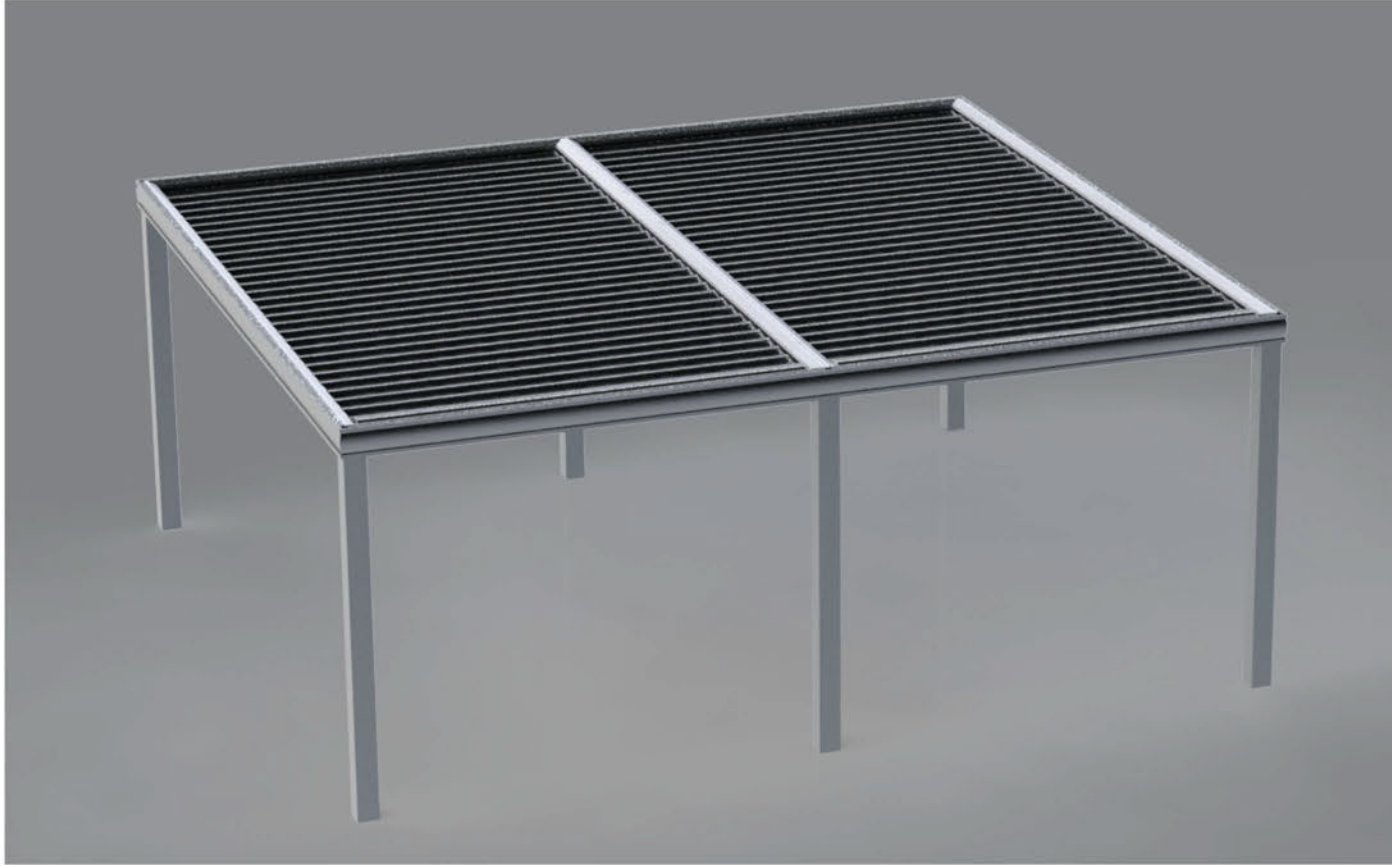
3.2 DEFLECTION LIMITS

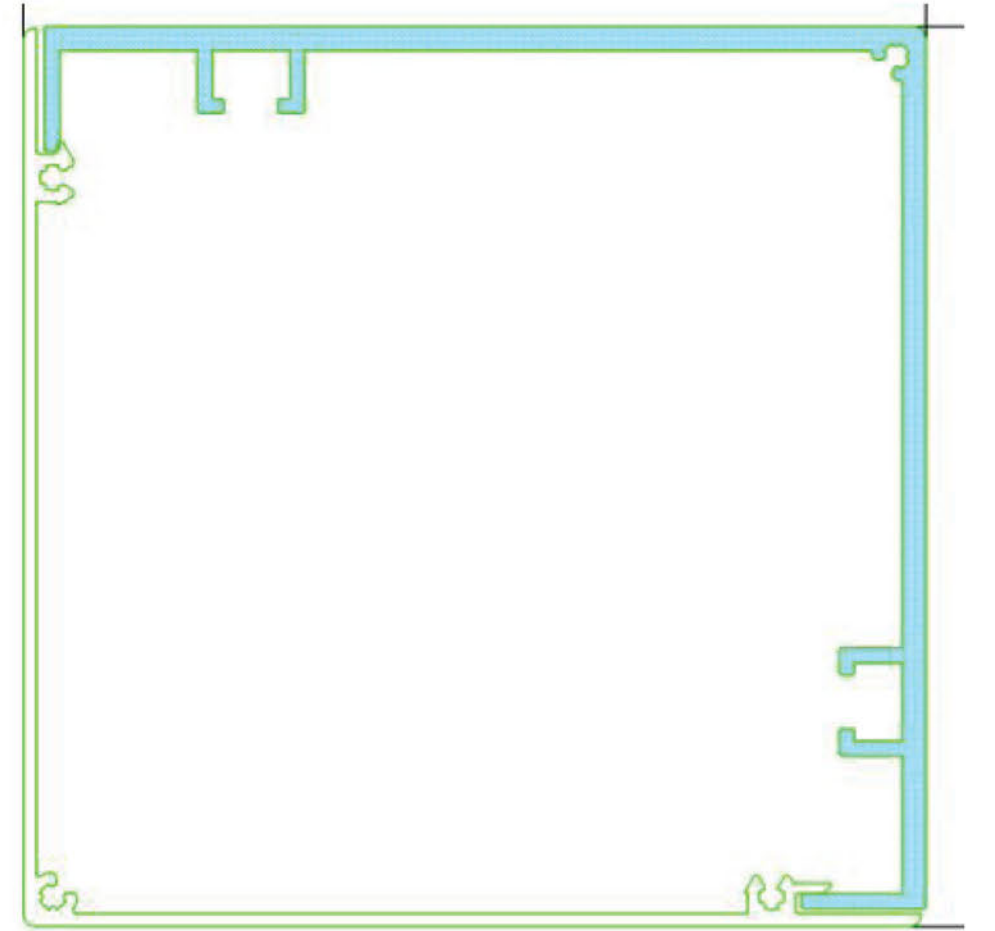
