

Sistem

ONDULINE[®] HR



Çatı Kaplama Levhası

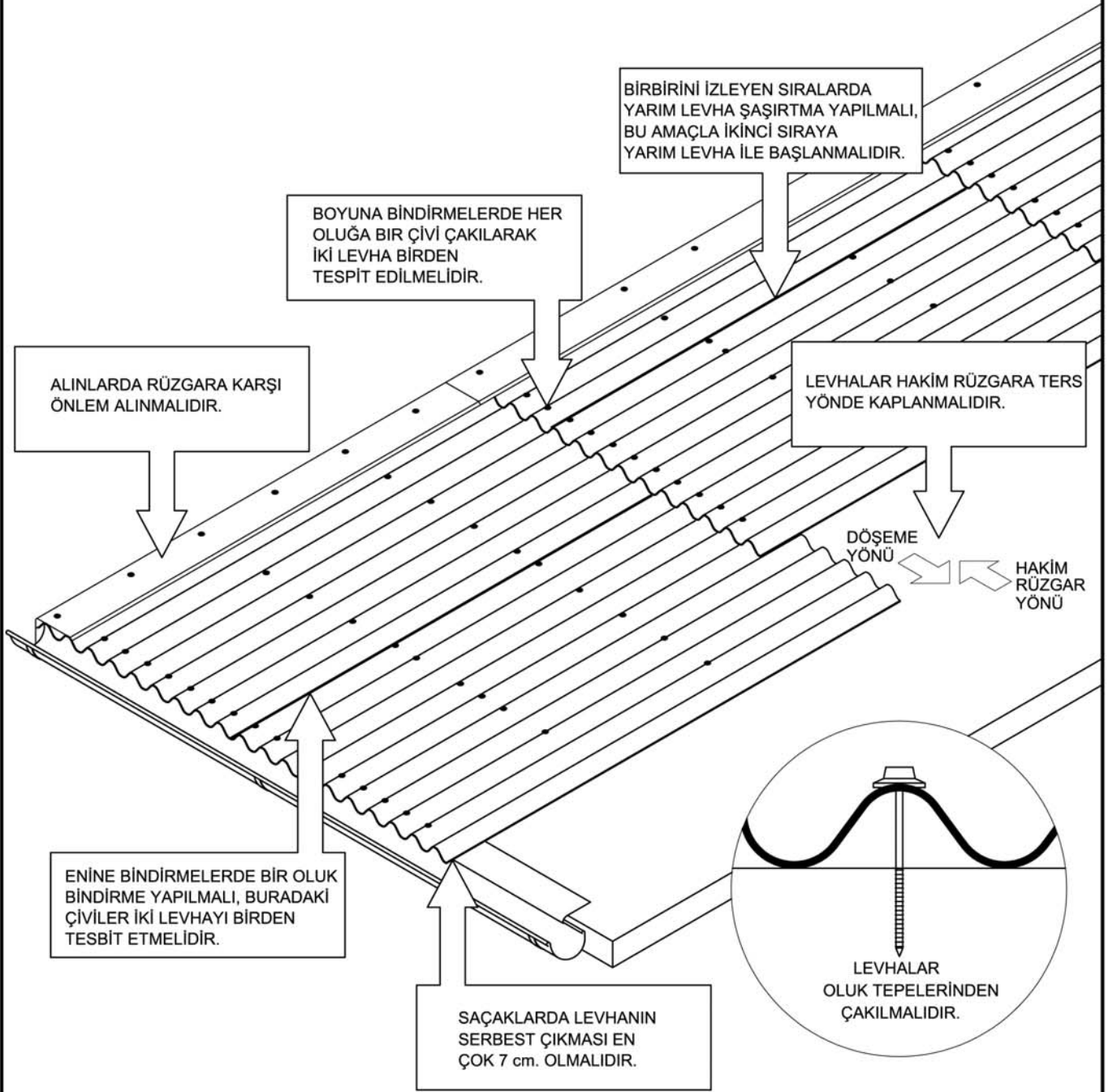
- *Hafif*
- *Kolay Uygulanır*
- *Su Geçirimsiz*
- *UV Dayanımlı*



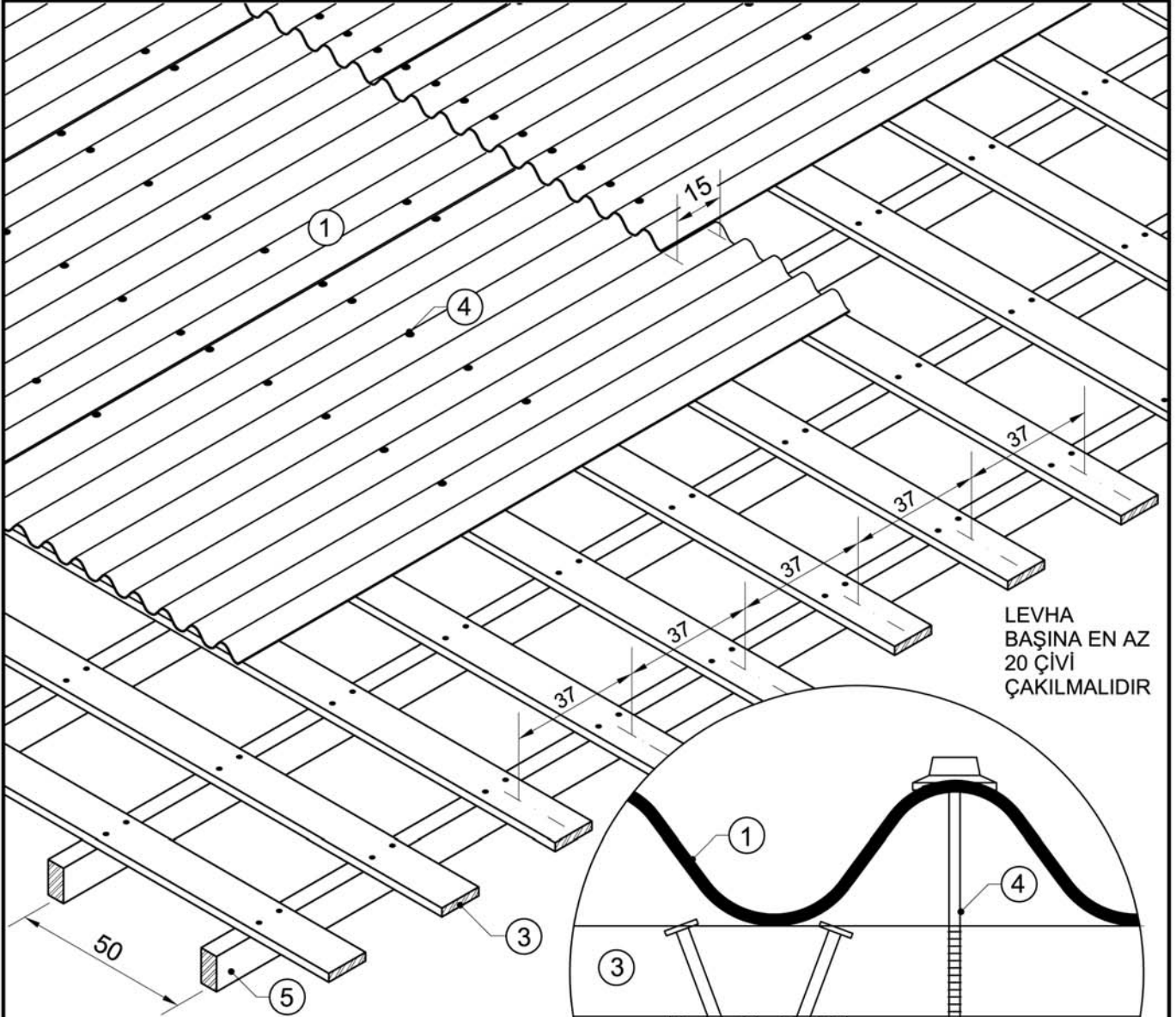
Onduline[®]
AVRASYA A.Ş.

www.onduline.com.tr



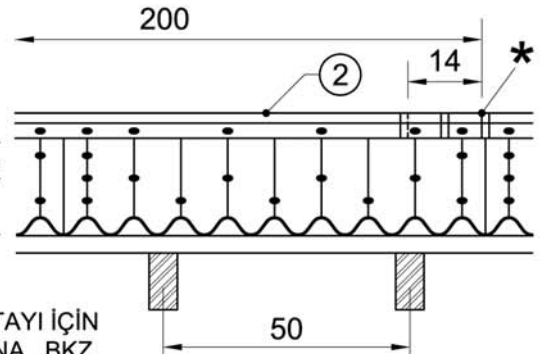
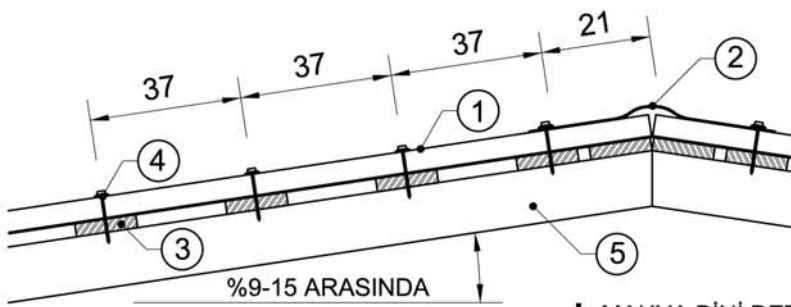
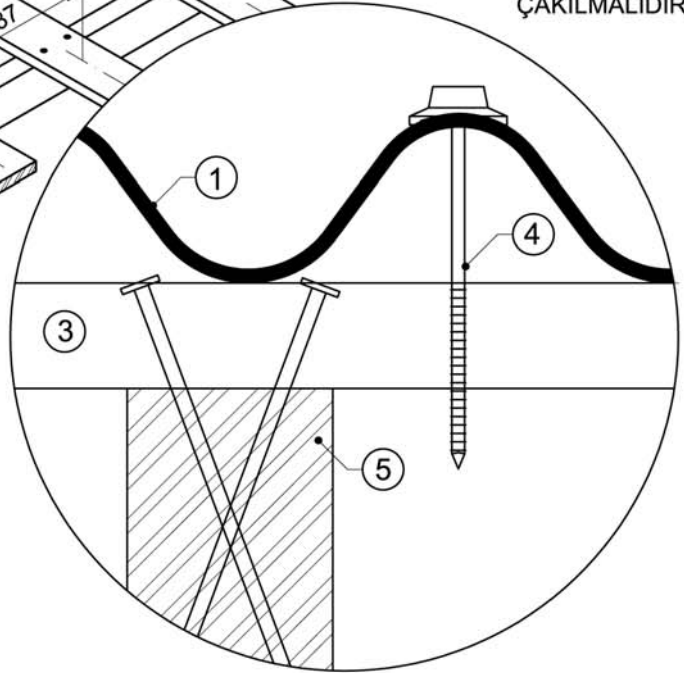


YUKARIDAKİ BİLGİLER TÜM EĞİMLERDE VE ALT YAPI SİSTEMLERİNDE GEÇERLİ OLAN TEMEL UYGULAMA ESASLARINI KAPSAR.

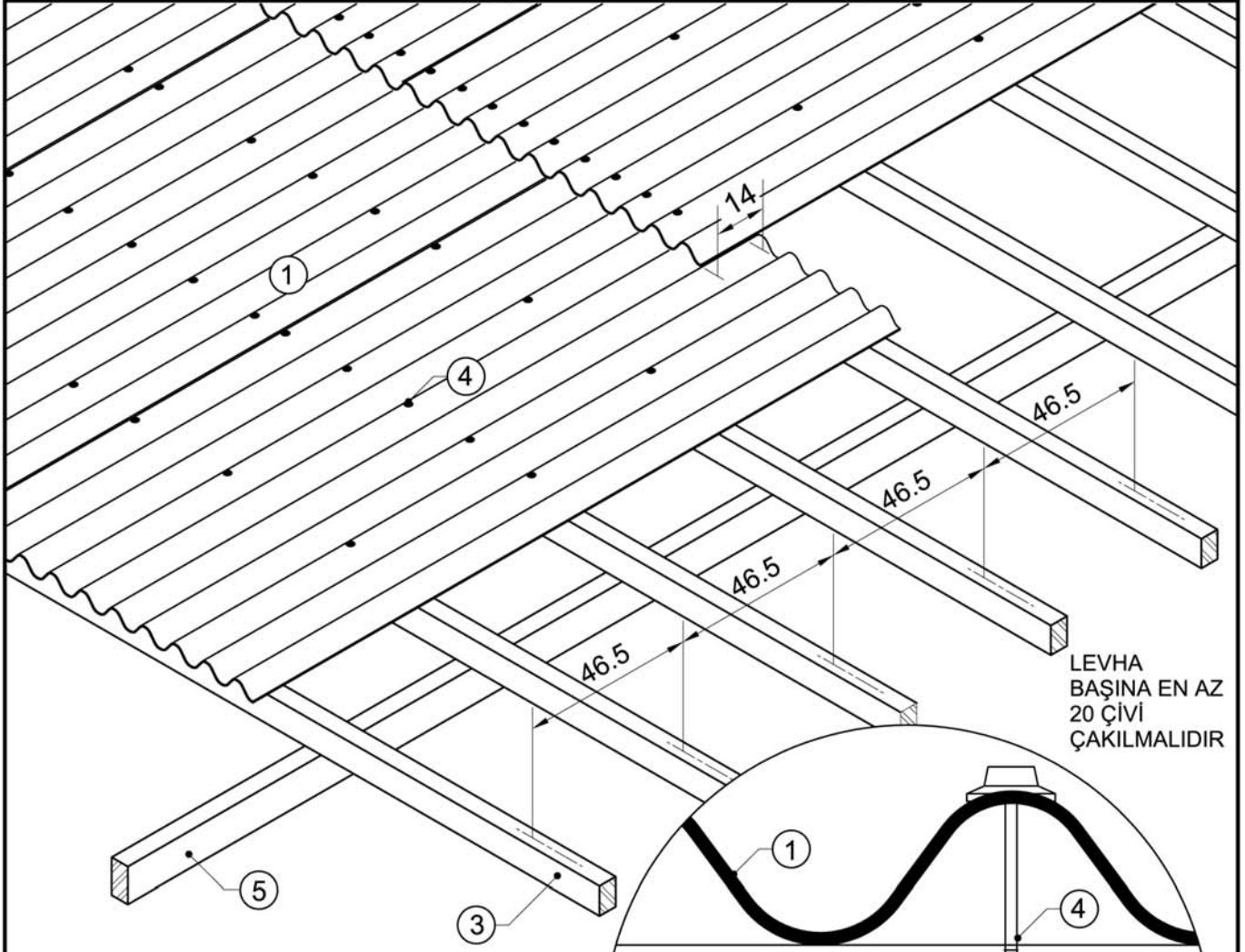


LEVHA
BAŞINA EN AZ
20 ÇİVİ
ÇAKILMALIDIR

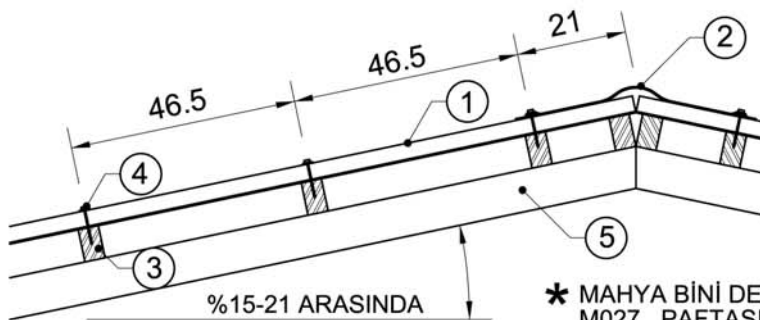
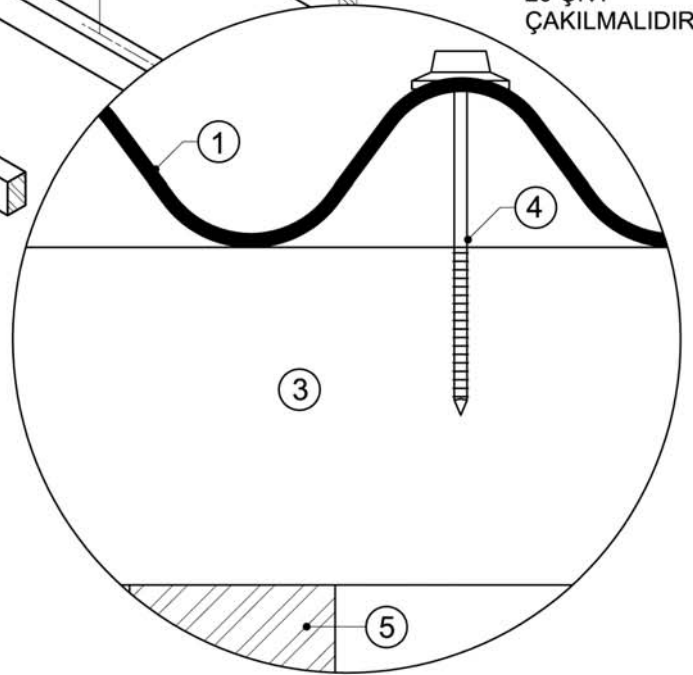
- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ KAPLAMA TAHTASI 2/12
- ④ GALVANİZLİ PLASTİK BAŞLIKLI
MONOBLOK ÇİVİ l=8 cm.
- ⑤ AĖŞAP MERTEK



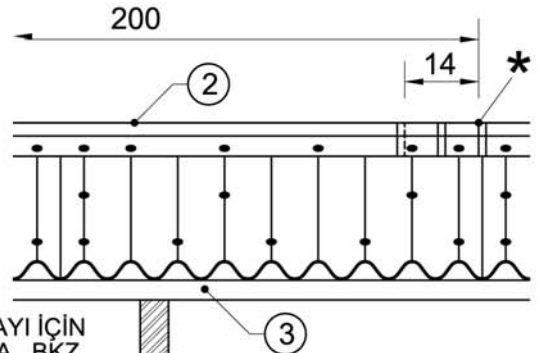
* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BKZ.

