



alüminyum
kış bahçesi
ve
çit sistemleri



- HIZLI VE PRATİK İMALAT & MONTAJ KOLAYLIĞI
- AÇILI VEYA KERTME GEREKTİRMİYEN İMALAT AVANTAJI
- ALTERNATİF ÖLÇÜLERDE GÜÇLÜ STOK İMKANI



ALÜMİNYUM KIŞ BAHÇESİ SİSTEMLERİ

Foral kış bahçesi için müstakil konutlar her ne kadar ideal olsa da boş arazilerinizde özel kullanım içinde kış bahçesi yaptırabilirsiniz. Kış bahçesi uygulamalarımız villa tipi müstakil yapılar ile birlikte yapılabildiği gibi ayrı olarak da uygulaması ve imalatı yapılabilmektedir. Konforlu ve kaliteli bir yaşam için yapılarınızda Foral kış bahçesi sistemleri ile her mevsim yaşanılabilir alanlar sunuyoruz.

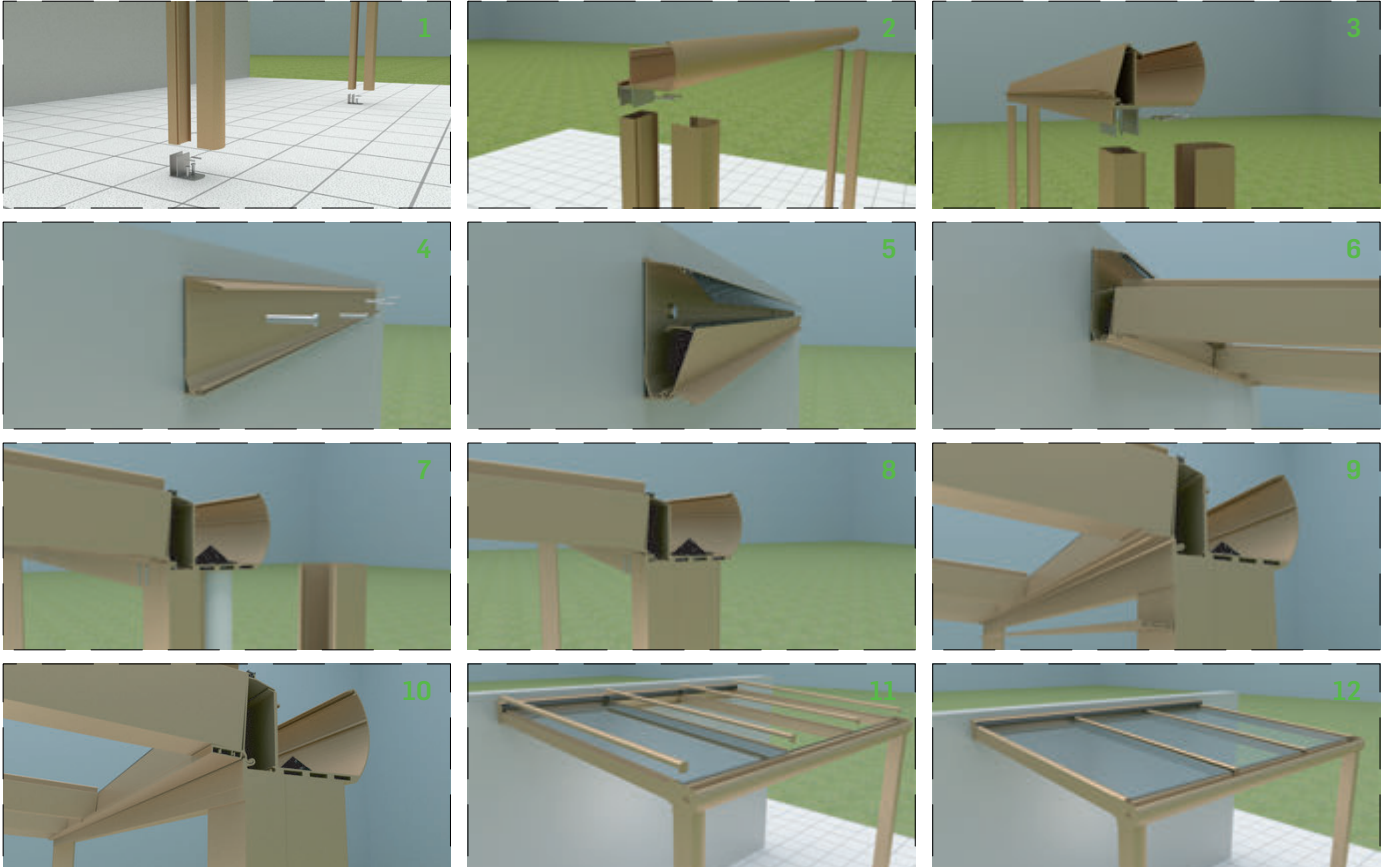
» Kolay Montaj
Easy to mounting

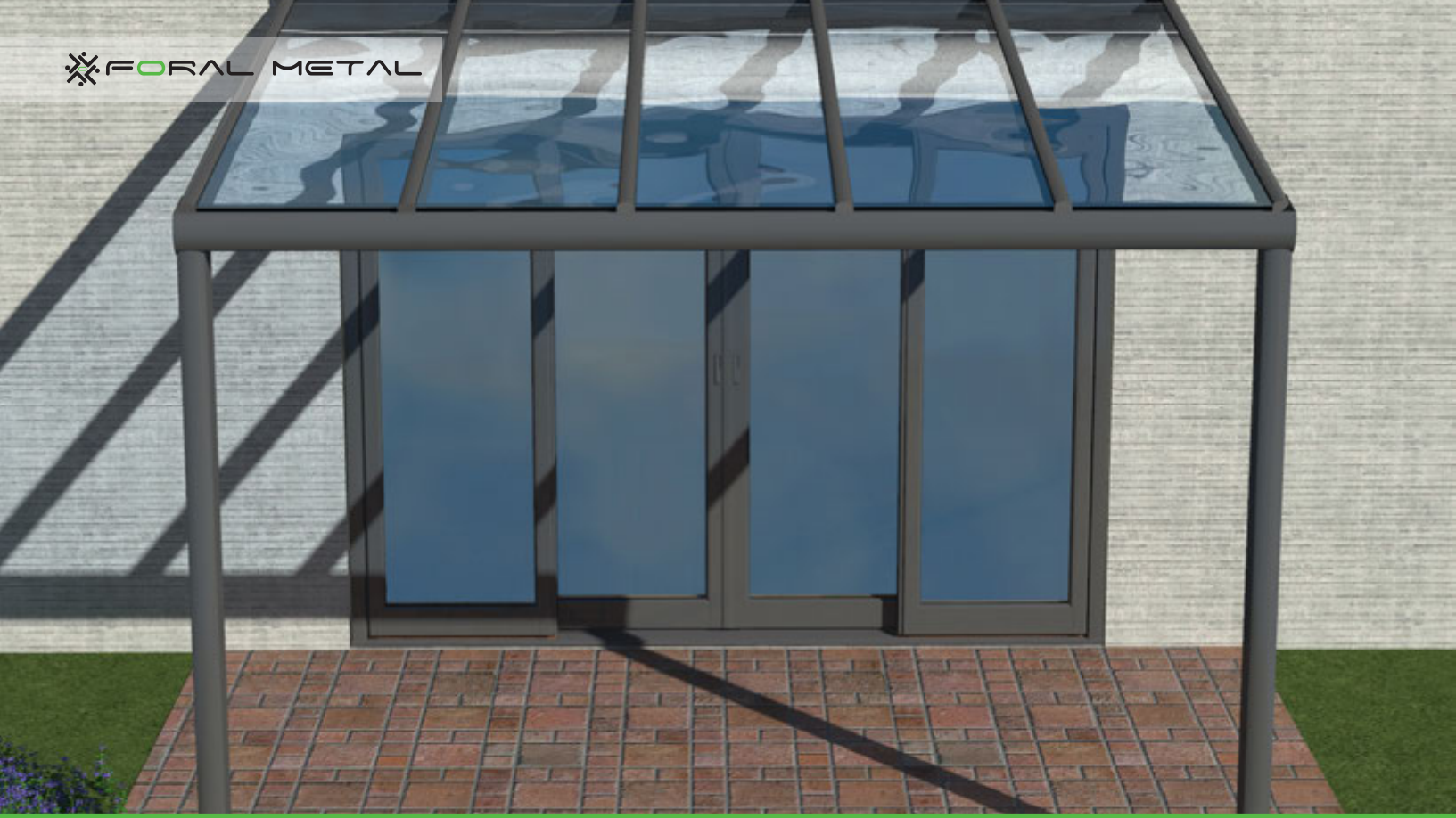
» Renk ve Model Seçekleri
All color and models options

» Özel Üretim Seçenekleri
Special manufacturing options

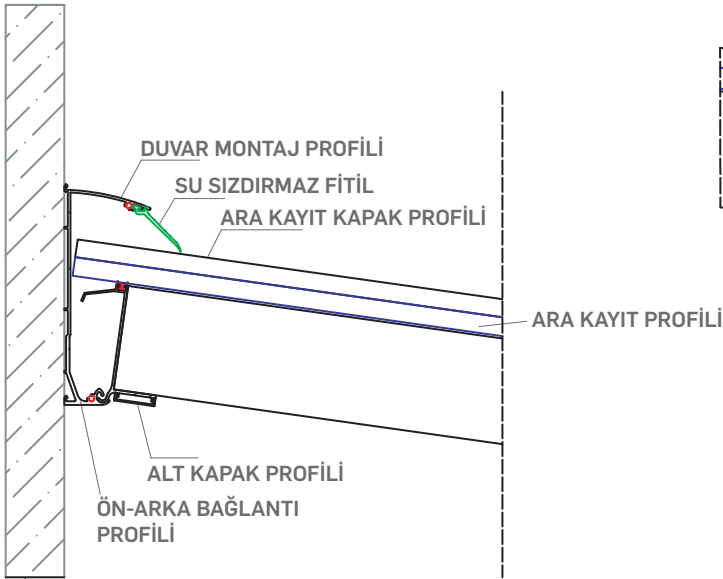
» Dayanıklı Sistem
Ready package systems

UYGULAMA AŞAMALARI

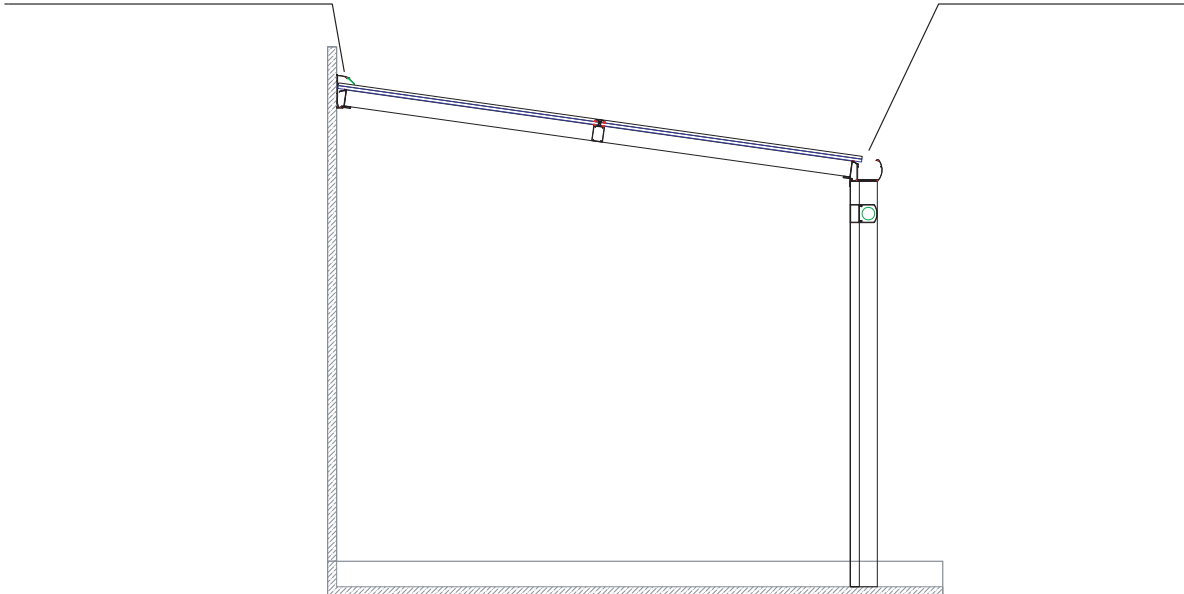
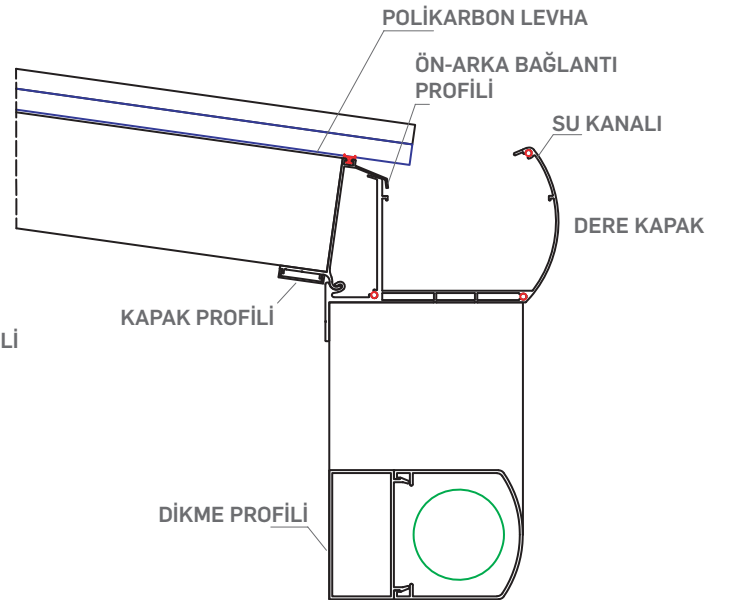