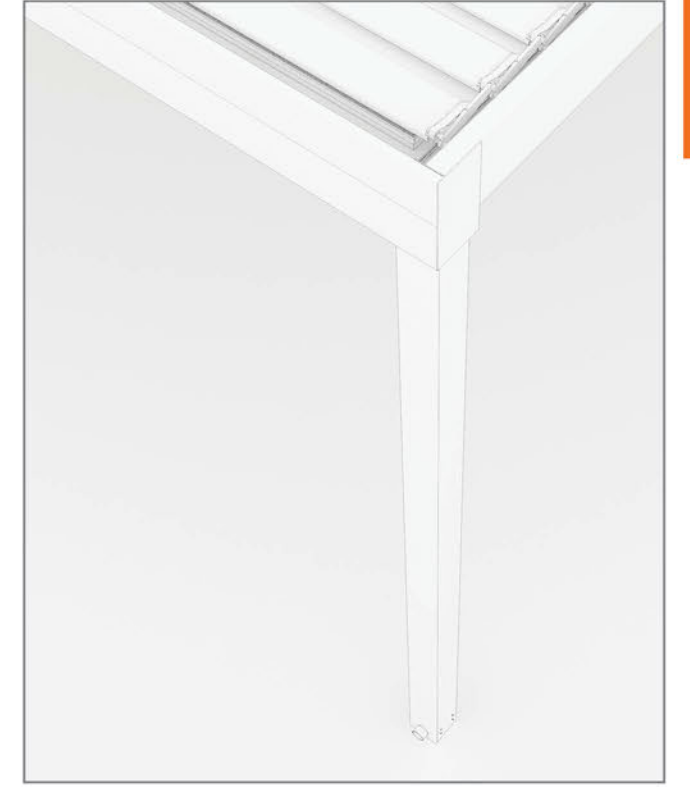
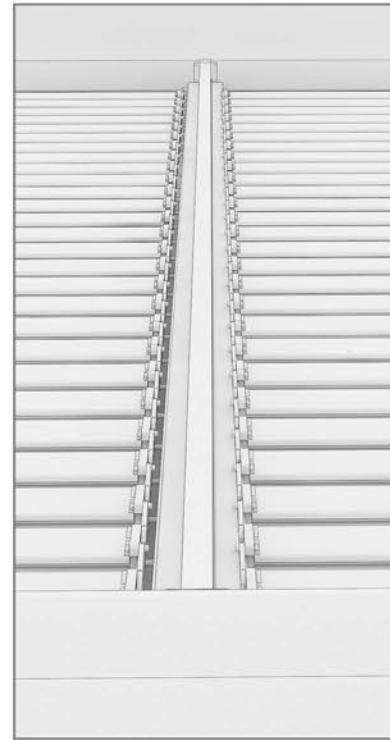
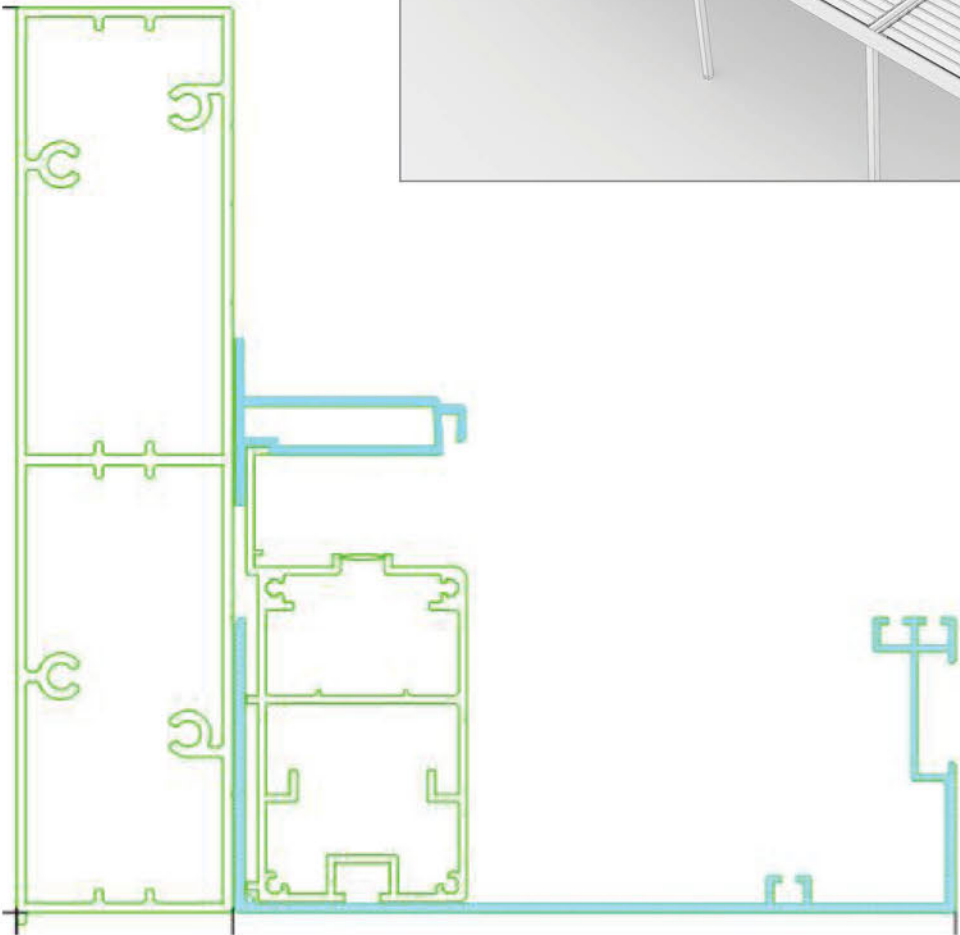