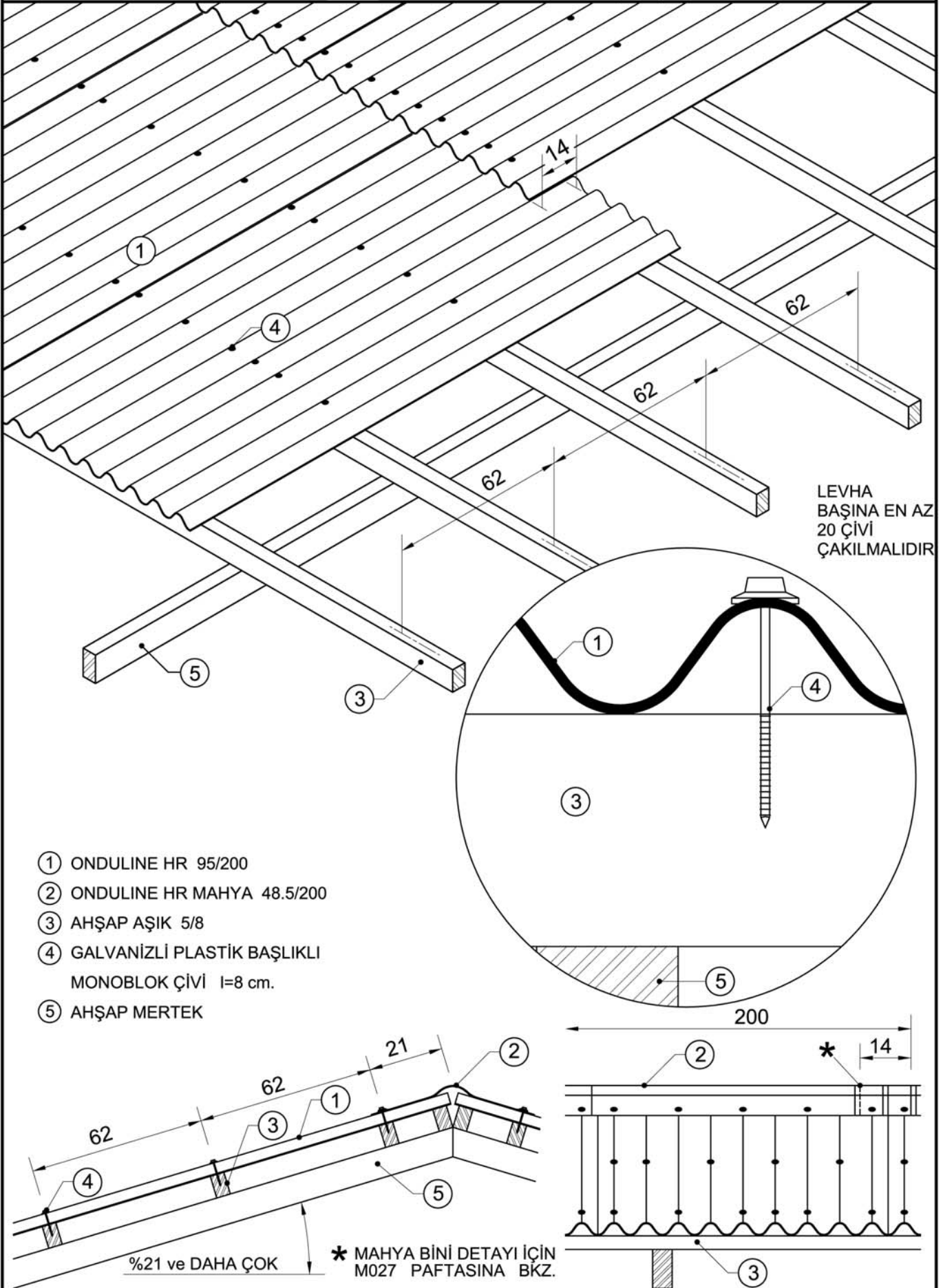


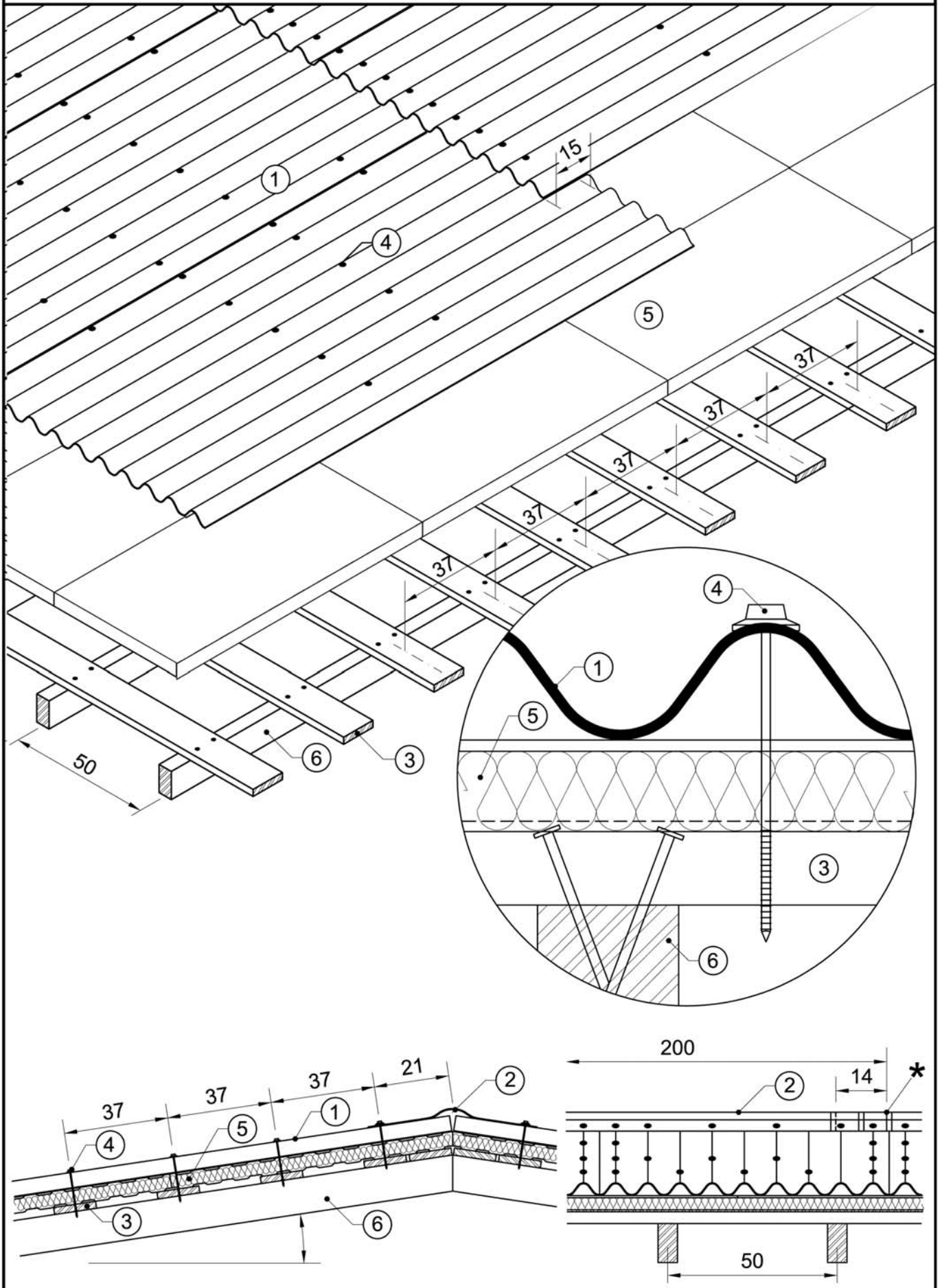
- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ AHŞAP AŞIK 5/8
- ④ GALVANİZLİ PLASTİK BAŞLIKLIL
MONOBLOK ÇİVİ l=8cm.
- ⑤ AHŞAP MERTEK

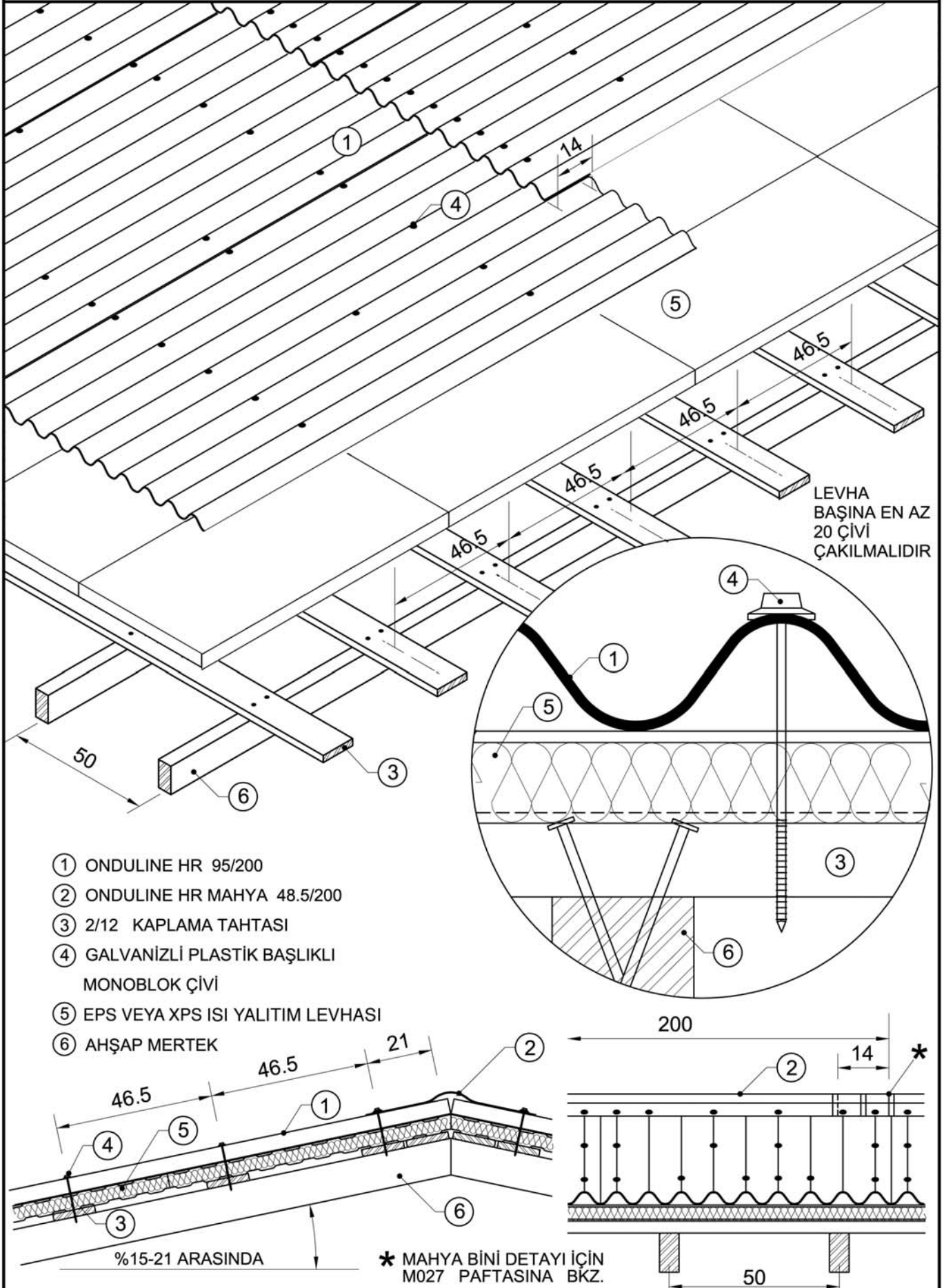


* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA B.KZ.

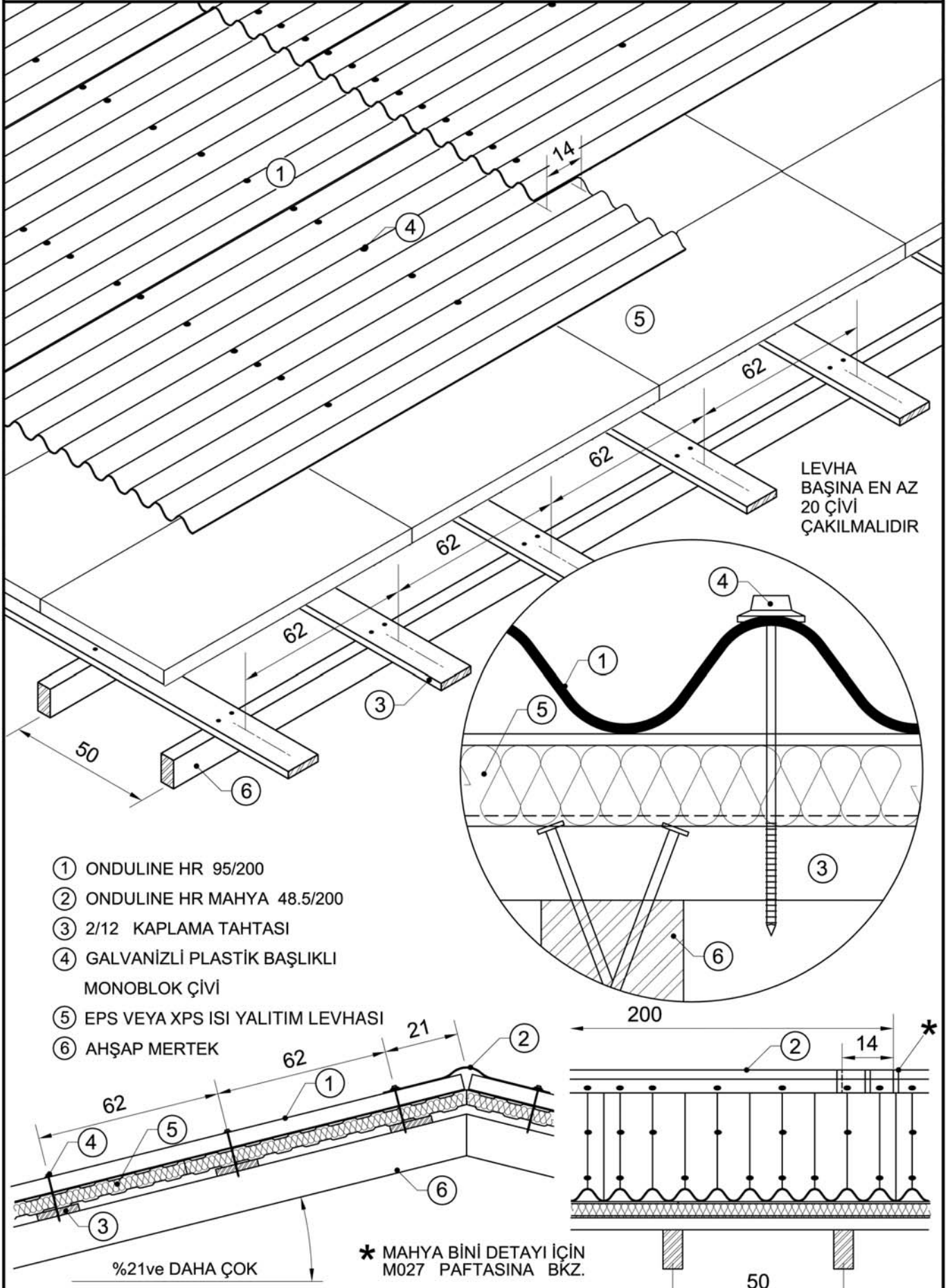








- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ 2/12 KAPLAMA TAHTASI
- ④ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ
- ⑤ EPS VEYA XPS İSİ YALITIM LEVHASI
- ⑥ AĞŞAP MERTEK

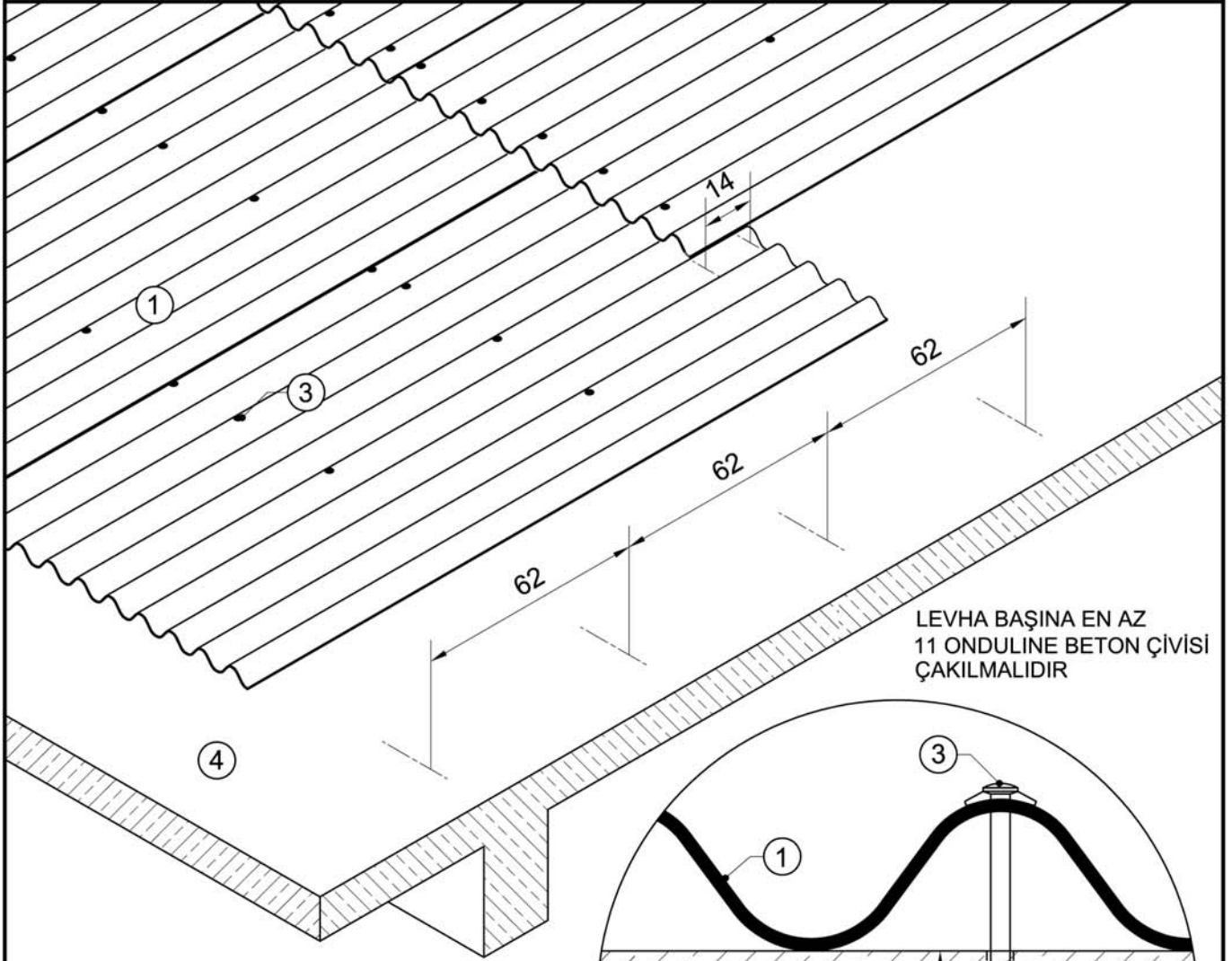


LEVHA
BAŞINA EN AZ
20 ÇİVİ
ÇAKILMALIDIR

- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ 2/12 KAPLAMA TAHTASI
- ④ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ
- ⑤ EPS VEYA XPS ISI YALITIM LEVHASI
- ⑥ AĞSAP MERTEK

%21ve DAHA ÇOK

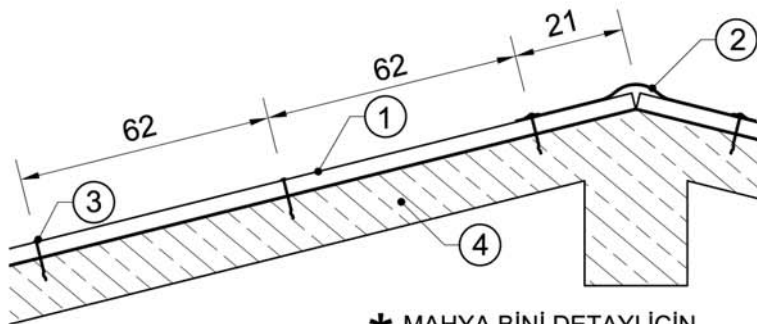
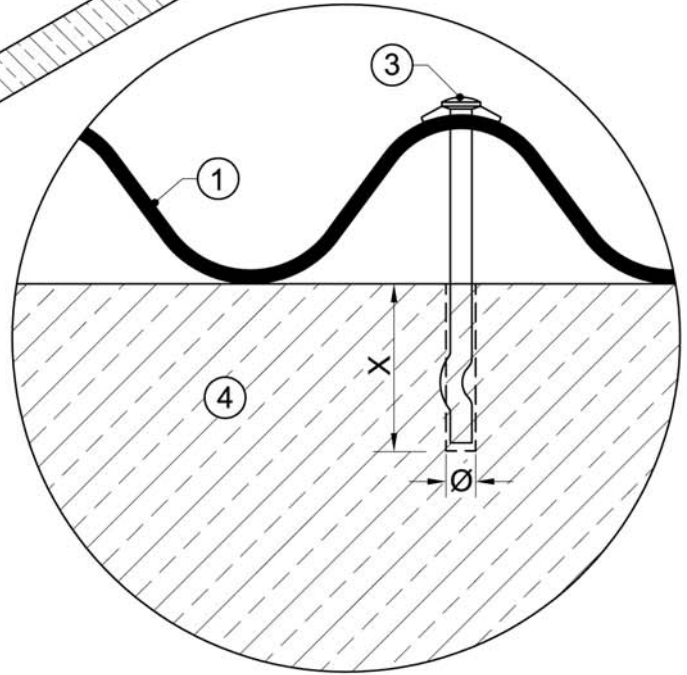
* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BKZ.