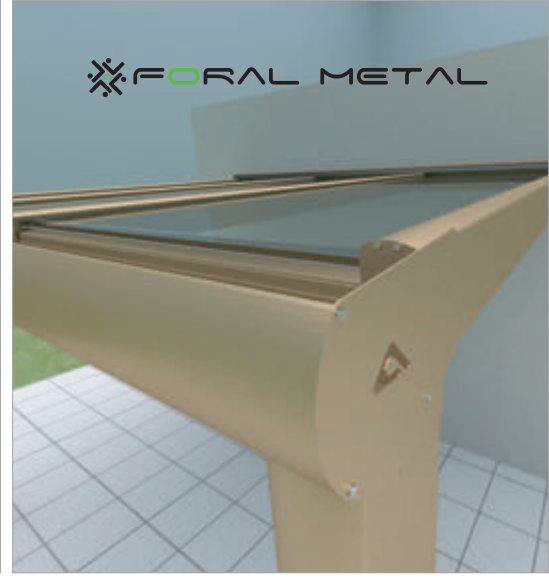
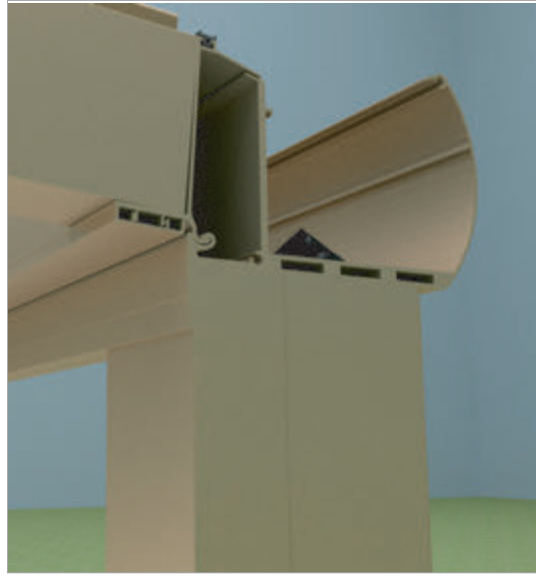
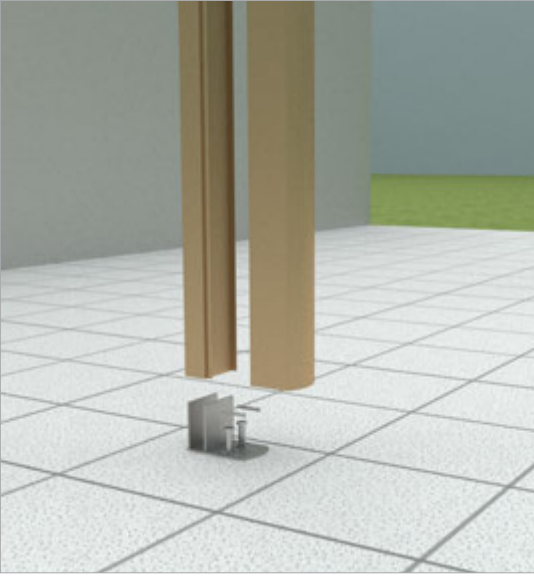