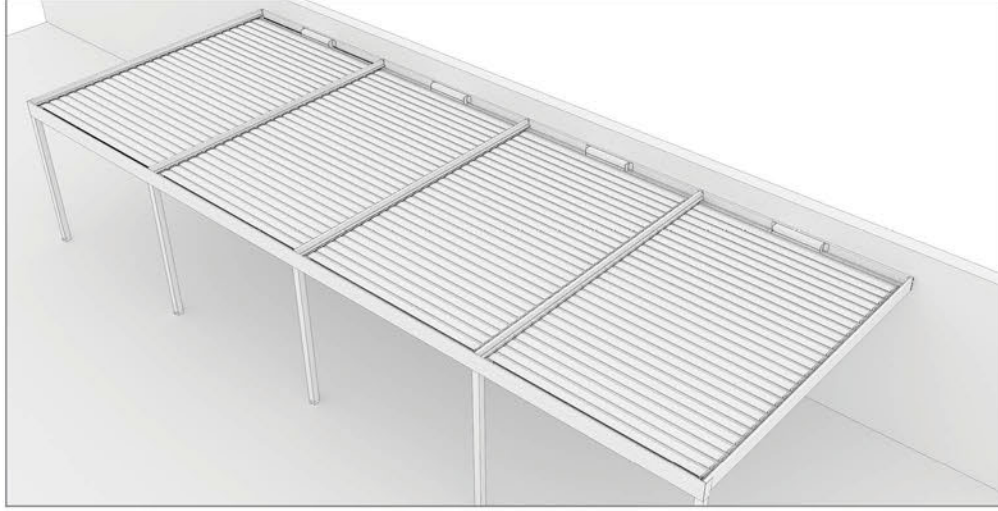
Table 1. Indicative limiting values for particular serviceability criteria