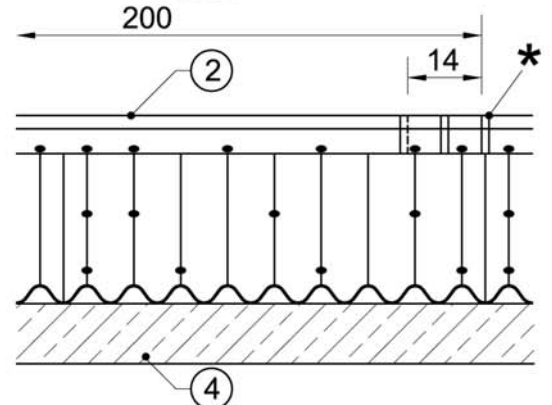
- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ GALVANİZLİ PLASTİK RONDELALI
BETON ÇİVİSİ l=7cm.**
- ④ BETONARME ÇATI

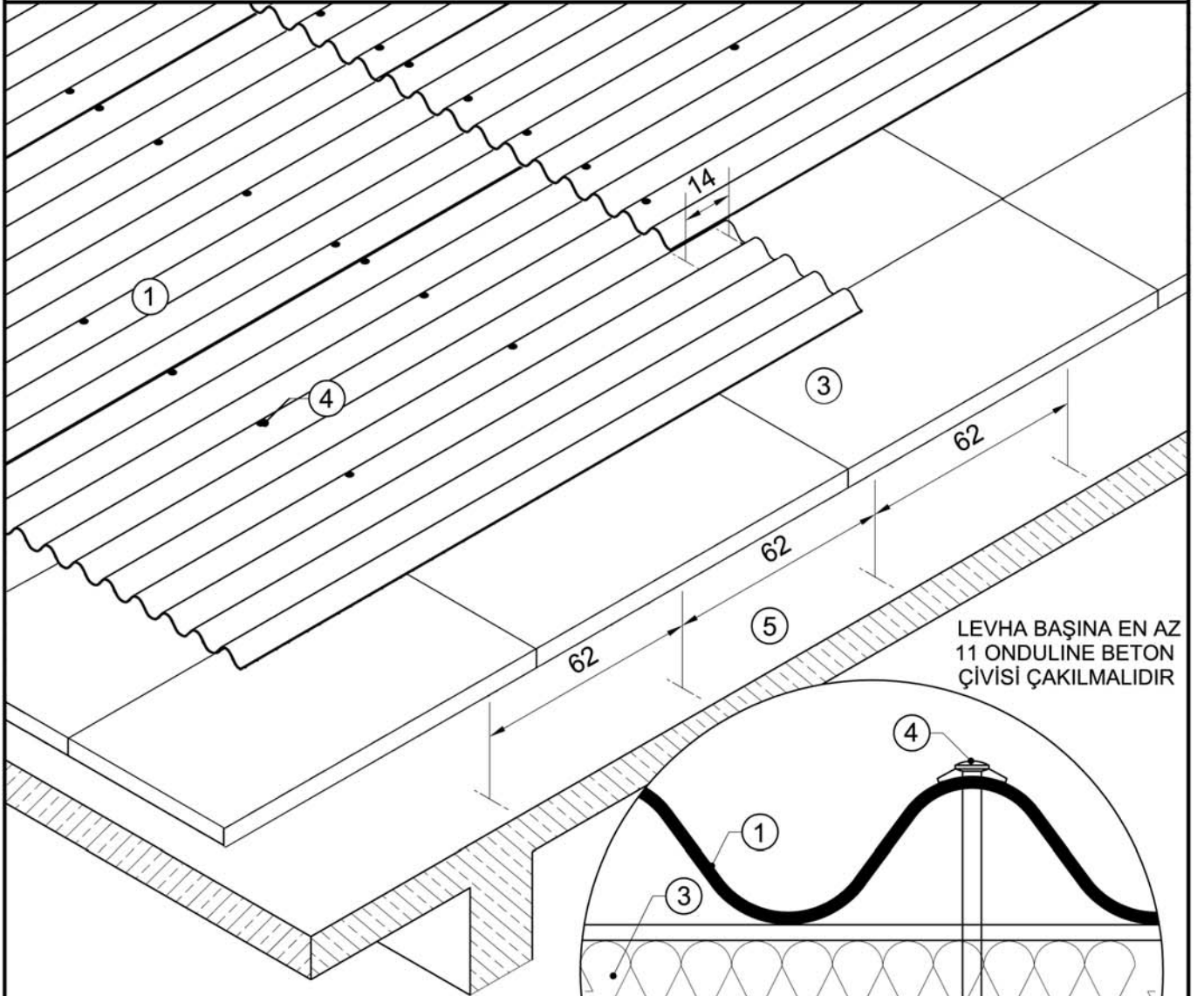
** Ø=DELİK ÇAPI 5mm.

X=DELİK DERİNLİĞİ 40mm.

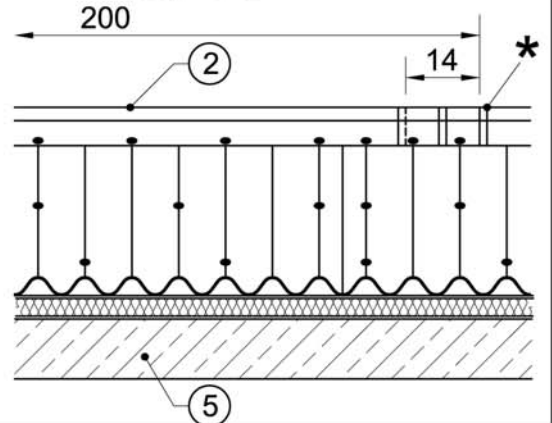
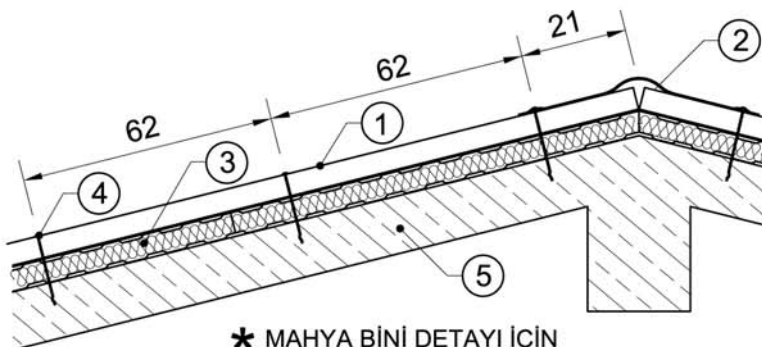
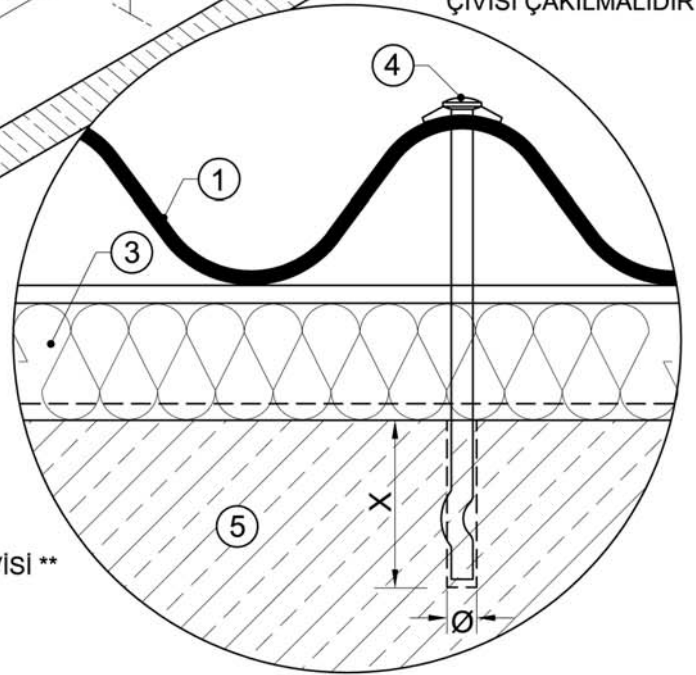


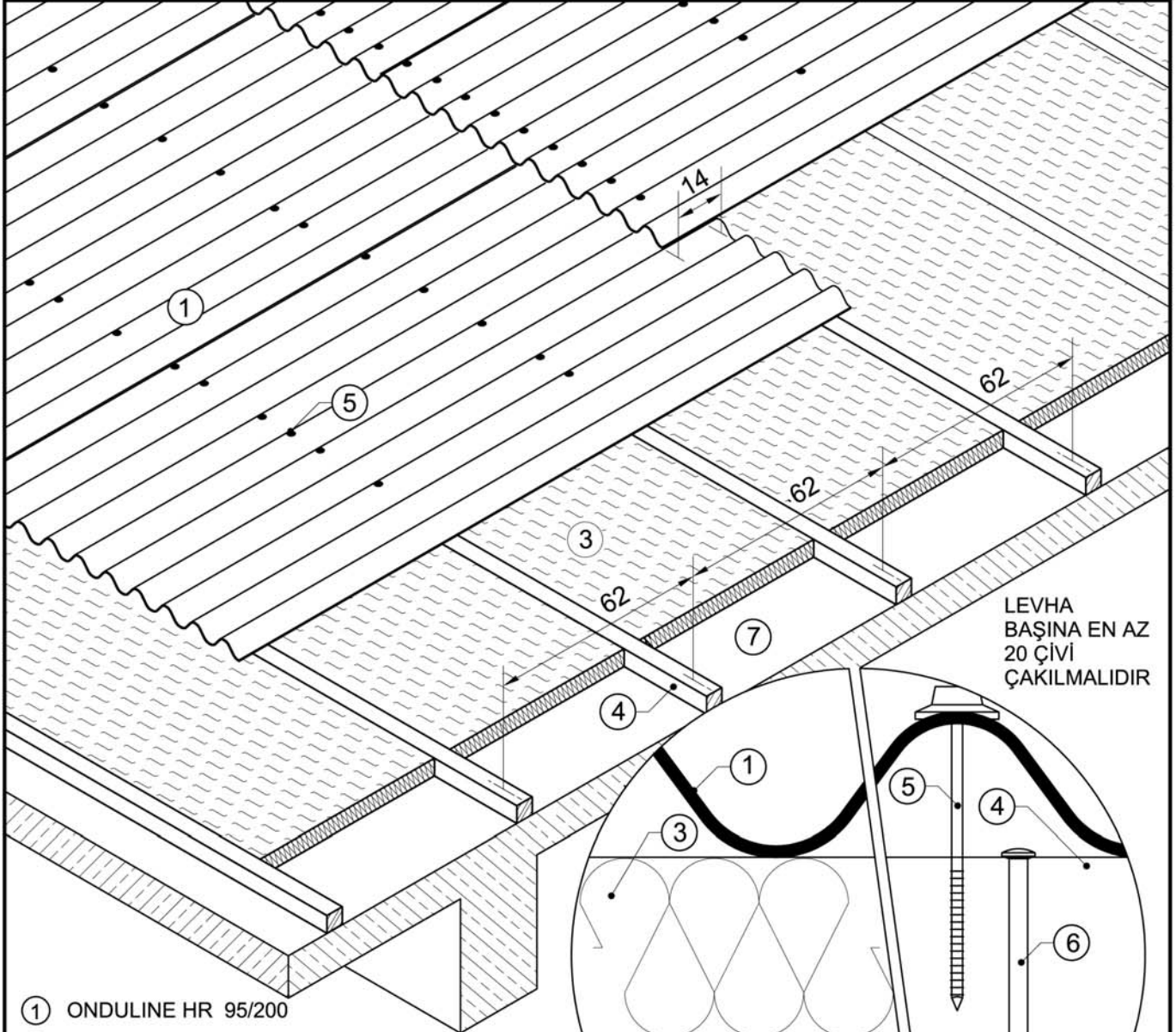
* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BKZ.





- ① ONDULINE HR 95/200
 - ② ONDULINE HR MAHYA 48.5/200
 - ③ EPS VEYA XPS ISI YALITIM LEVHASI
 - ④ GALVANİZLİ PLASTİK RONDELALI BETON ÇİVİSİ **
 - ⑤ BETONARME ÇATI
- **Ø=DELİK ÇAPI 5mm.
X=DELİK DERİNLİĞİ 40mm.



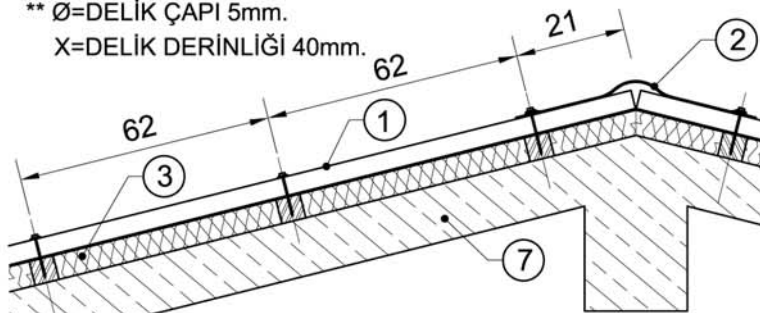


LEVHA
BAŞINA EN AZ
20 ÇİVİ
ÇAKILMALIDIR

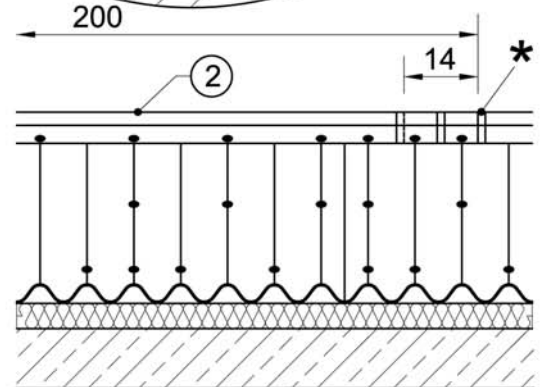
- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ CAM YÜNÜ d=6cm.
- ④ AHŞAP AŞIK 5/5
- ⑤ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ l=8 cm.
- ⑥ GALVANİZLİ PLASTİK RONDELALI BETON ÇİVİSİ l=10cm.**
- ⑦ BETONARME ÇATI

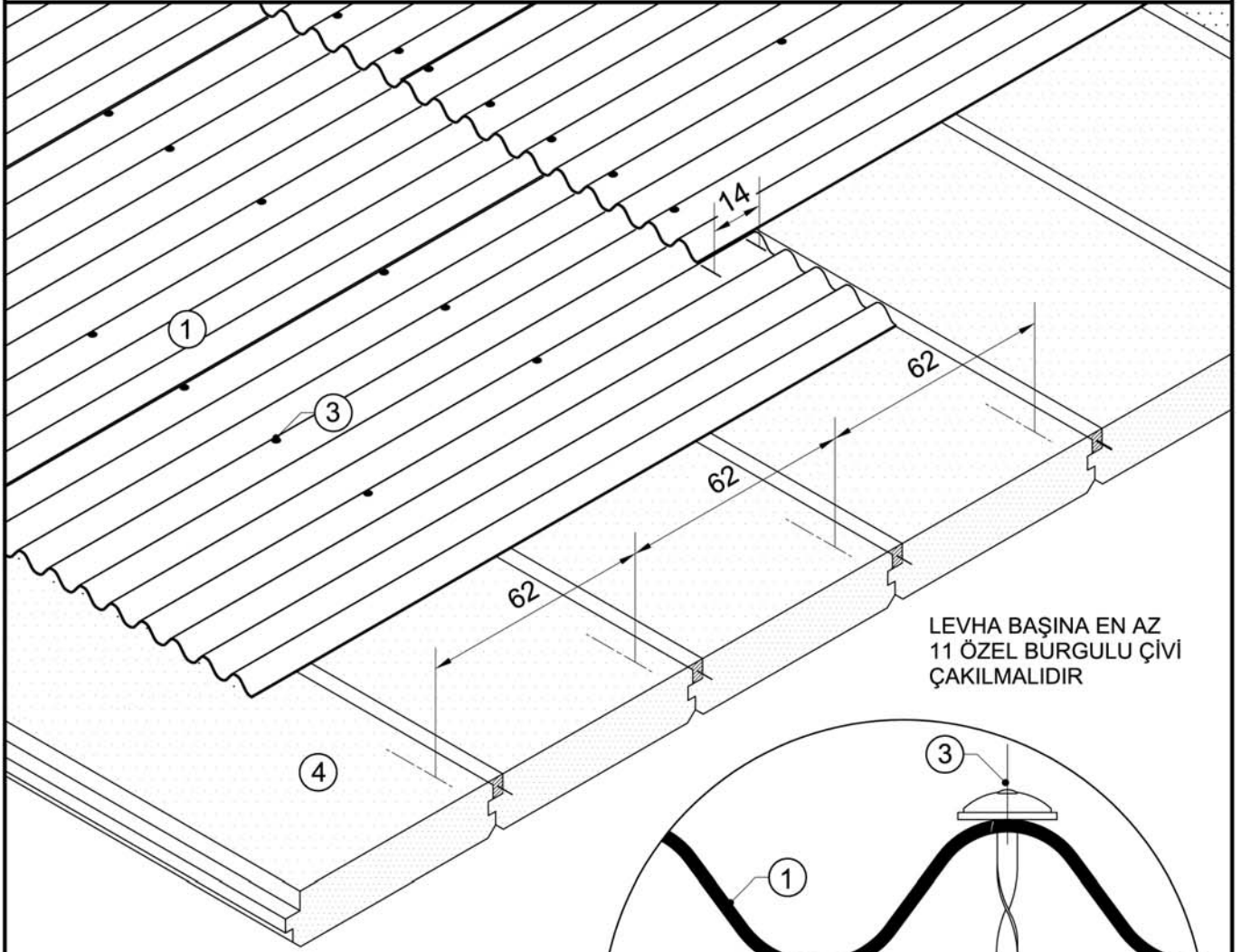
** Ø=DELİK ÇAPI 5mm.

X=DELİK DERİNLİĞİ 40mm.