Duvar Bağlantı Detayı

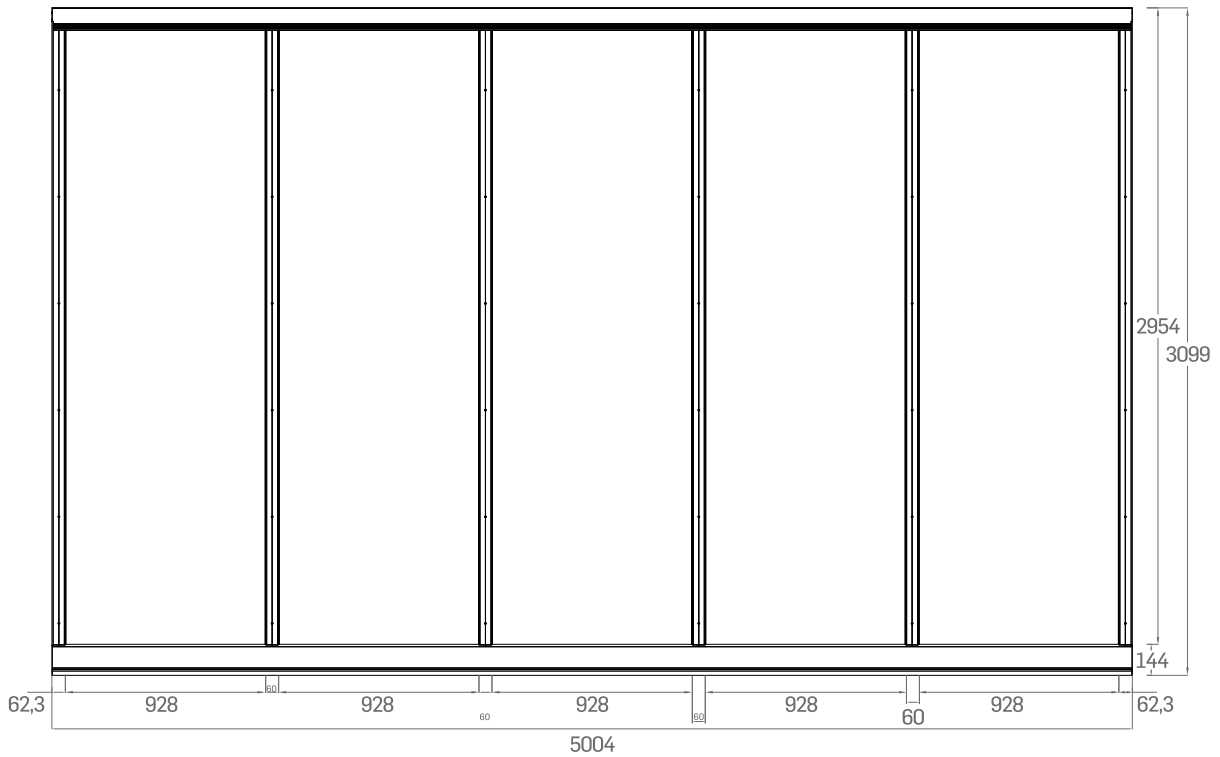
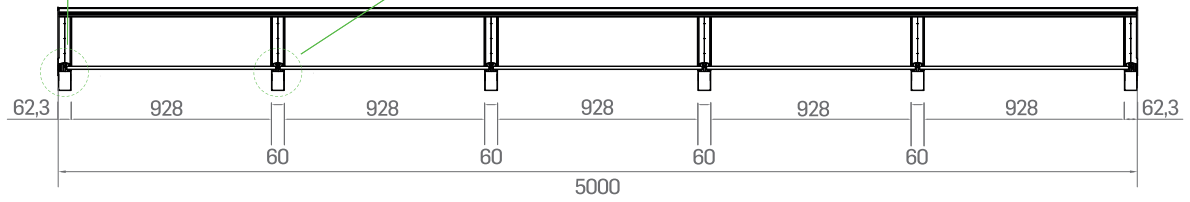
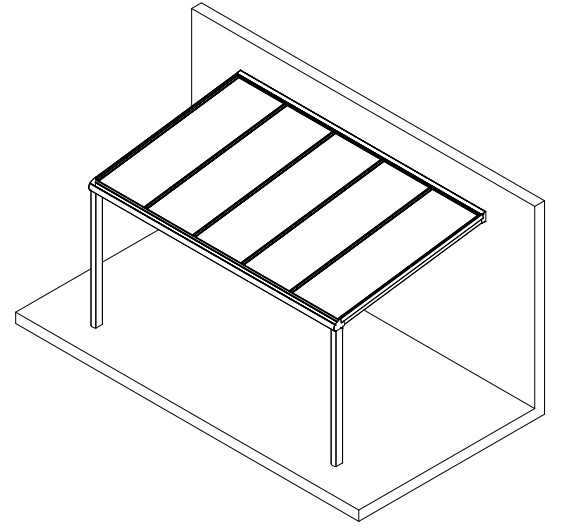
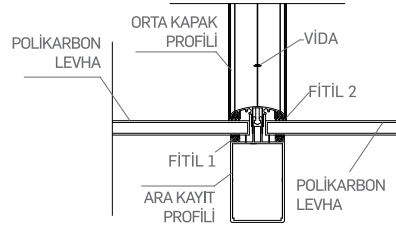
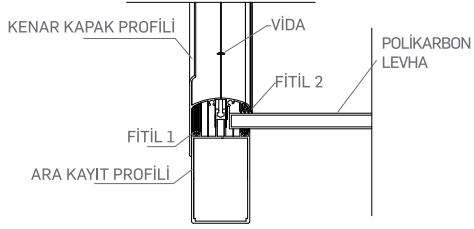