Serviceability requirements	Serviceability Limit States Vertical deflections – See figure 7 ^{(1), (2)}		
	Irreversible effects of Actions	Reversible effects of Actions	
	Characteristic Combination W_{tot} OR W_{max}	Frequent Combination W_{max}	Quasi-permanent Combination W_{max}
Function and damage to non-structural members (e.g. partition walls, claddings, etc) ⁽³⁾ • Brittle • Non-brittle	≤ L/500 to L/360 ≤ L/300 to L/200		
Function and damage to structural members	≤ L/300 to L/200		
To avoid ponding of water. Roof covered with waterproof membrane		≤ L/250 ⁽⁴⁾	
Comfort of user or functioning of machinery		≤ L/300	
Crane gantry girders, deflection due to static wheel loads		≤ L/600	
Appearance			≤ L/250

- (1) See EN 1990, Clause A1.4.3.
- (2) The benefits of any pre-camber may be considered if appropriate.
- (3) These figures assume that partitions, cladding and finishes have not been specifically detailed to allow for anticipated deflections.
- (4) The deflection limit of L/250 is appropriate for flat roofs of 2,5% slope or greater. A more restrictive limit would apply for roofs of less than this slope.

Some codes require a limit of 1/360 of the span for floor deflections, while permitting a deflection of 1/240 of the span for roofs. Other countries use similar limits, with minimum allowable deflections seldom less than 1/360 of the span nor seldom larger than 1/180 of the span.





DIAMOND *Lite* BIOCLIMATIC

Diamond *Lite* Bioclimatic



Retractable Aluminum Bioclimatic Pergola gives you the advantage of usage in all weather conditions in all kind of outdoor areas. Also regarding with wooden and steel pergolas, retractable aluminum ceiling provides you full open top cover in outdoor spaces.

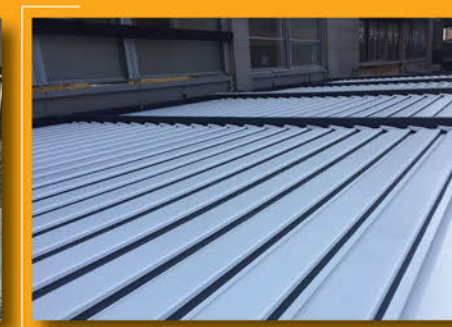
System made of T5 6063 heat treatment aluminum profiles that gives a perfect performance in outer areas.