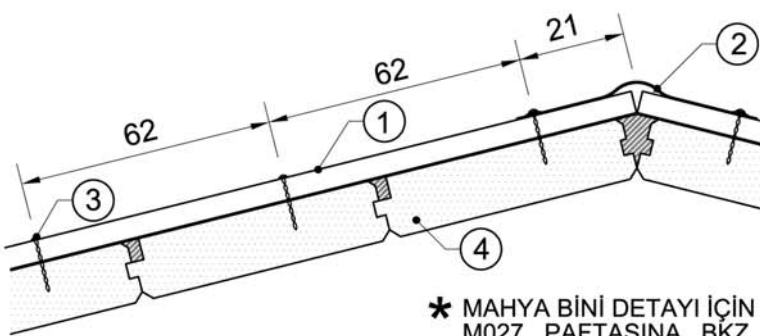
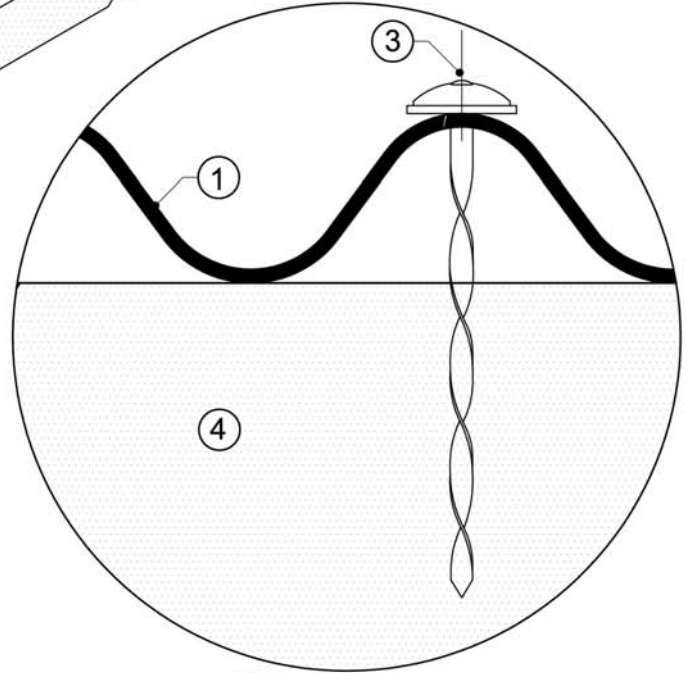
* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BĞZ.



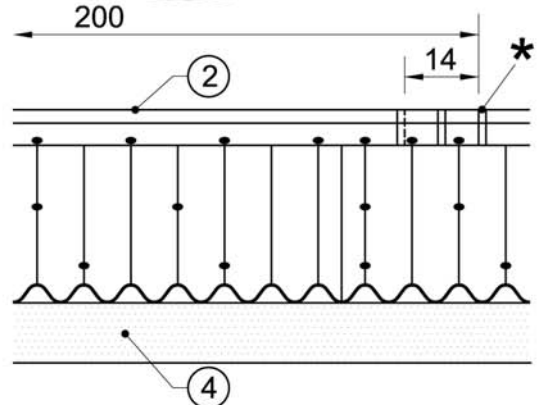


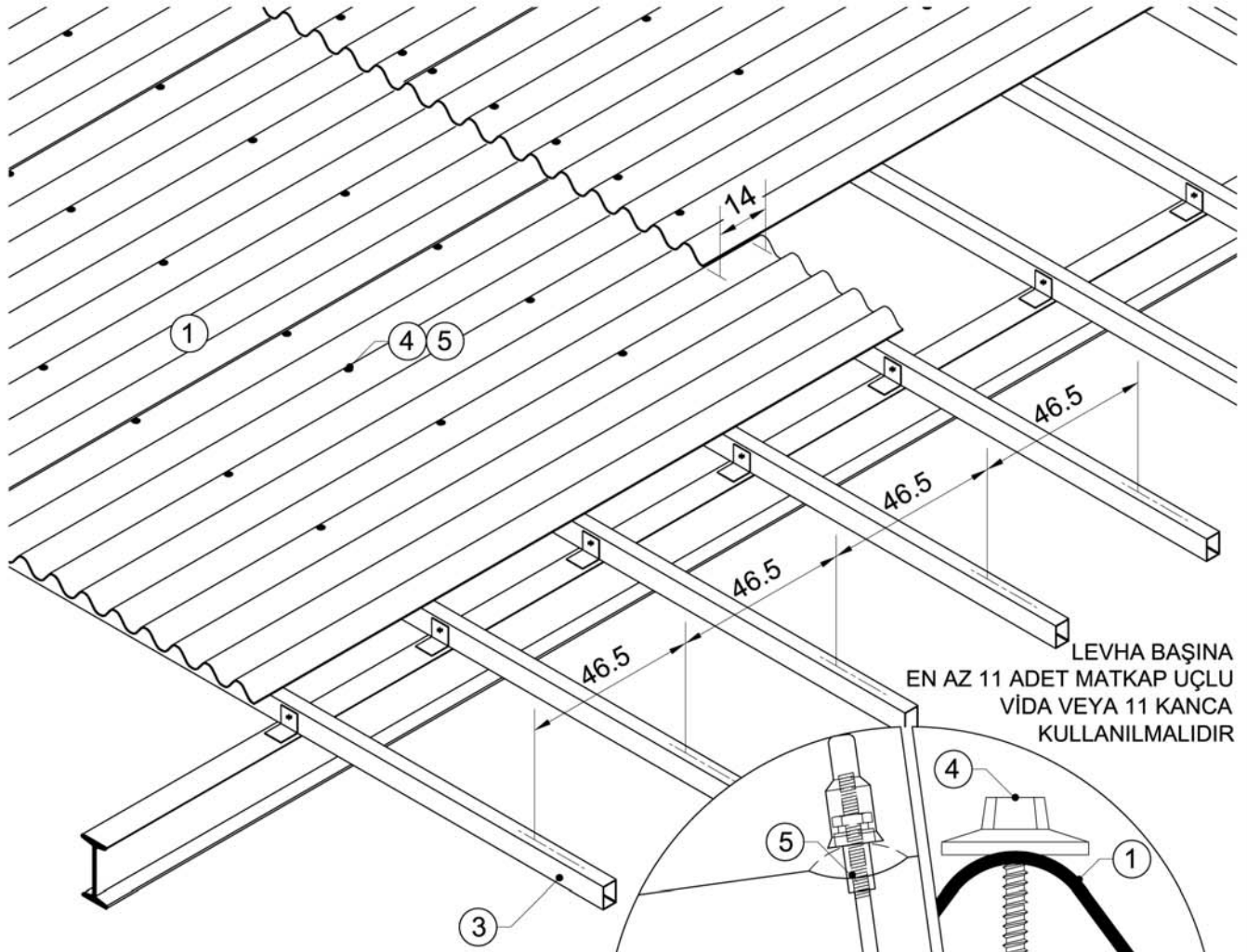
LEVHA BAŞINA EN AZ
11 ÖZEL BURGULU ÇİVİ
ÇAKILMALIDIR

- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ ÖZEL BURGULU ÇİVİ l=10cm.
- ④ HAFİF BETON ÇATI PANELİ



* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BİZ.

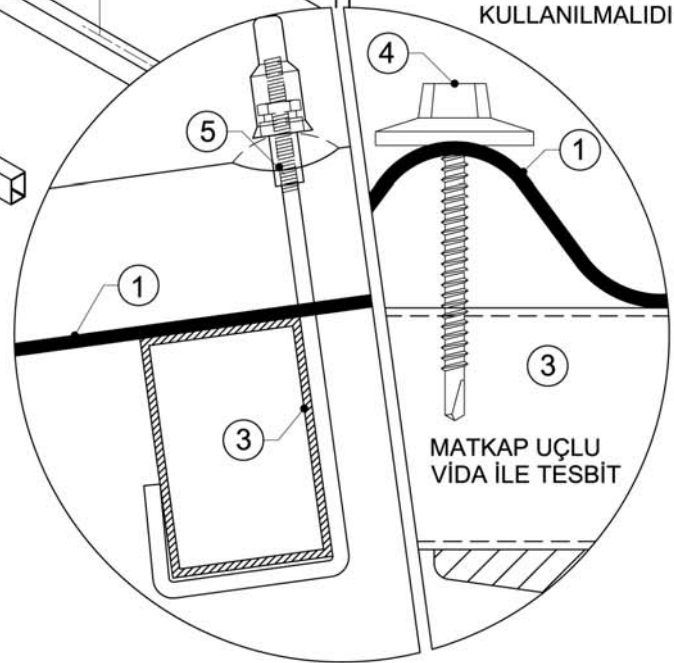




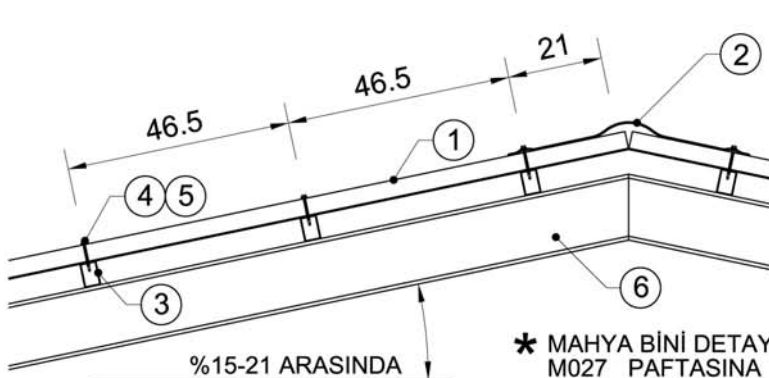
LEVHA BAŞINA
EN AZ 11 ADET MATKAP UÇLU
VİDA VEYA 11 KANCA
KULLANILMALIDIR

- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ ÇELİK AŞIK 40x60 KUTU PROFİL
- ④ MATKAP UÇLU MONOBLOK VİDA 6 cm.
- ⑤ KANCA l=18cm

- MAKAS ARALIĞI l=400cm
- KAR YÜKÜ =100kg/m²

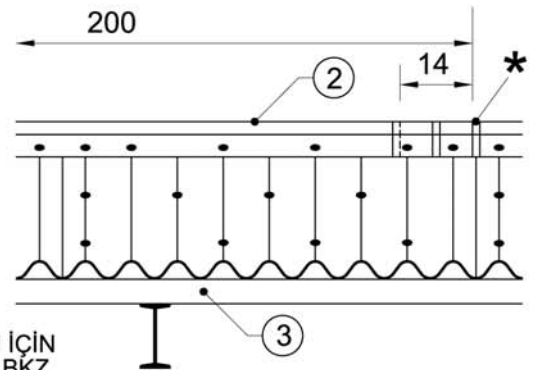


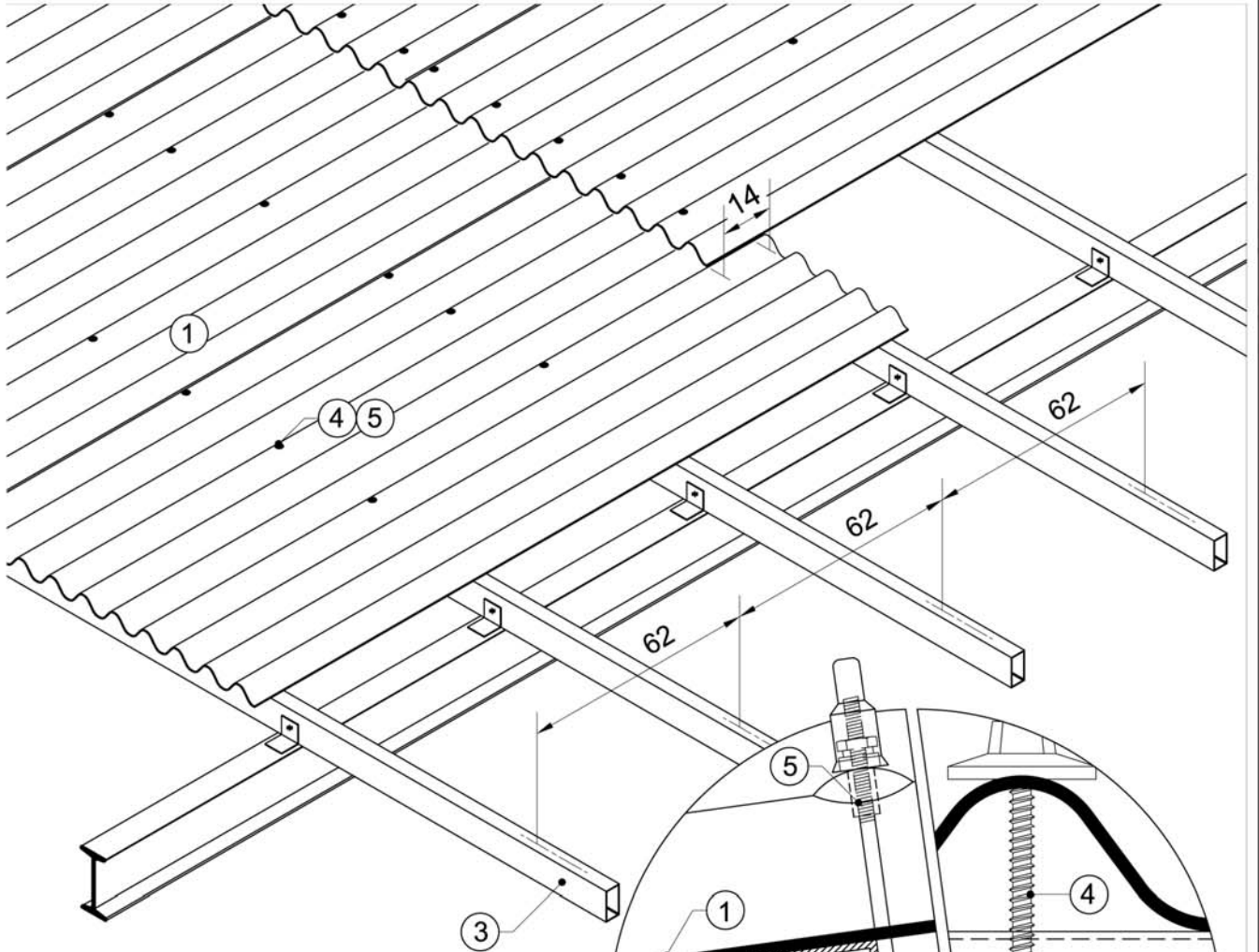
MATKAP UÇLU
VİDA İLE TESBİT



%15-21 ARASINDA

* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BKZ.

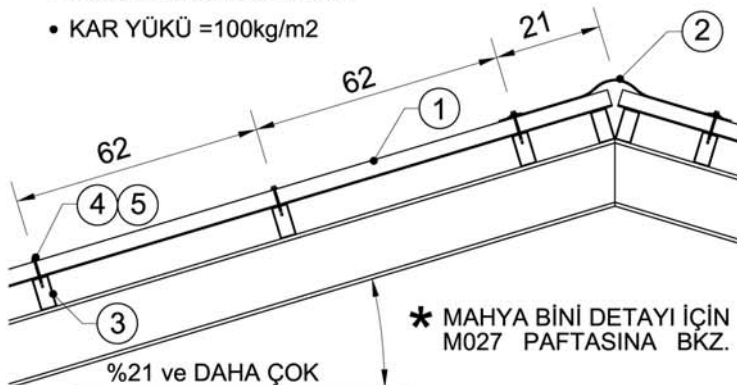




LEVHA BAŞINA EN AZ 11 ADET MATKAP UÇLU
VİDA VEYA 11 KANCA KULLANILMALIDIR

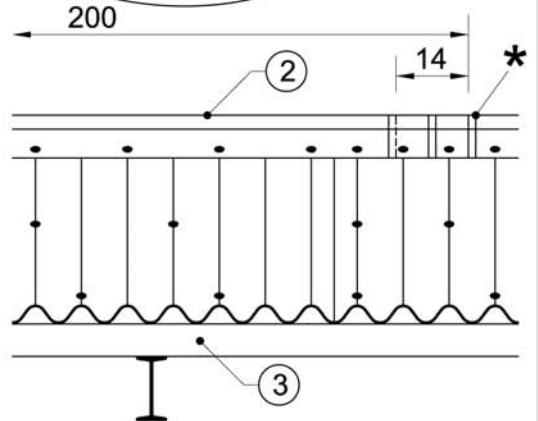
- ① ONDULINE HR 95/200
- ② ONDULINE HR MAHYA 48.5/200
- ③ ÇELİK AŞIK 40x80 KUTU PROFİL
- ④ MATKAP UÇLU MONOBLOK VİDA 6 cm.
- ⑤ KANCA l=20cm

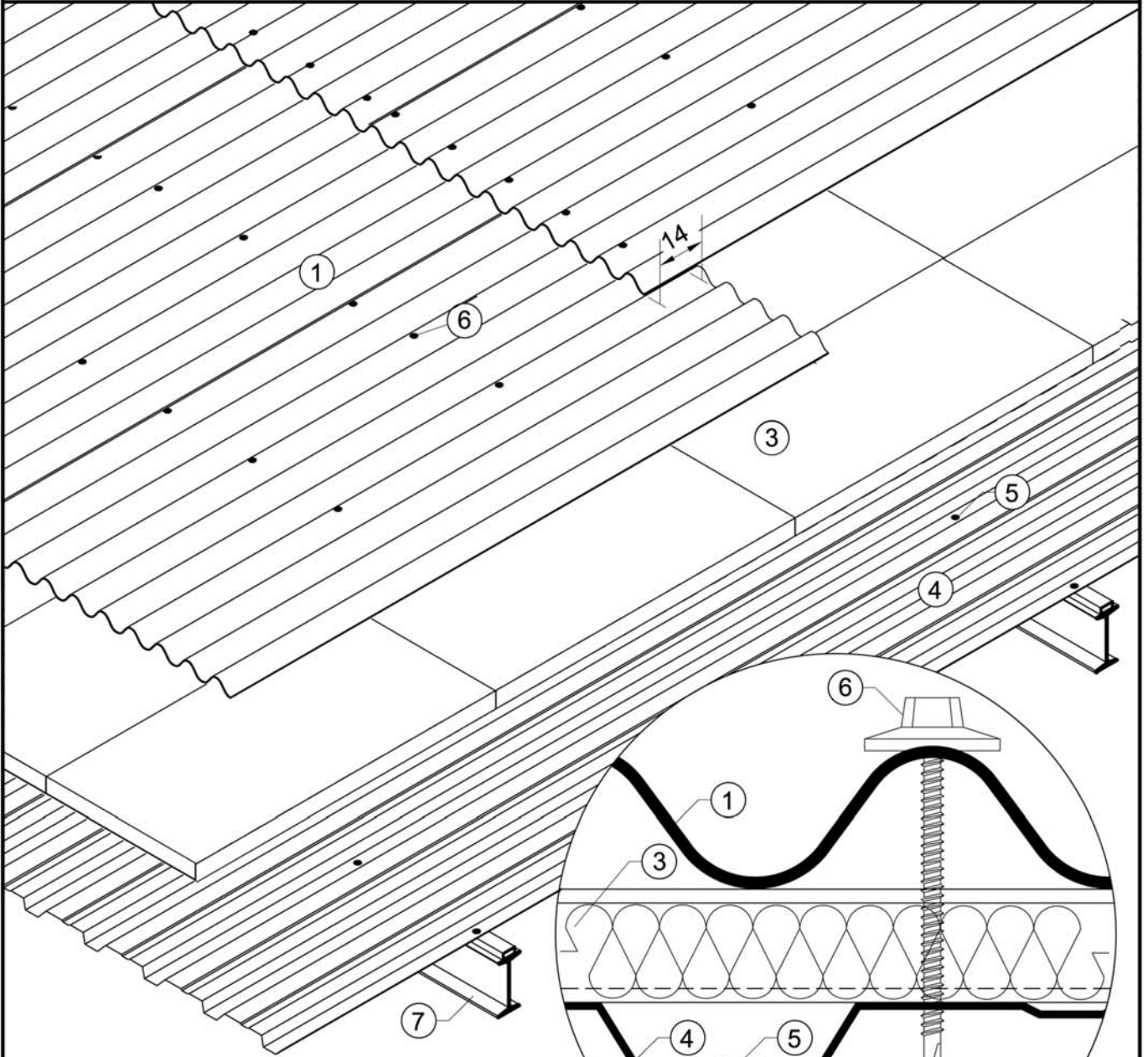
- MAKAS ARALIĞI l=400cm
- KAR YÜKÜ =100kg/m²



* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BKZ.