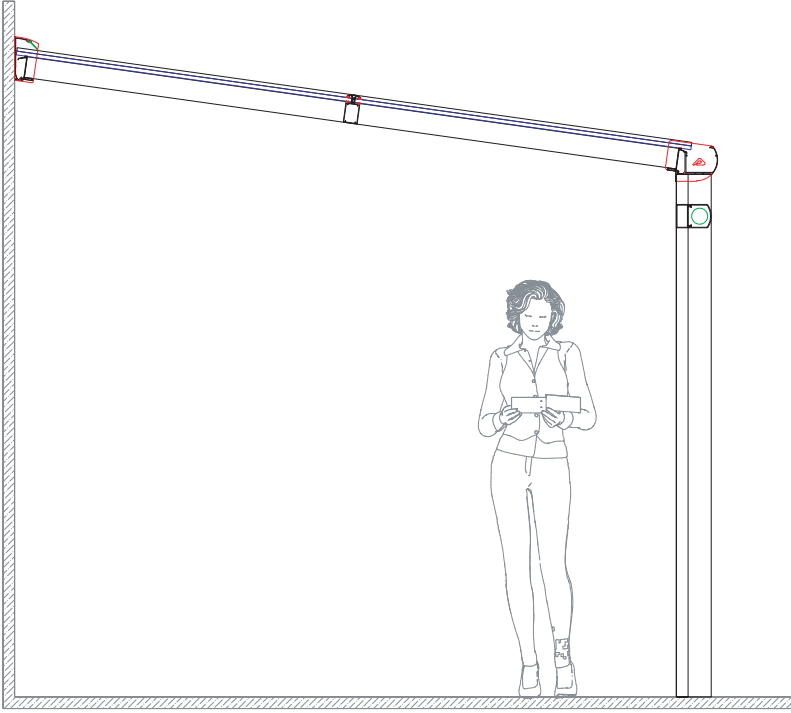
Dikme-Dere Bağlantı Detayı





FORAL METAL



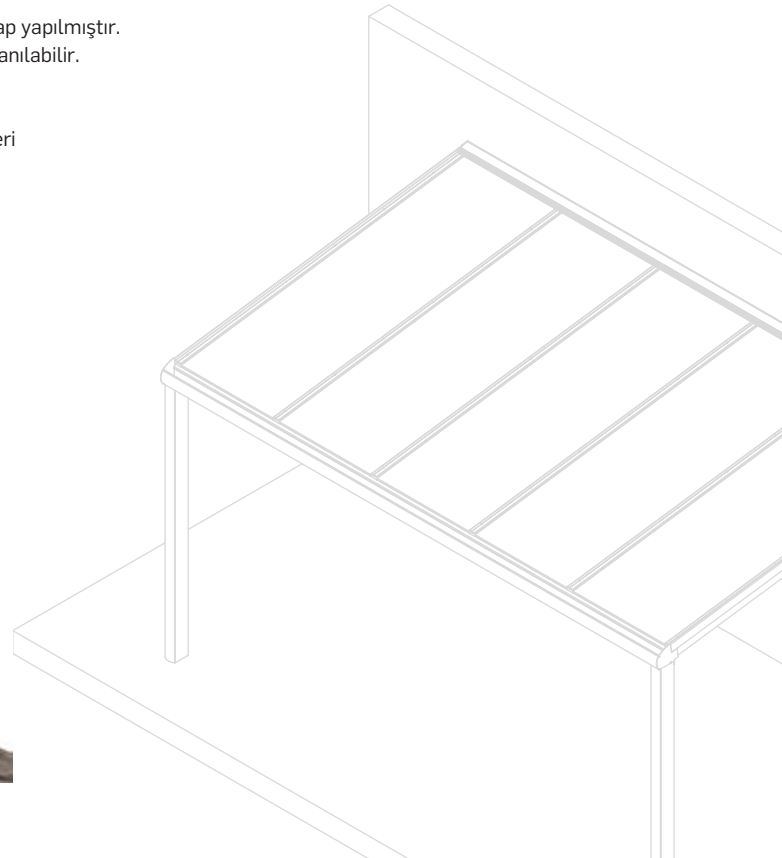
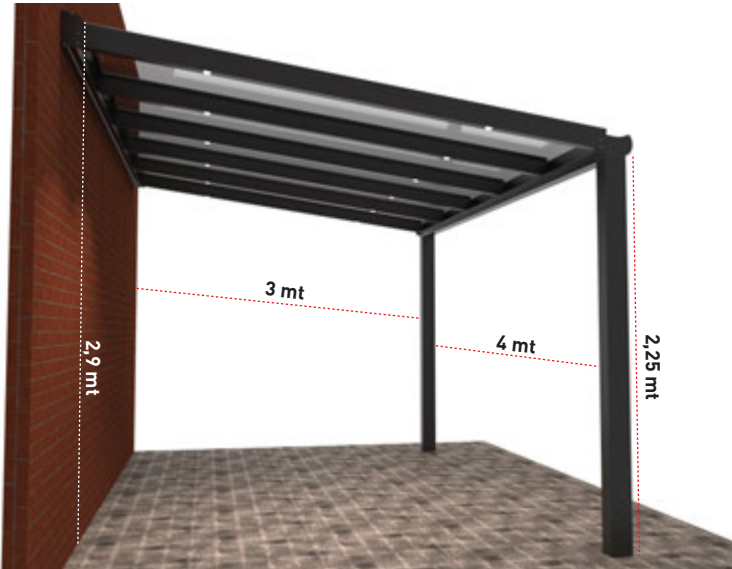


- Kertme ve açılı kesime ihtiyaç duyulmaz.
- 8 mm - 30 mm cam aralığına kadar kullanım imkanı sağlar.
- Kendinden açılı profil ile 8° - 20° dereceye kadar açılı montaj olanıği sunar.
- Bütün profiller 90° kesime uyumludur.

GRİYAJ AKS ARALIĞI	GRİYAJ TİPİ	GRİYAJ PROFİL BOYU (Max. Sehim Değeri = L/200)		
		L=3m (Max. Sehim=15mm)	L=4m (Max. Sehim=20mm)	L=5m (Max. Sehim=25mm)
75 cm	Kutusuz Griyaj	4.20 mm	12.00 mm	28.00 mm
	Çelik Kutulu Griyaj	1.05 mm	3.73 mm	6.60 mm
80 cm	Kutusuz Griyaj	4.46 mm	12.90 mm	30.00 mm
	Çelik Kutulu Griyaj	1.11 mm	4.05 mm	7.10 mm
100 cm	Kutusuz Griyaj	5.33 mm	16.30 mm	38.00 mm
	Çelik Kutulu Griyaj	1.40 mm	5.10 mm	8.86 mm

Not: Kutulu Griyaj içinde S235 kalitesinde 40x80_2 mm kutu profil kullanılarak hesap yapılmıştır. Gerekli hallerde farklı et kalınlıklı profiller, statik hesap yapılarak uygun olursa kullanılabilir.

Kullanılması Uygun Sehim Değeri
 Kullanılması Uygun Olmayan veya Tavsiye Edilmeyen Sehim Değeri



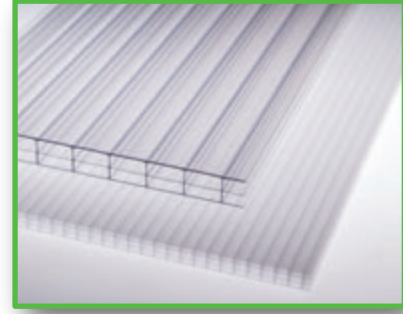
Polikarbon Çatı Ayak Montajı Ölçü Tablosu

Aks Aralığı Max 100 cm

Renkli Ölçülerde Cam Taşıyıcı Profilin İçine 40x80 2 mm Çelik Profil Kullanılarak

Montaj Yapılması Gerekmemektedir.

	2.5m	3m	3.5m	4m	4.5m	5m	5.5m	6m
3m	2	2	2	2	2	2	2	2
4m	2	2	2	2	2	2	2	2
5m	2	2	2	2	2	2	2	2
6m	2	2	3	3	3	3	3	3
7m	3	3	3	3	3	3	3	3
8m	3	3	3	3	3	3	3	3
9m	3	3	3	3	3	3	3	3
10m	3	3	3	3	3	3	3	3
11m	3	3	3	3	3	3	3	3
12m	4	4	4	4	4	4	4	4
genişlik								



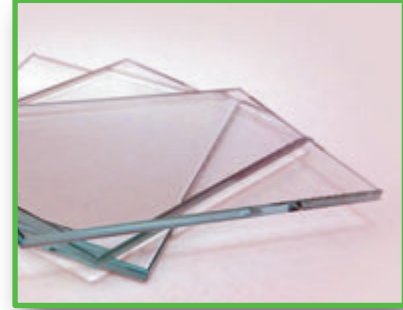
10 mm Temperli Cam Çatı Ayak Montajı Ölçü Tablosu

Aks Aralığı Max 85 cm

Renkli Ölçülerde Cam Taşıyıcı Profilin İçine 40x80 2 mm Çelik Profil Kullanılarak

Montaj Yapılması Gerekmemektedir.

	2.5m	3m	3.5m	4m	4.5m	5m	5.5m	6m
3m	2	2	2	2	2	2	2	2
4m	2	2	2	2	2	2	2	2
5m	2	3	3	3	3	3	3	3
6m	2	3	3	3	3	3	3	3
7m	3	3	3	3	3	3	3	3
8m	3	3	3	3	3	3	3	3
9m	3	3	3	3	3	3	3	3
10m	3	3	3	3	3	3	3	3
11m	3	3	3	3	3	3	3	3
12m	4	4	4	4	4	4	4	4
genişlik								