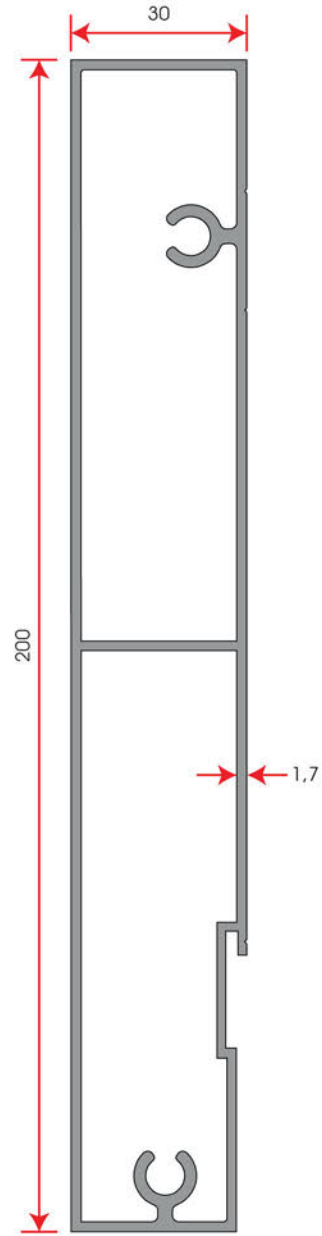
All profiles delivered to the production with electrostatic oven paint. As the system will be delivered to you as pre-montaged so that the installation will be very easy for you.

Production will be done according to your dimension and preferred colors.

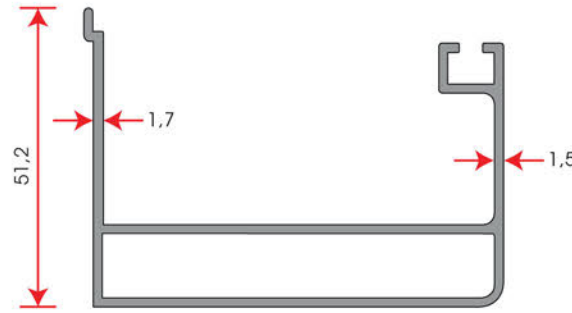
Beam and Pillars are designed according to aesthetic worries as the rain disposed pipes are all hidden in the pillars to avoid bad look. Isolated rain gutters are wisely hidden behind the beams.

Channels on the panels allows the system to work under heavy weather conditions.