%21 ve DAHA ÇOK

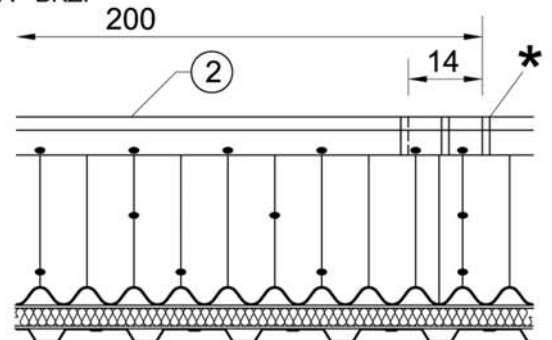
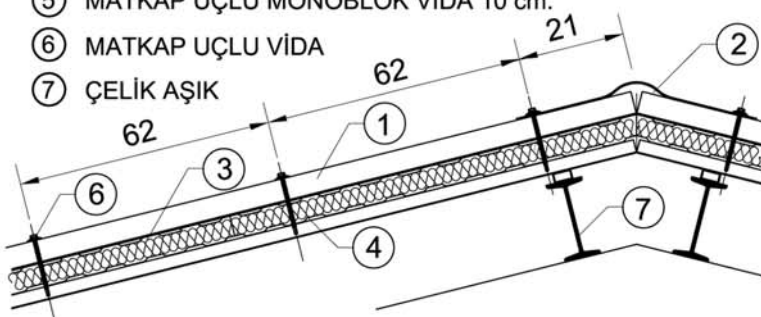


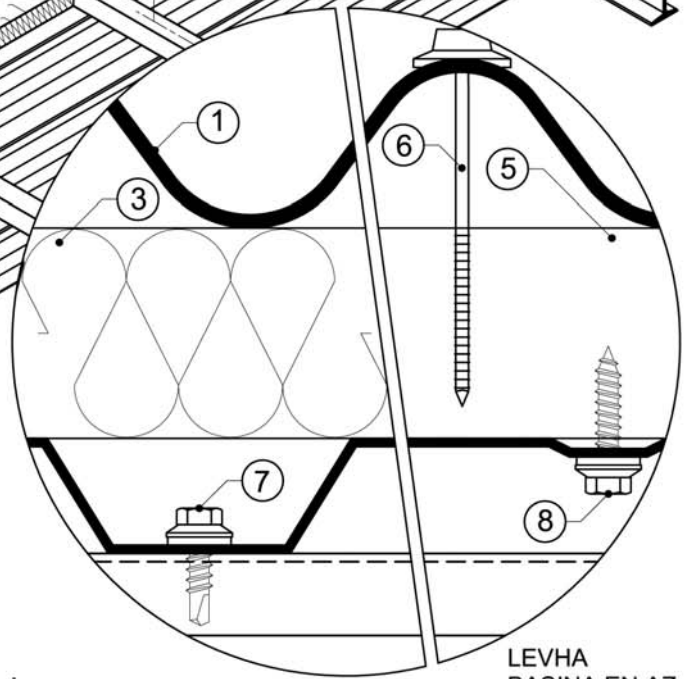
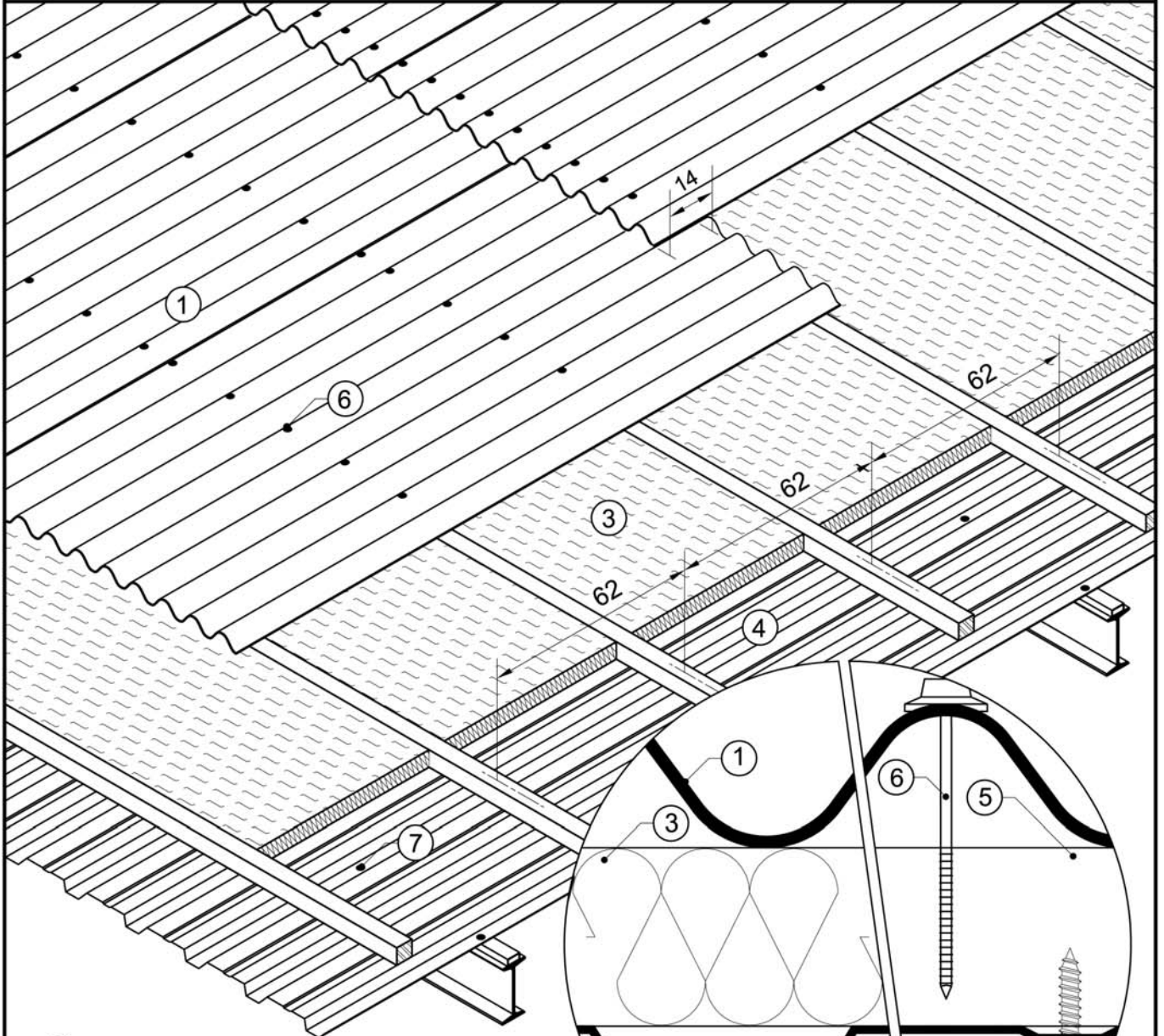


LEVHA BAŞINA EN AZ 11 ADET
MATKAP UÇLU VİDA KULLANILMALIDIR

- ① ONDULINE HR 95 / 200
- ② ONDULINE HR MAHYA 48.5 / 200
- ③ EPS VEYA XPS ISI YALITIM LEVHASI
- ④ 0.65mm TRAPEZ SAC 27 / 200
- ⑤ MATKAP UÇLU MONOBLOK VİDA 10 cm.
- ⑥ MATKAP UÇLU VİDA
- ⑦ ÇELİK AŞIK

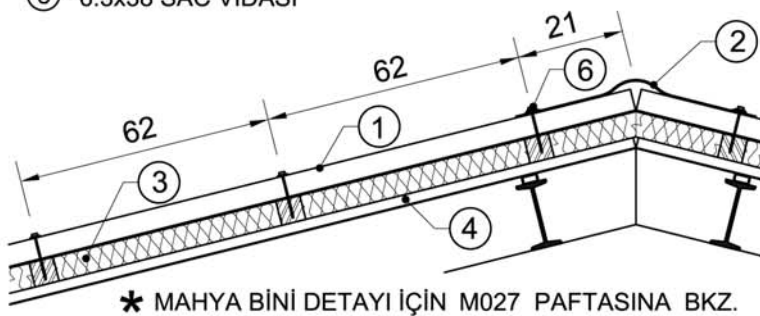
* MAHYA BİNİ DETAYI İÇİN
M027 PAFTASINA BKZ.



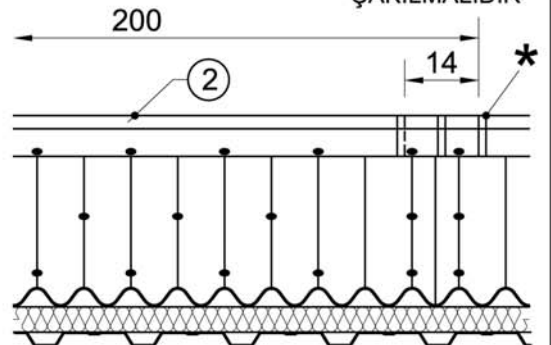


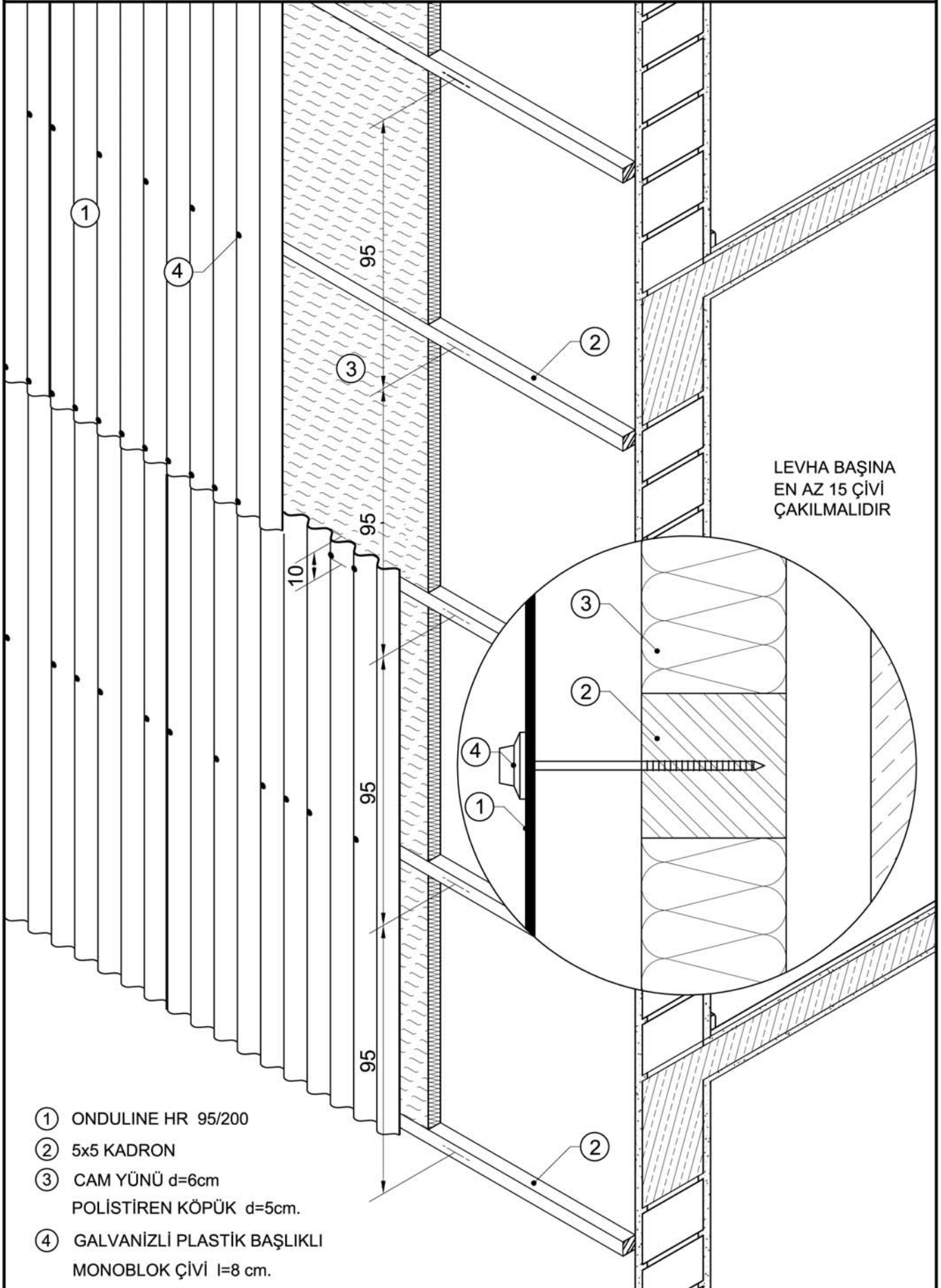
- ① ONDULINE HR 95 / 200
- ② ONDULINE HR MAHYA 48.5 / 200
- ③ CAM YÜNÜ d=6cm
- ④ 0.65mm TRAPEZ SAC 27 / 200
- ⑤ AHŞAP AŞIK 5 / 5
- ⑥ GALVANİZLİ PLASTİK BAŞLIKLIL MONOBLOK ÇİVİ l = 8cm.
- ⑦ 6.3x25 MATKAP UÇLU VİDA
- ⑧ 6.3x38 SAC VİDASI

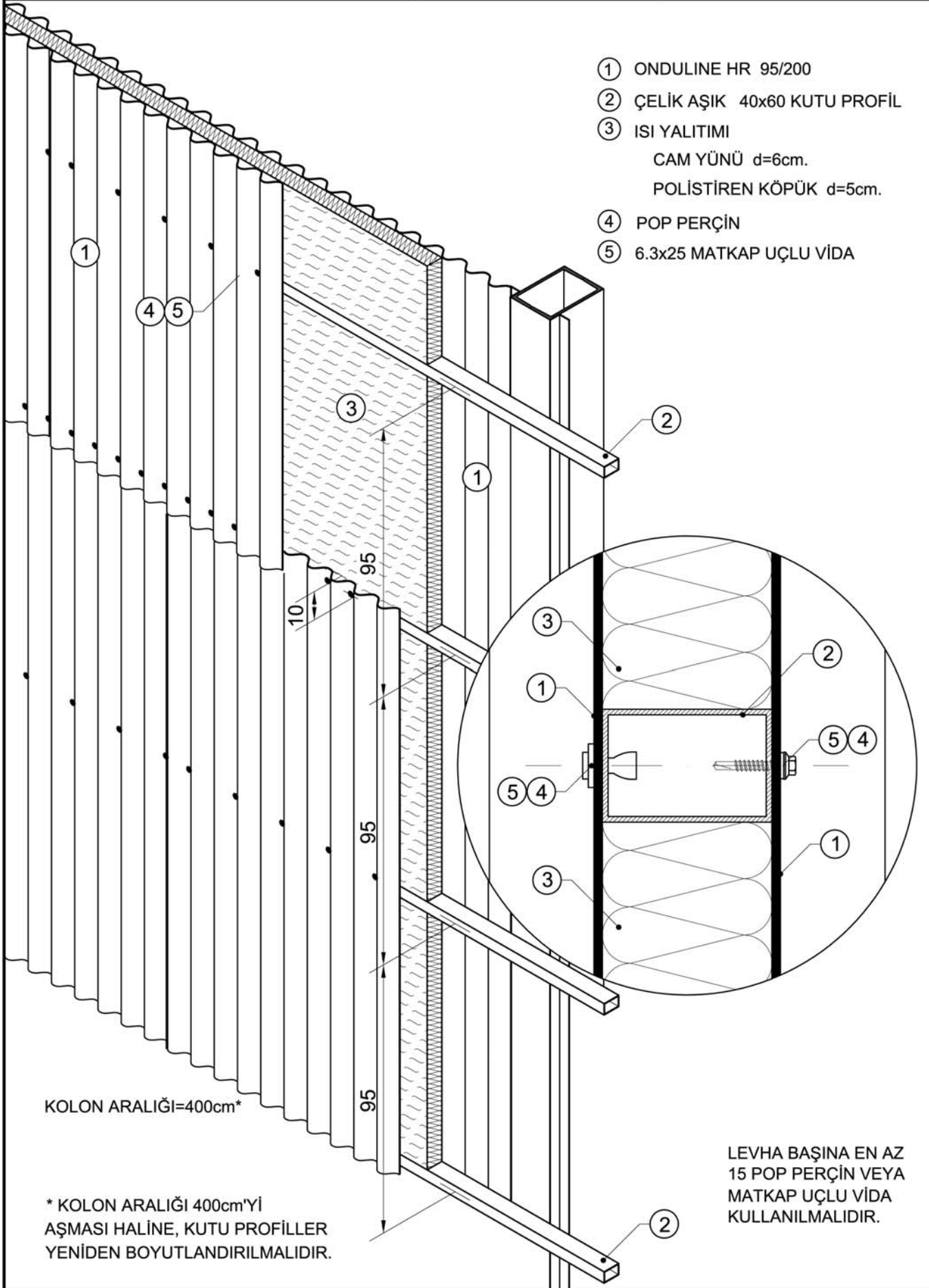
LEVHA
BAŞINA EN AZ
20 ÇİVİ
ÇAKILMALIDIR



* MAHYA BİNİ DETAYI İÇİN M027 PAFTASINA BKZ.