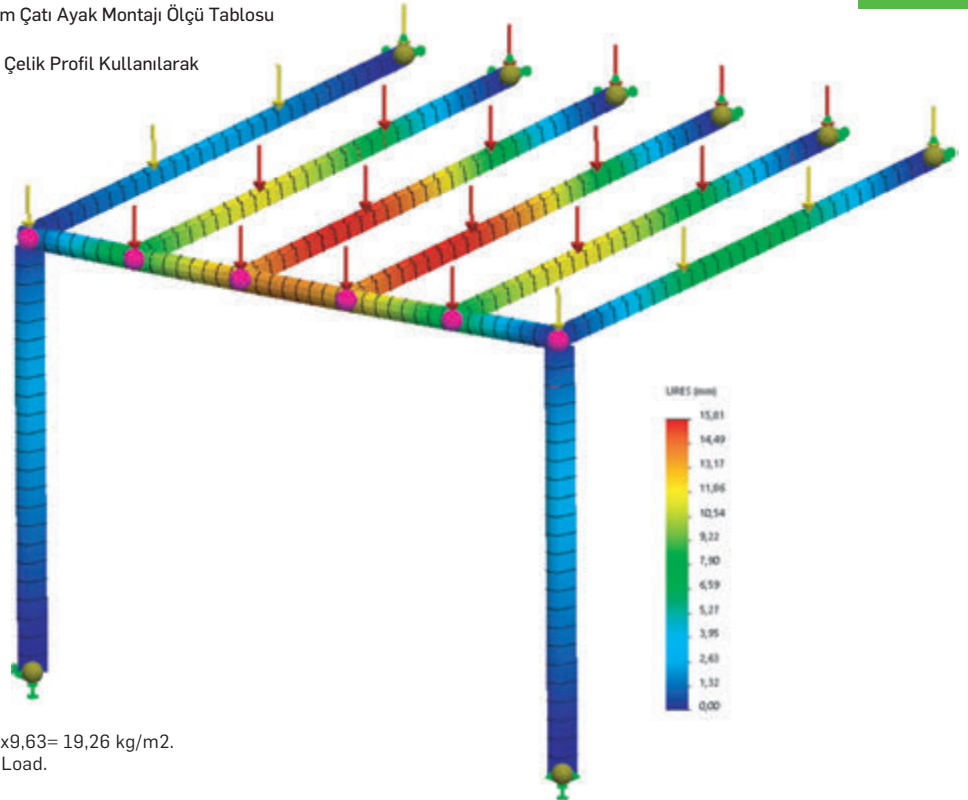
6 mm Temperli+12 mm Hb+4+4 Mm Lamine Isıcamlı Cam Çatı Ayak Montajı Ölçü Tablosu

Aks Aralığı Max 75 cm

Renkli Ölçülerde Cam Taşıyıcı Profilin İçine 40x80 2 mm Çelik Profil Kullanılarak

Montaj Yapılması Gerekmemektedir.

	2.5m	3m	3.5m	4m
3m	2	2	2	2
4m	2	2	3	3
5m	3	3	3	3
6m	3	3	3	3
7m	3	3	3	3
8m	3	3	3	3
9m	3	3	3	3
10m	3	3	3	3
11m	3	3	3	3
12m	4	4	4	4
genişlik				



Assumptions

The calculation is made for 3mx4m module.

Height of the pillars is 2,4m and roof angle is 10°.

LOADS:

6mm glass = 14,70 kg/m² and double 4mm glass = 2x9,63= 19,26 kg/m².

Total = 33,96 and 35 kg/m² will be used as the Glass Load.

Glass Load = 35 Kg/m²

Snow Load = 150 Kg/m²

Dead Load = 5 Kg/m²

TOTAL LOAD = 190 Kg/m² (It will be converted to distributed span load for the roof elements.)

"AAMA/NPEA/NSA 2100-12 Specifications for Sunrooms" published by American National Sunroom Association will be used as reference for this study.

Conclusion

The maximum stress value on the profiles = 110 MPa < 215 MPa (Stress Check is Ok)

Deflection Limit For Purlin Profiles $L/175 = 3000/175 = 17 \text{ mm}$

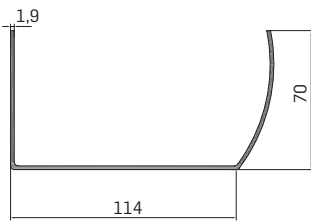
Deflection Limit For Gutter Profiles $L/60 = 4000/60 = 66 \text{ mm}$

PURLIN PROFILES $15,81 \text{ mm} < 17 \text{ mm}$ OK

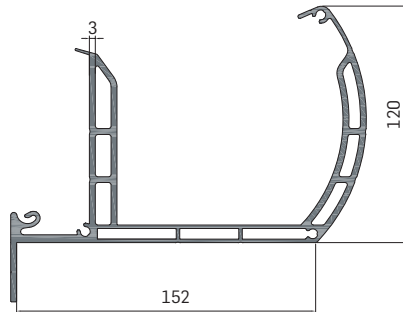
GUTTER PROFILES $\sim 14,00 \text{ mm} < 66 \text{ mm}$ OK

PROFILER

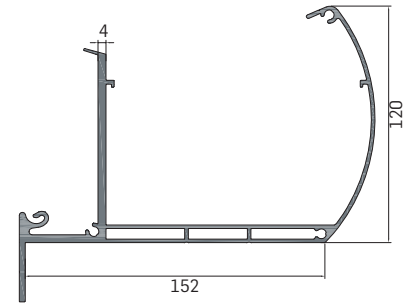
PROFILES



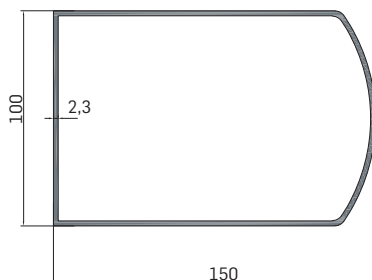
Profil kodu: 1661
Kg/m 1,130
Jx cm⁴ 25,16



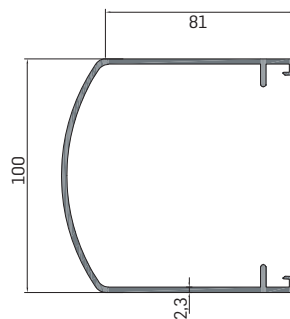
Profil kodu: 1791
Kg/m 5,742
Jx cm⁴ 211.50



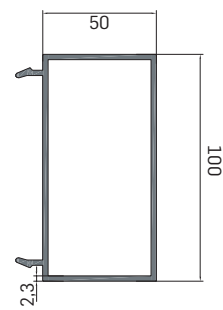
Profil kodu: 1656
Kg/m 4,046
Jx cm⁴ 163.45



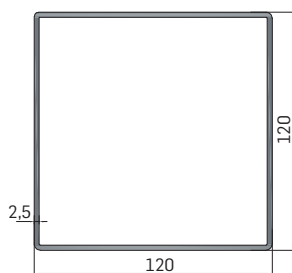
Profil kodu: 1657
Kg/m 2,905
Jx cm⁴ 325.53