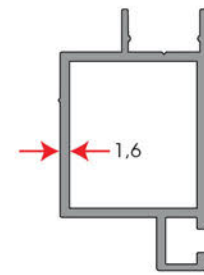
Profile No	Weight kg/m
8519	2.621



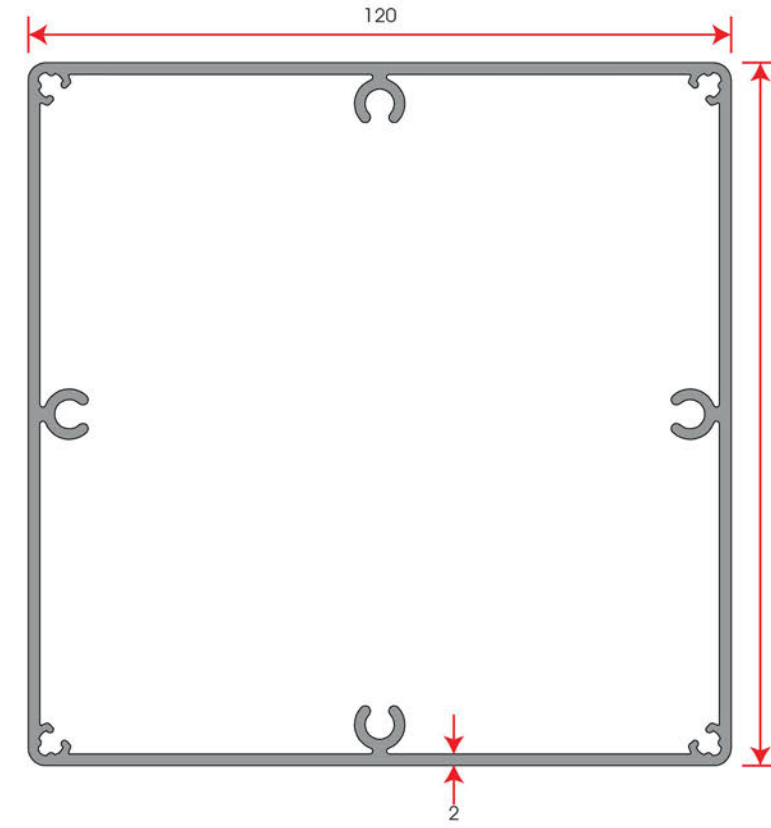
Profile No	Weight kg/m
8520	1.094



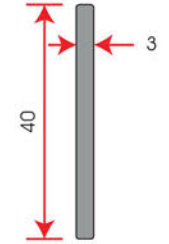
Profile No	Weight kg/m
1508	0.070



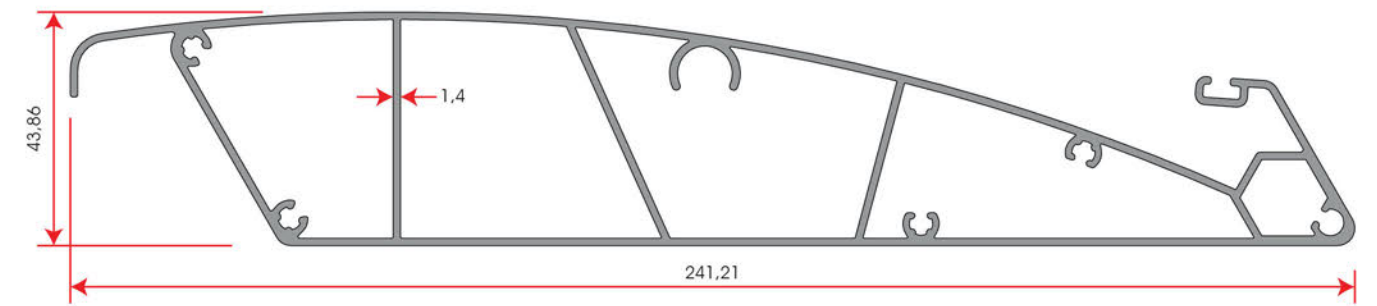
Profile No	Weight kg/m
8521	0.581



Profile No	Weight kg/m
8522	3.107



Profile No	Weight kg/m
3303	0.340



Profile No	Weight kg/m
8523	3.035

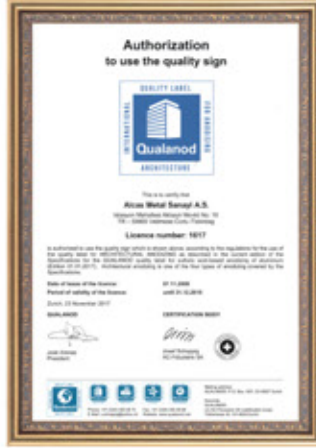
ISO 9001 SERTİFİKASI



QUALICOAT SERTİFİKASI



QUALANOD SERTİFİKASI



IATF 16949 SERTİFİKASI



TSE HASSAS PROFİLLER BELGESİ



TSE YÜZEY İŞLEM BELGESİ



TSE İMALATI YETERLİLİK BELGESİ



ISO 14001



OHSAS 18001 BELGESİ



FABRİKA ÜRETİM UYGUNLUK



CE BELGESİ



GOST-R SERTİFİKASI



ALCAS®

Metal sanayi a.ş

alcasmetal   Hürriyet Bulvarı, Skyport Residence Kat: 15 No: 148 Beylikdüzü - İstanbul / TÜRKİYE

alcasmetal   +90 212 474 60 00

alcasmetal   alcas@alcas.com.tr

alcasmetal   www.alcas.com.tr

alcasaluminum   Velimeşe OSB 129.Sok.11/1 Ergene - Tekirdağ / TÜRKİYE  +90 282 674 5175



The designs, profiles, and accessories featured in this catalog are ® registered and patented products under the name Alcas. They cannot be copied or imitated in any way.
Bu katalogta yer alan tasarımlar, profiller ve aksesuarlar tescilli ve patentli ürünlerimizdir. Hiçbir şekilde kopyalanamaz ve taklit edilemez.

AY / 01.04.2024 / IST



İyi bir ürün için iyi bir fabrika