- ① ONDULINE HR 95/200
- ② ÇELİK AŞIK 40x60 KUTU PROFİL
- ③ ISI YALITIMI
CAM YÜNÜ d=6cm.
POLİSTİREN KÖPÜK d=5cm.
- ④ POP PERÇİN
- ⑤ 6.3x25 MATKAP UÇLU VİDA

KOLON ARALIĞI=400cm*

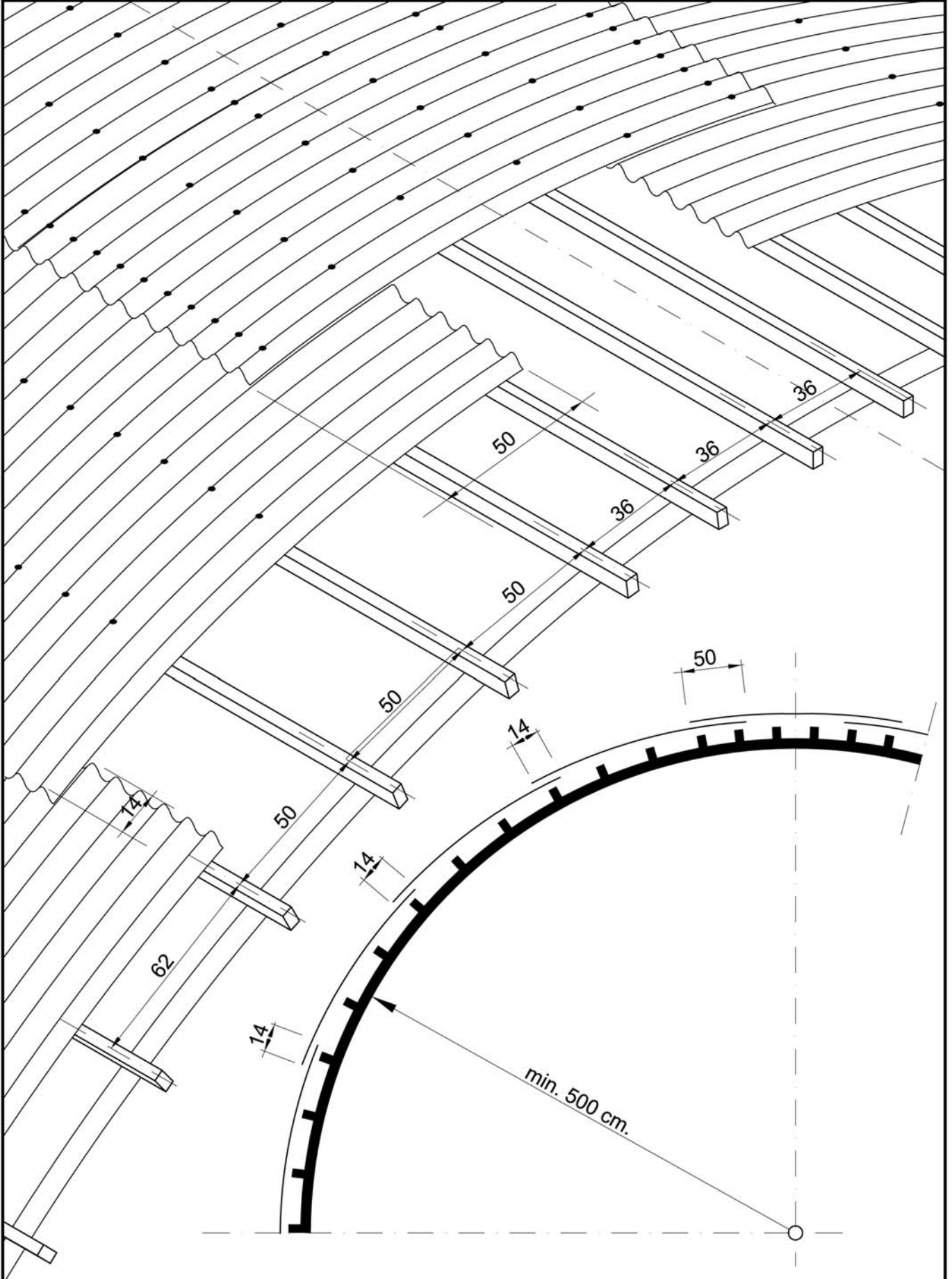
* KOLON ARALIĞI 400cm'Yİ
AŞMASI HALİNE, KUTU PROFİLLER
YENİDEN BOYUTLANDIRILMALIDIR.

LEVHA BAŞINA EN AZ
15 POP PERÇİN VEYA
MATKAP UÇLU VİDA
KULLANILMALIDIR.

ONDULINE® HR

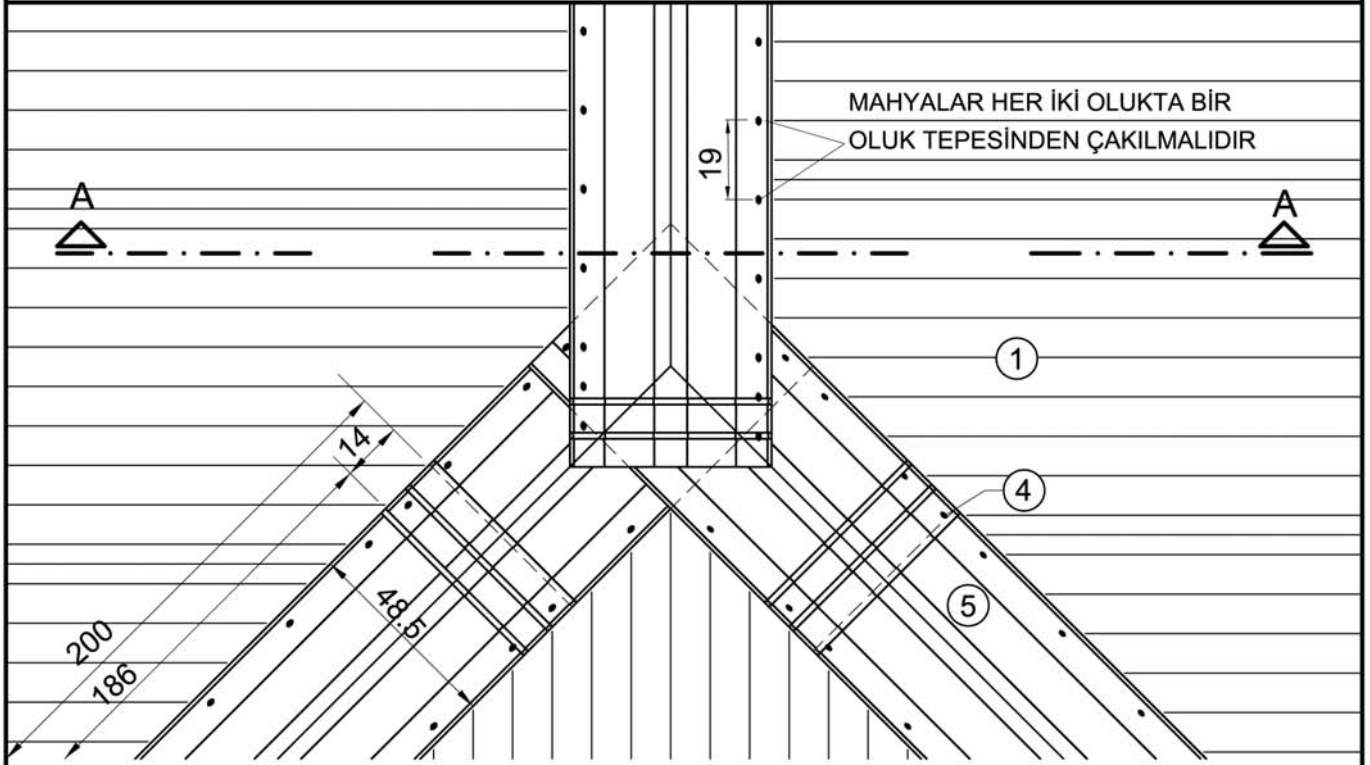
EĞRİSEL YÜZEYLİ ÇATIDA UYGULAMA

M017

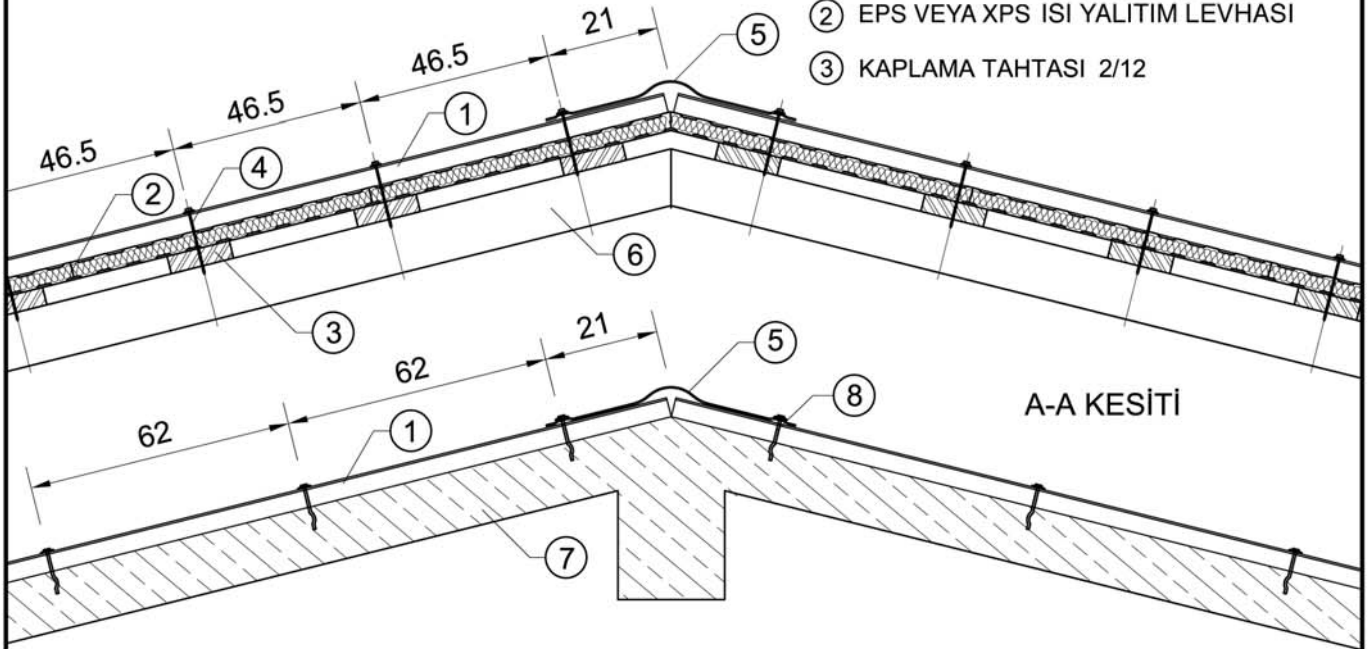


Onduline®
AVRASYA A.Ş.

MERKEZ: Değirmen Sokak Nida Kule No 12 Kat 8 34742 Kozyatağı / Kadıköy/ İSTANBUL Tel. : 0216 384 16 00 pbx. Faks: 0216 384 16 10
ANKARA: Turan Güneş Bulvarı 51/3 Korman Sit. 1. Blok, D:3 06550 Çankaya / ANKARA Tel: 0312 441 35 50 - 440 77 69 Faks: 0312 441 99 93
İZMİR: Alsancak Kültür Mh. Dr. Mustafa Enver Bey Cd. No: 35 35220 Alsancak / İZMİR Tel.: 0232 422 20 21 pbx. Faks: 0232 421 22 68



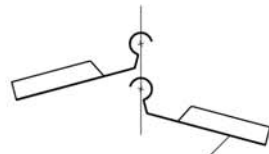
- ① ONDULINE HR 95/200
- ② EPS VEYA XPS ISI YALITIM LEVHASI
- ③ KAPLAMA TAHTASI 2/12



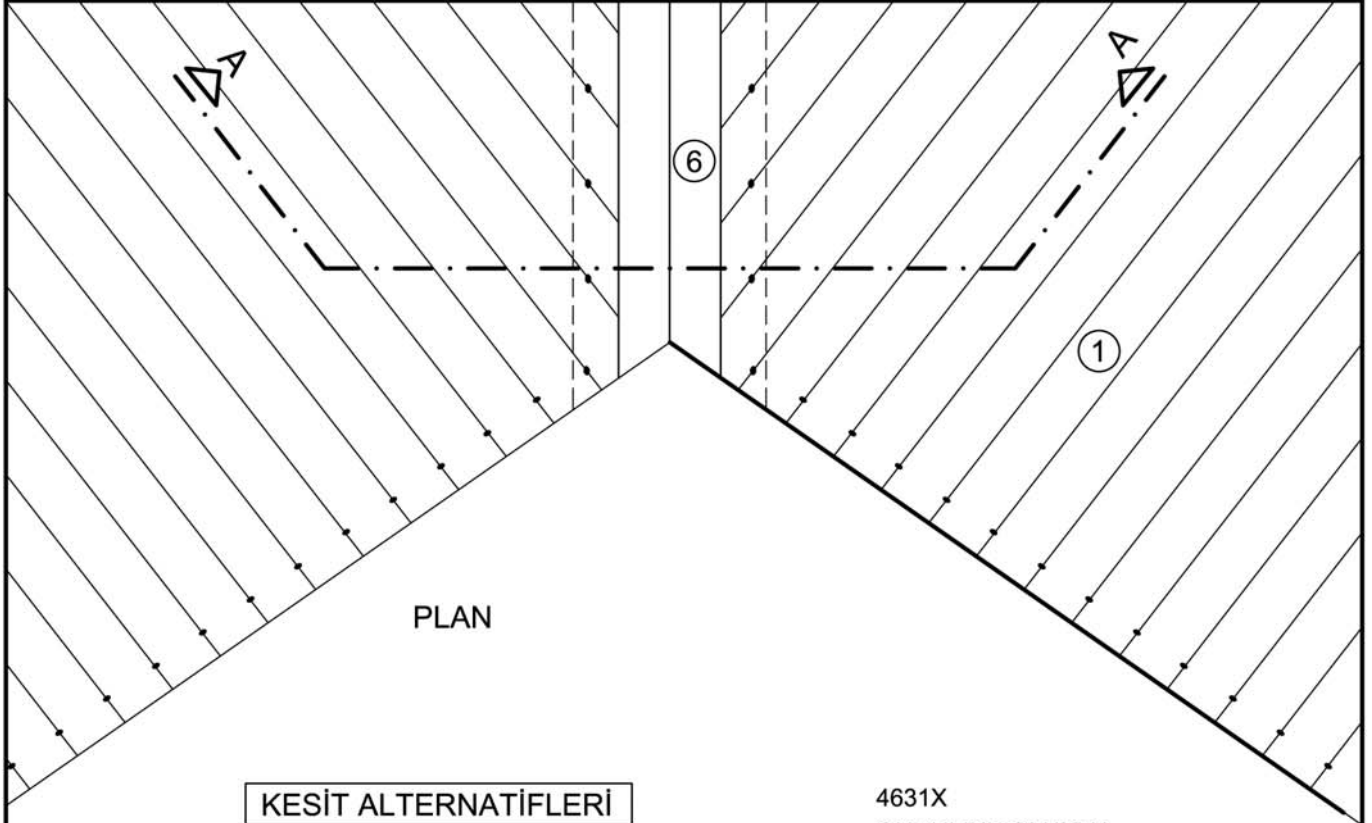
*İSTENDİĞİNDE CTP MAHYA
ELEMANI KULLANILABİLİR

*CTP ELEMANLAR SİPARİŞ
ÜZERİNE ÜRETİLİRLER

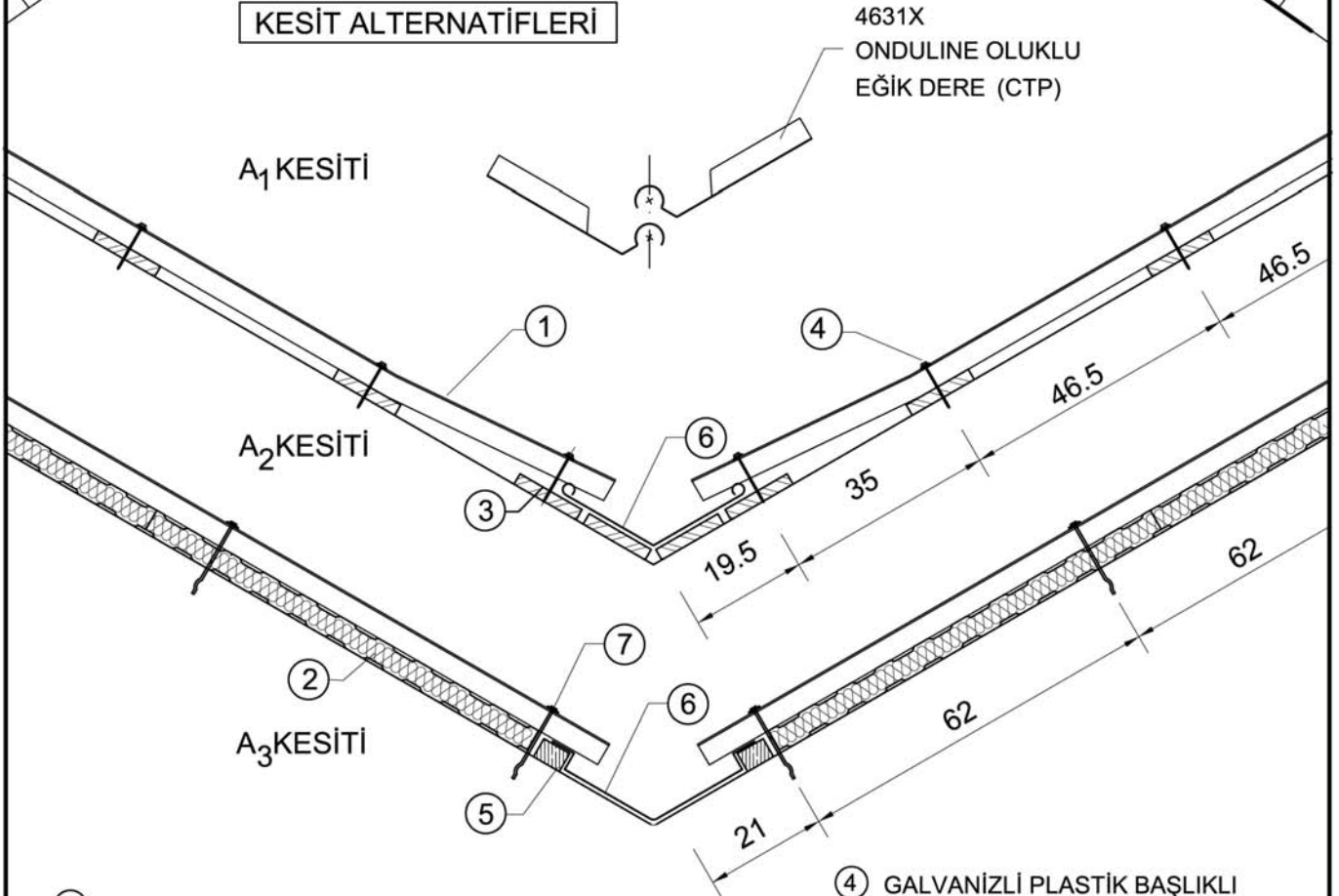
CTP MAHYA (4631X)



- ④ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ
- ⑤ ONDULINE HR MAHYA 48.5/200
- ⑥ AHŞAP MERTEK
- ⑦ BETONARME ÇATI
- ⑧ ONDULINE BETON ÇİVİSİ
l=10cm



KESİT ALTERNATİFLERİ



4631X
ONDULINE OLUKLU
EĞİK DERE (CTP)