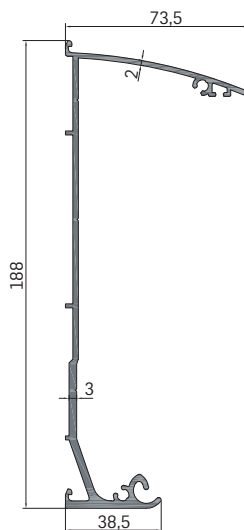
Profil kodu: 1789
Kg/m 1,875
Jx cm⁴ 79.78



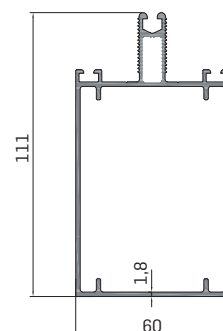
Profil kodu: 1790
Kg/m 1,976
Jx cm⁴ 35.14



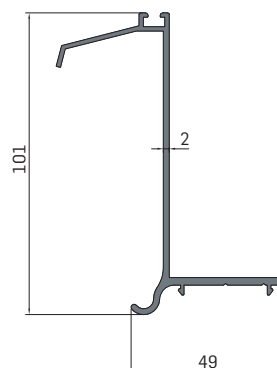
Profil kodu: 1695
Kg/m 3,165
Jx cm⁴ 268.56



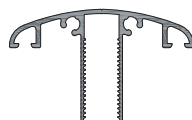
Profil kodu: 5769
Kg/m 2,192



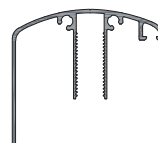
Profil kodu: 5770
Kg/m 1,799
Jx cm⁴ 90.08



Profil kodu: 5773
Kg/m 1,054



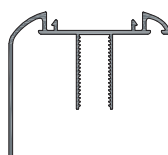
Profil kodu: 5771
Kg/m 0,634



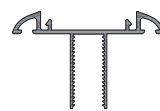
Profil kodu: 5772
Kg/m 0,748



Profil kodu: 2723
Kg/m 0,160



Profil kodu: 2887
Kg/m 0,688



Profil kodu: 2888
Kg/m 0,513



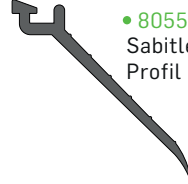
• Kapak Üst Fitiili



• Tek Cam Griyaj Kanal Fitiili



• Çift Cam Griyaj Kanal Fitiili



• 8055 Sabitleme Profil Fitiili



• Dikme Ankraj - Zemin



• Yatay U Baęlantı



• Ayak - Dere Baęlantı - Üst



• Yaprak Tutucu Gider Ø 70



• 70° LİK PVC DİRSEK



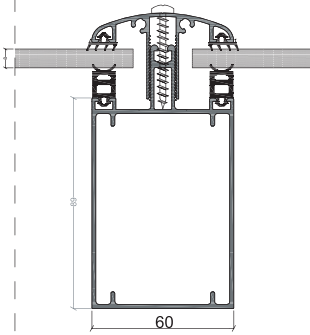
• 70° LİK PVC BORU (3 METRE)



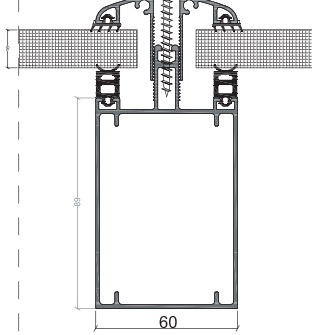
• SPOT LAMBA



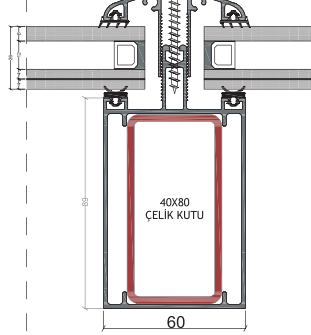
8-10 mm TEK CAM



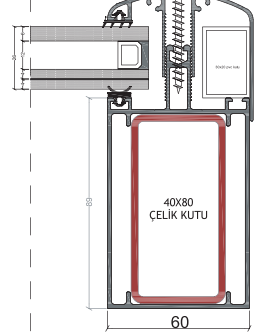
16 mm POLİKARBONAT



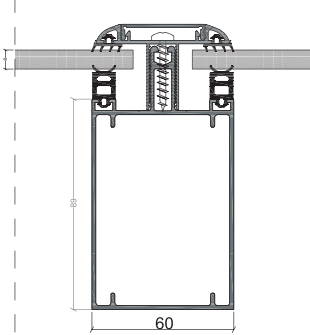
26 mm LAMİNE İSİCAM



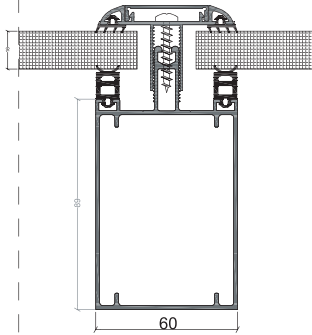
26 mm LAMİNE İSİCAM



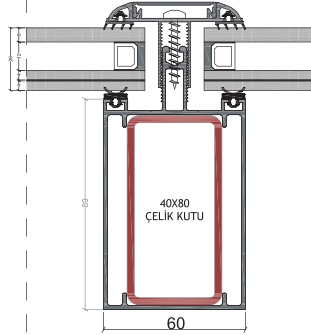
8-10 mm TEK CAM



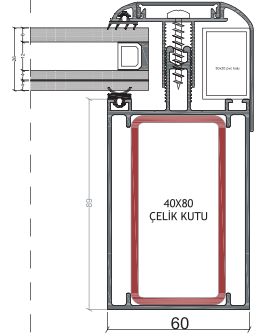
16 mm POLİKARBONAT



26 mm LAMİNE İSİCAM



26 mm LAMİNE İSİCAM



ALÜMİNYUM ÇİT SİSTEMLERİ

Foral Çit Sistemleri yüksek mukavemet gücü, estetik modern ve kolay uygulanabilirliği ile tük eloksal renkleri ve RAL boya renkleriyle yapılarınıza estetik bir görünüm sağlar.

High static strength, esthetic, modern and easy application provides you with an esthetic look to your structure with all anodised colors and RAL paint colors.

» Kolay Montaj

Easy to mounting

» Renk ve Model Seçekleri

All color and models options

» Özel Üretim Seçenekleri

Special manufacturing options

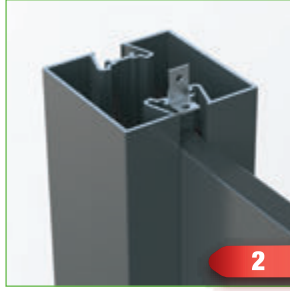
» Hazır Paket Sistem

Ready package systems

UYGULAMA AŞAMALARI



1



2



3



4



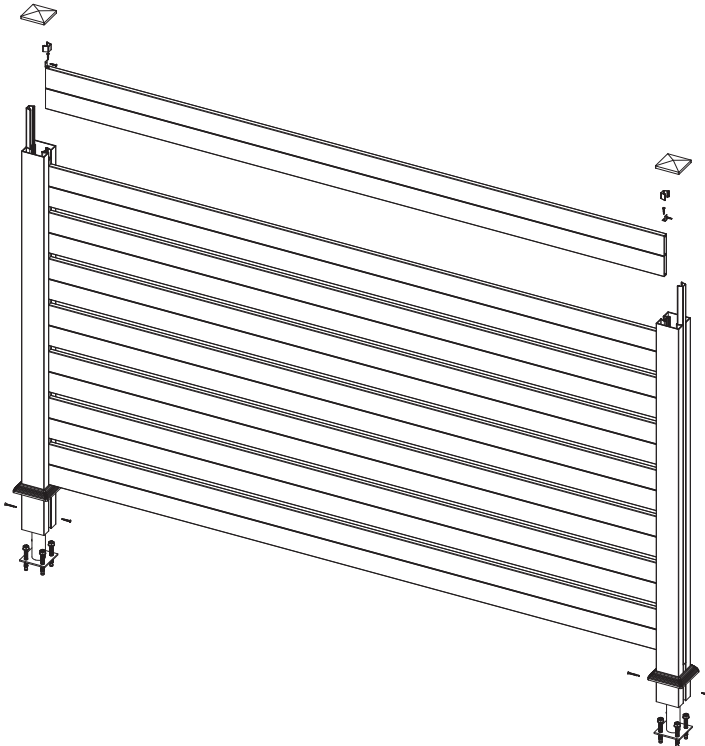
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6

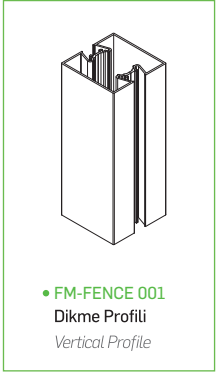


7



PROFİLLER

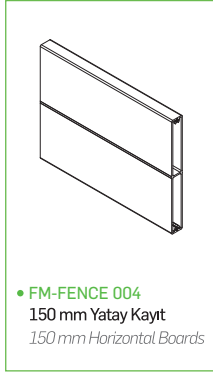
PROFILES



• FM-FENCE 001
Dikme Profili
Vertical Profile



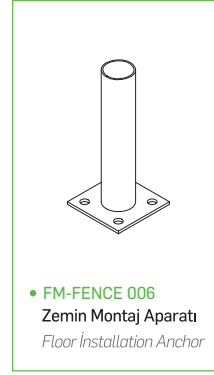
• FM-FENCE 003
Dikme Kenar Çıtası
Vertical Edge Profile



• FM-FENCE 004
150 mm Yatay Kayıt
150 mm Horizontal Boards



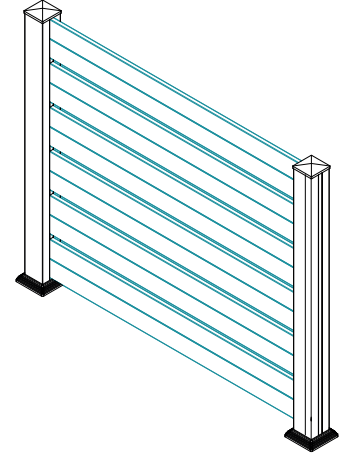
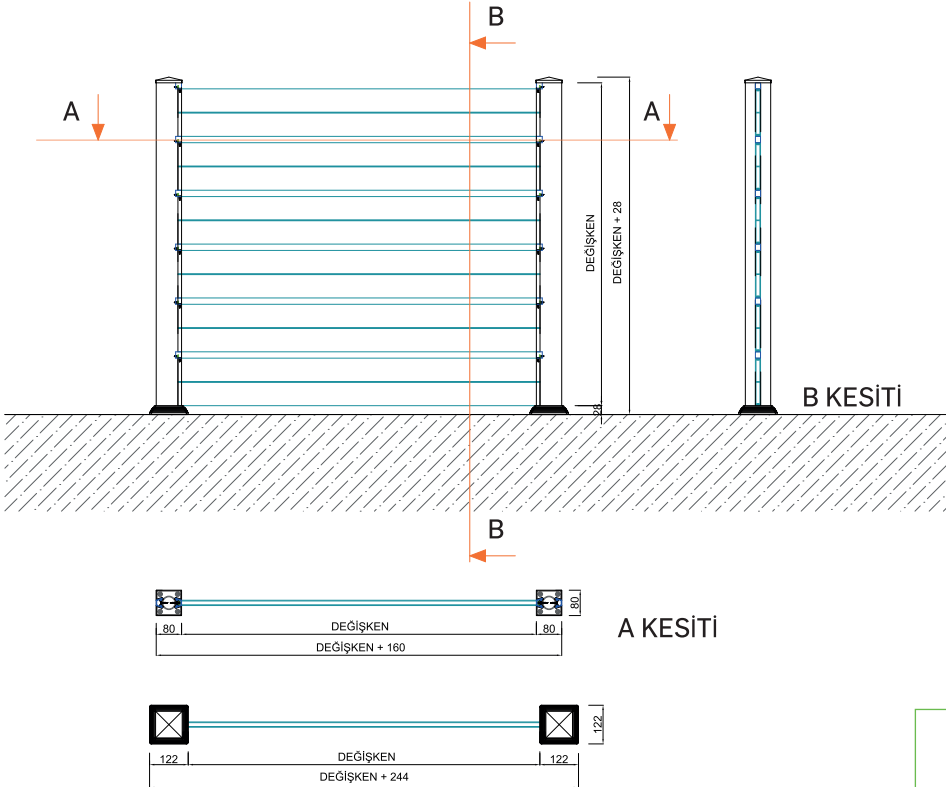
• FM-FENCE 005
200 mm Yatay Kayıt
200 mm Horizontal Boards



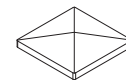
• FM-FENCE 006
Zemin Montaj Aparatı
Floor Installation Anchor



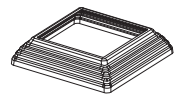
• FM-FENCE 007
Yatay Kayıt L Montaj Aparatı
Horizontal Board L Type
Installation Equipment



Aksesuarlar / Accessories



• FM-FENCE 008
Dikme Kapak Profili
Vertical Profile End Cap



• FM-FENCE 009
Dikme Flanşı
Vertical Profile Flange



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