A₁ KESİTİA₂ KESİTİA₃ KESİTİ

① ONDULINE HR 95/200

② EPS VEYA XPS ISI YALITIM LEVHASI

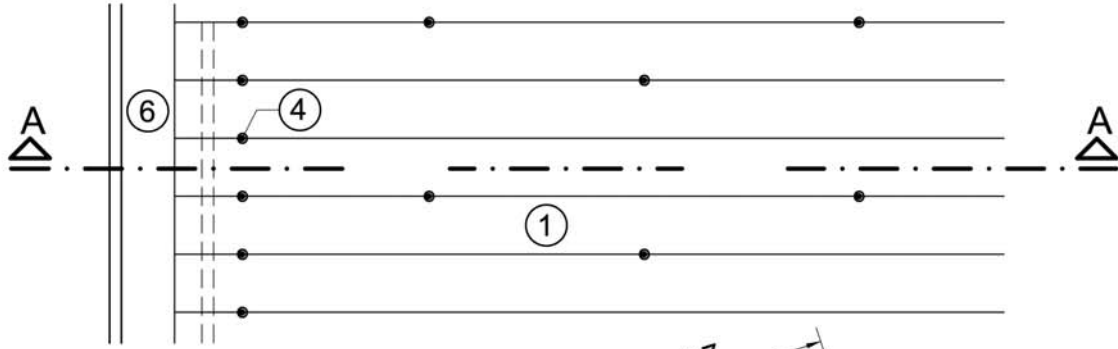
③ KAPLAMA TAHTASI 2/12

④ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ

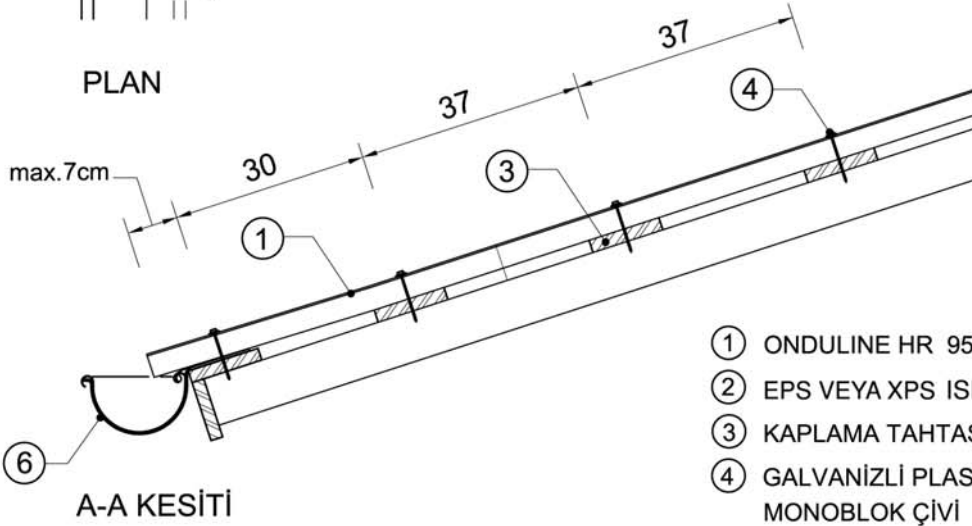
⑤ AHŞAP AŞIK 3/5

⑥ ÇİNKO DERE

⑦ ONDULINE BETON ÇİVİSİ

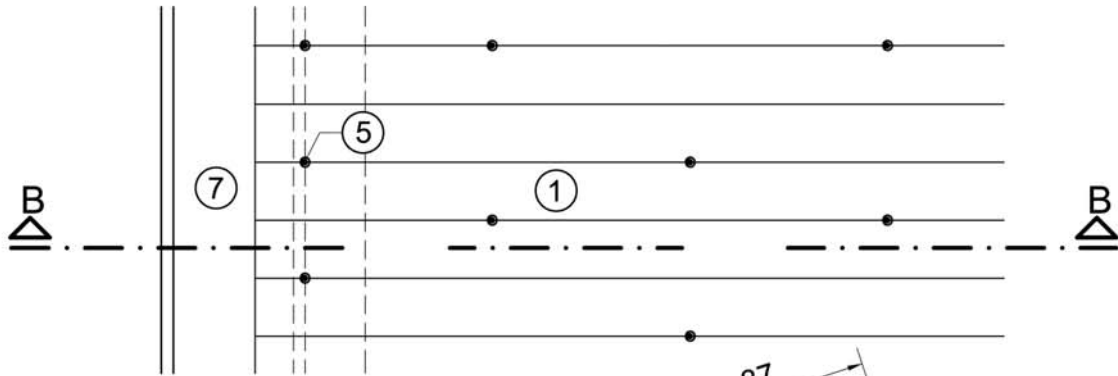


PLAN

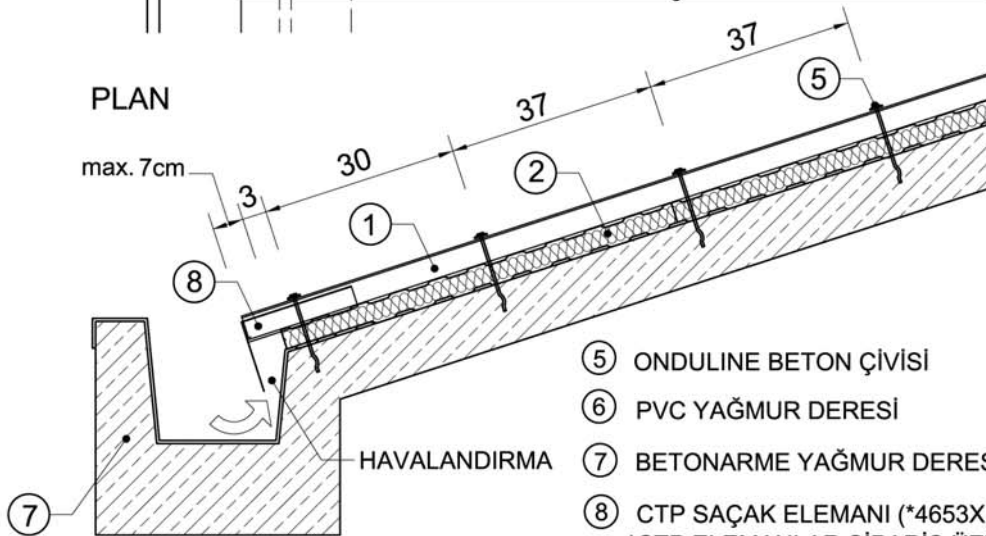


A-A KESİTİ

- ① ONDULINE HR 95/200
- ② EPS VEYA XPS ISI YALITIM LEVHASI
- ③ KAPLAMA TAHTASI 2/12
- ④ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ l=8cm.

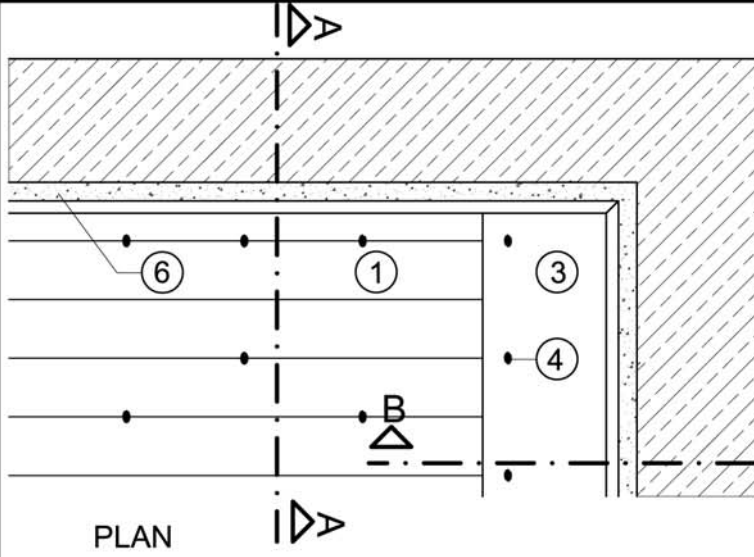


PLAN



B-B KESİTİ

- ⑤ ONDULINE BETON ÇİVİSİ
 - ⑥ PVC YAĞMUR DERESİ
 - ⑦ BETONARME YAĞMUR DERESİ
 - ⑧ CTP SAÇAK ELEMANI (*4653X)
- *CTP ELEMANLAR SİPARİŞ ÜZERİNE ÜRETİLİRLER

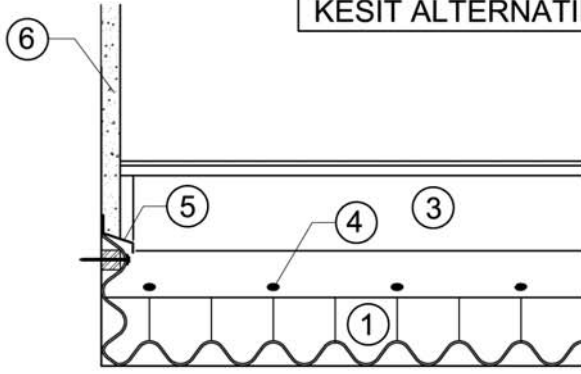


PLAN

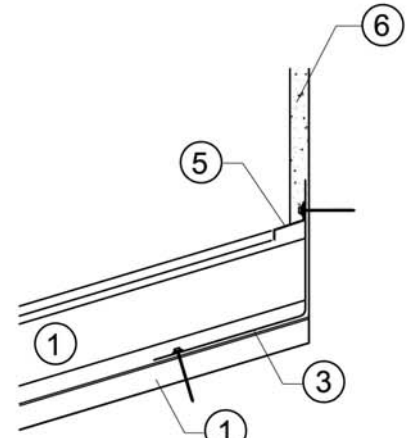
- ① ONDULINE HR 95/200
- ② ISI YALITIMI
- ③ ONDULINE MAHYA 48.5/200
- ④ GALVANİZLİ PLASTİK BAŞLIKLı MONOBLOK ÇİVİ
- ⑤ CTP DUVAR DİBİ Z PROFİLİ(4644X) *
- ⑥ SIVA
- ⑦ AHŞAP KADRON 5/5
- ⑧ MASTİK

*CTP ELEMANLAR SİPARİŞ ÜZERİNE ÜRETİLİRLER

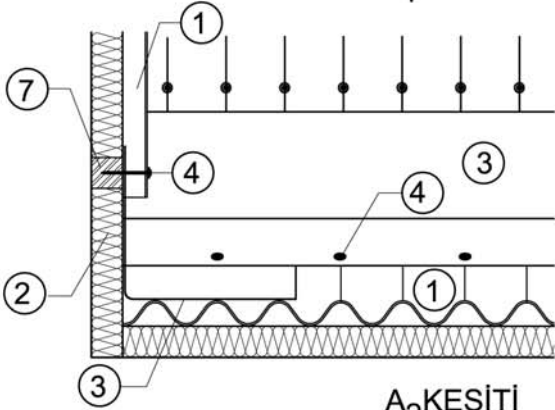
KESİT ALTERNATİFLERİ



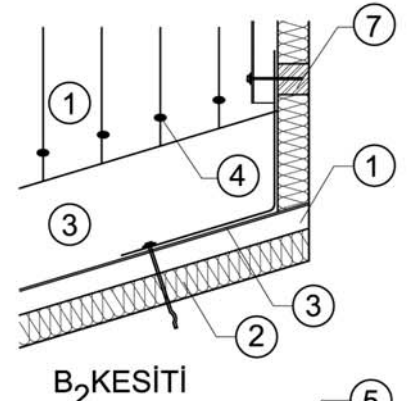
A₁ KESİTİ



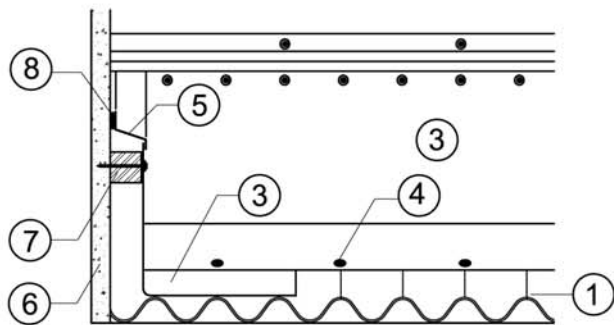
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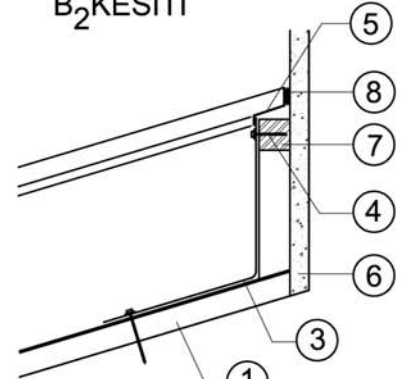
A₂ KESİTİ



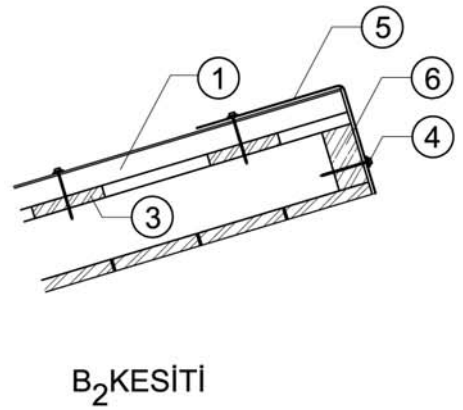
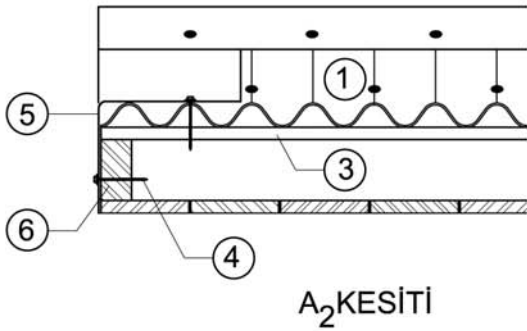
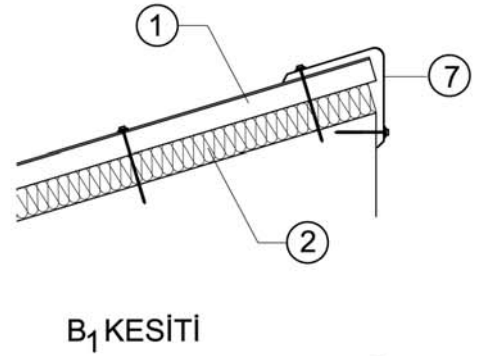
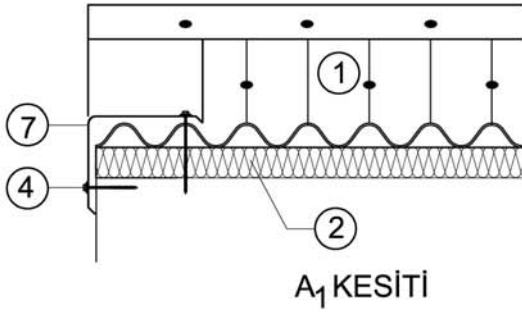
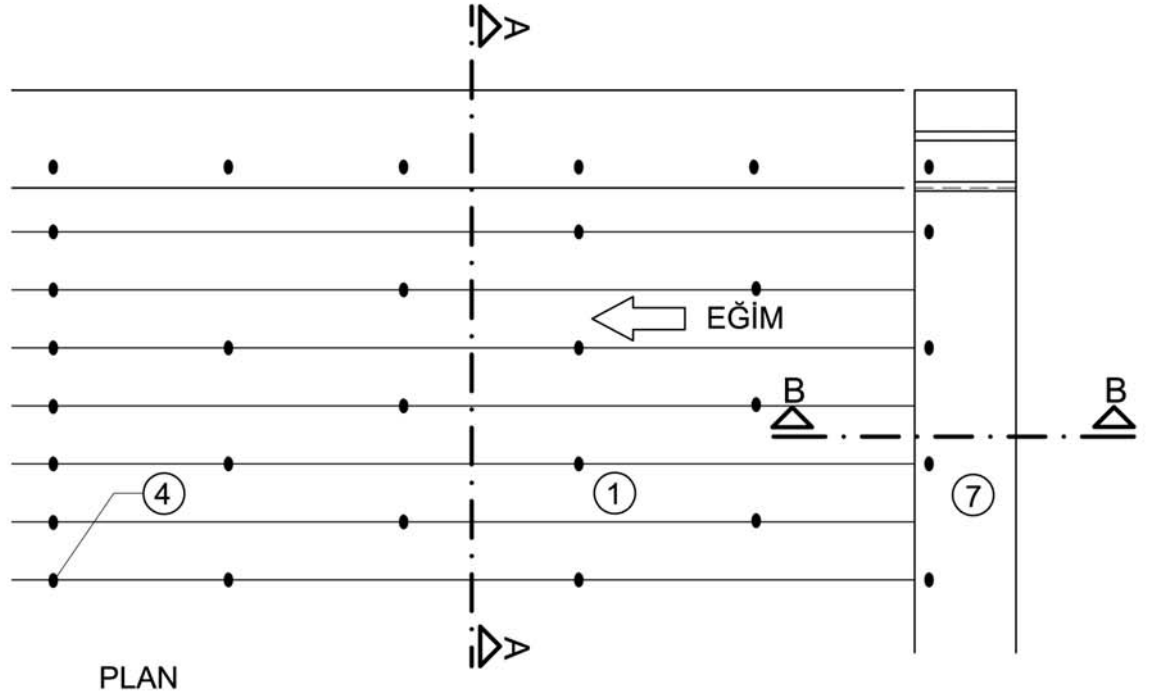
B₂ KESİTİ



A₃ KESİTİ

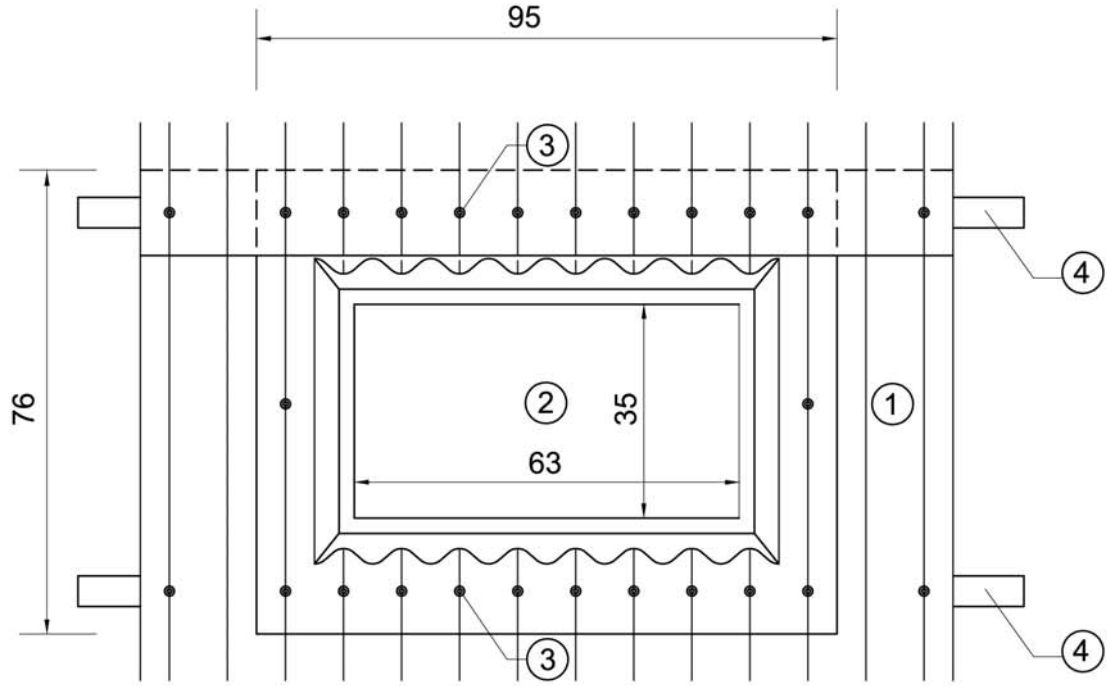


B₃ KESİTİ



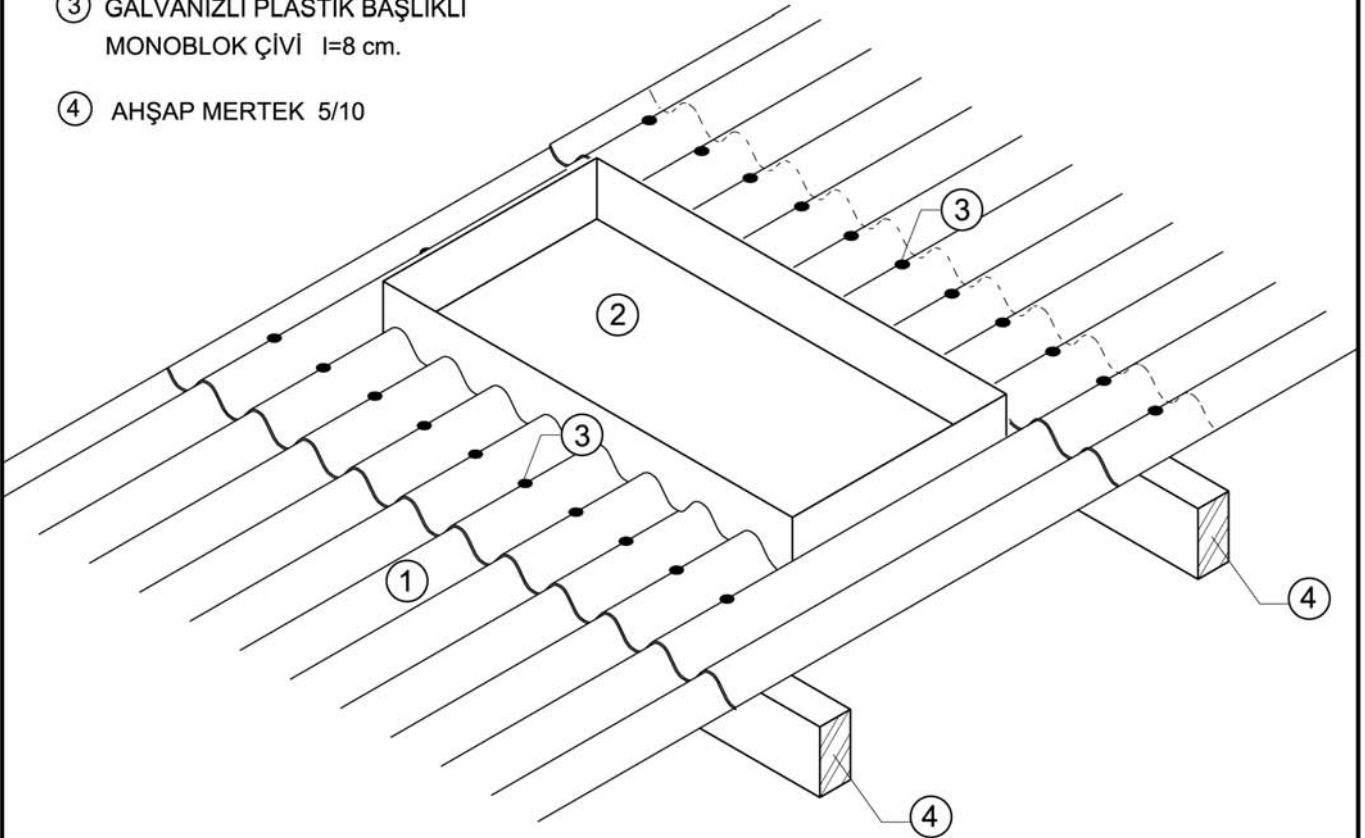
- ① ONDULINE HR 95/200
- ② ISI YALITIMI
- ③ KAPLAMA TAHTASI 2/12
- ④ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ

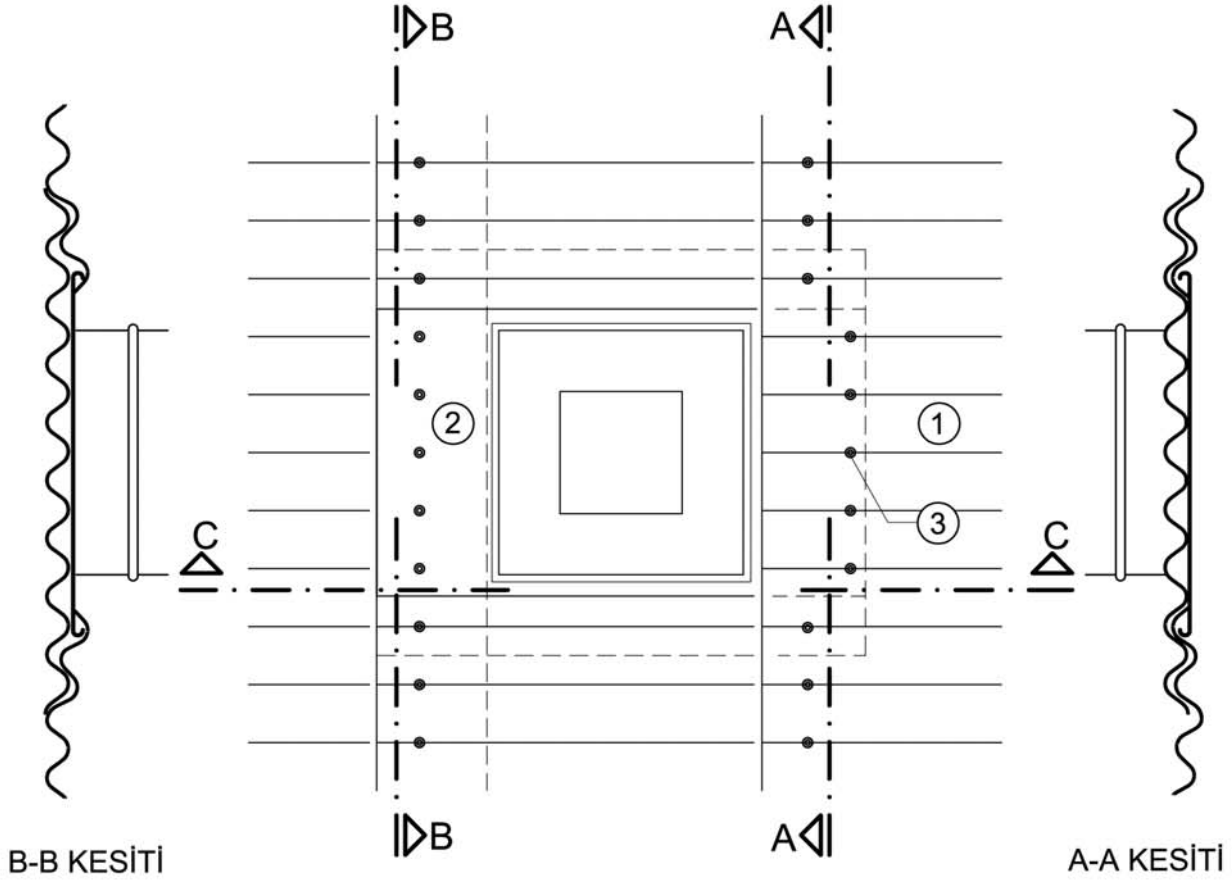
- ⑤ ONDULINE HR MAHYA 48.5/200
- ⑥ AHŞAP MERTEK
- ⑦ KALKAN DUVARI KENARI (4671X)



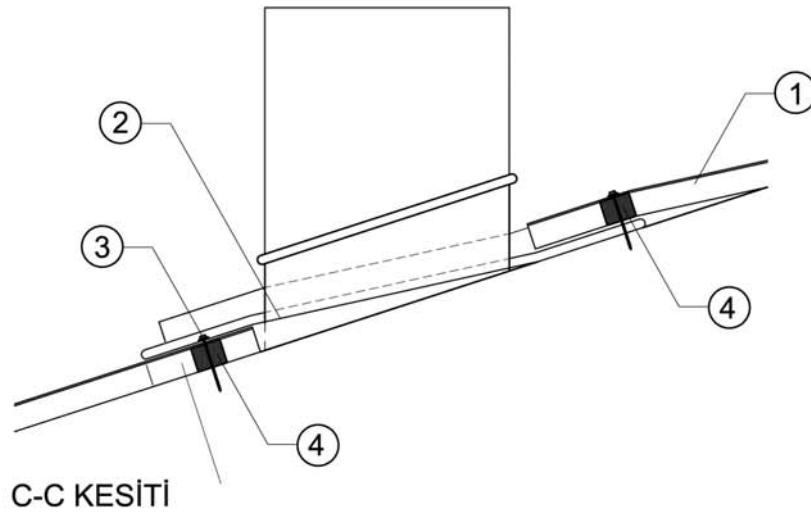
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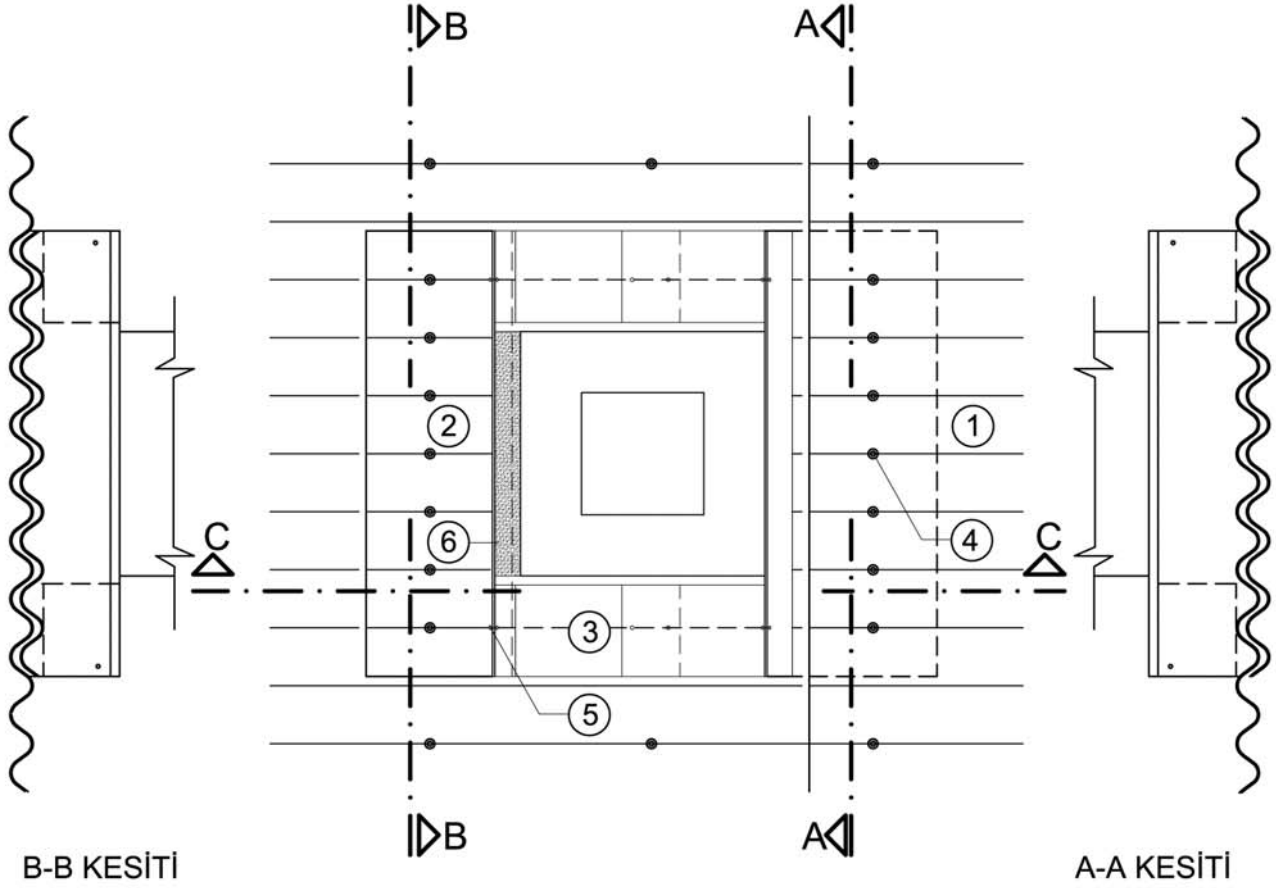
- ① ONDULINE HR 95/200
- ② ÇATI KAPAĞI
- ③ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ l=8 cm.
- ④ AHŞAP MERTEK 5/10



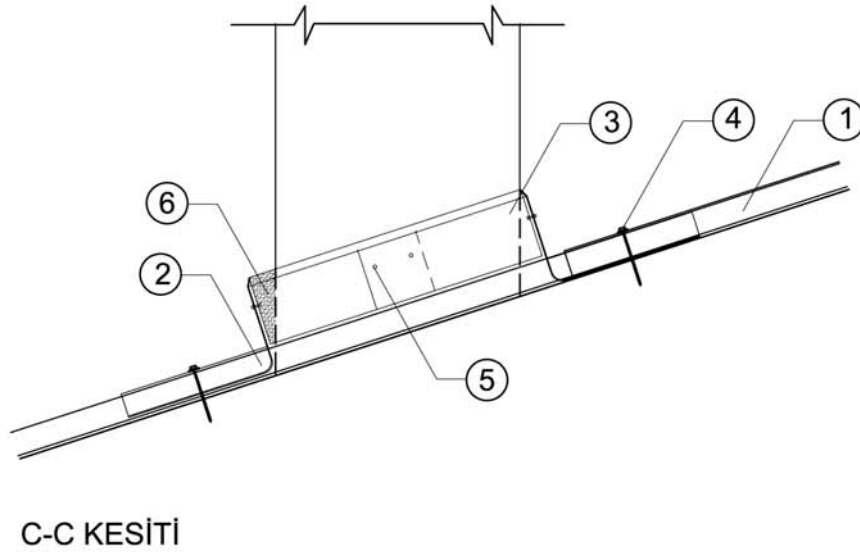


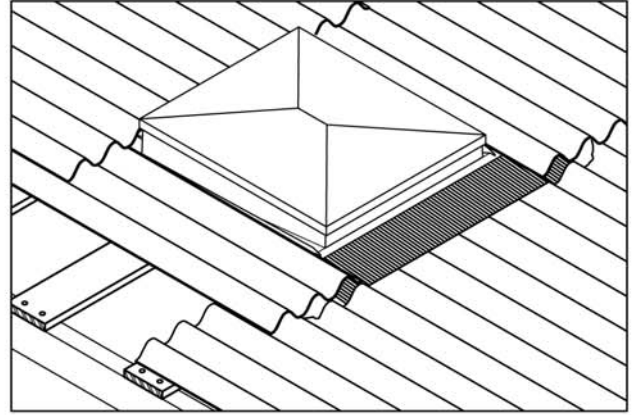
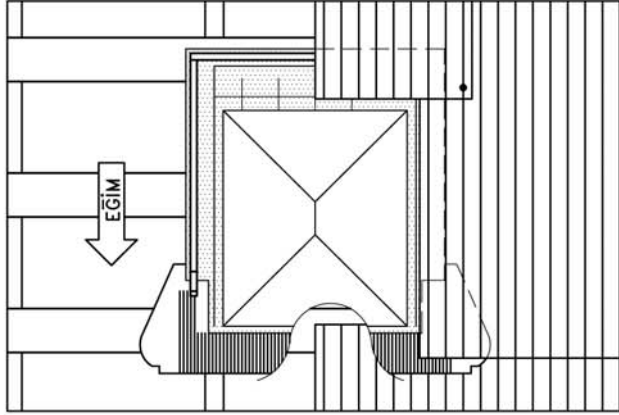
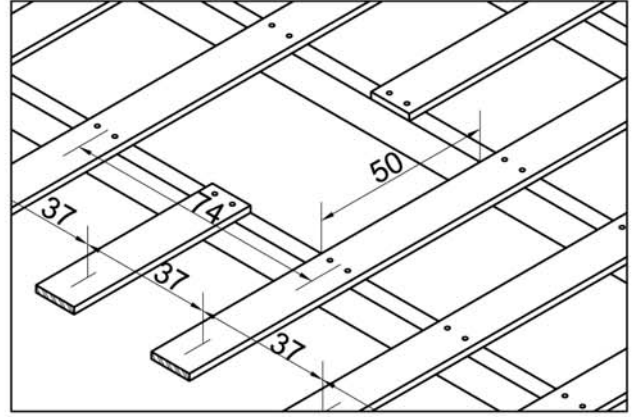
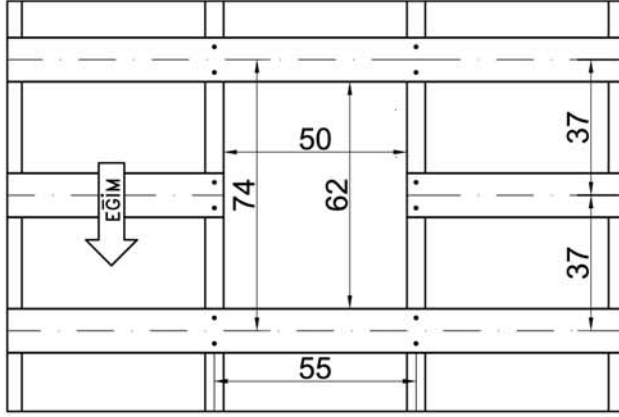
- ① ONDULINE HR 95/200
- ② ÇİNKO BACA DİBİ ELEMANI
- ③ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ l=8 cm.
- ④ ONDULINE HR OLUKLU BİTÜMLÜ SÜNGER



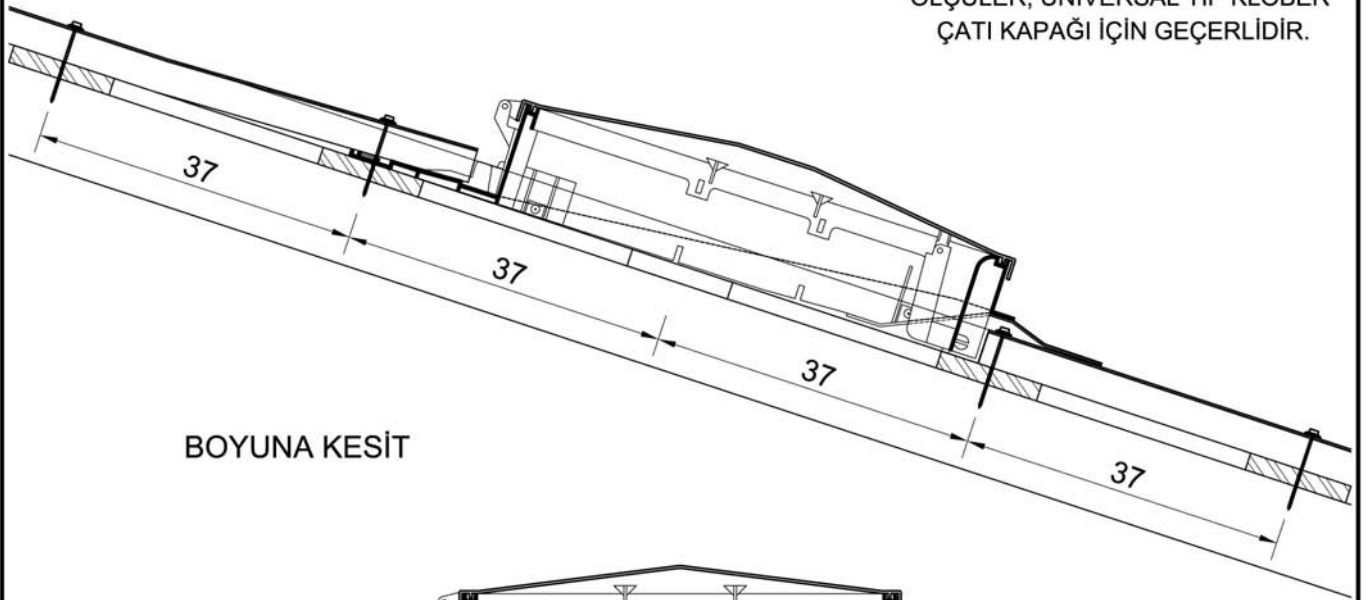


- ① ONDULINE HR 95/200
- ② OLUKLU BACA DİBİ ELEMANI(4641X)
- ③ OLUKSUZ BACA DİBİ ELEMANI(4663X)
- ④ GALVANİZLİ PLASTİK BAŞLIKLİ
MONOBLOK ÇİVİ l=8 cm.
- ⑤ POP PERÇİN
- ⑥ HARÇ

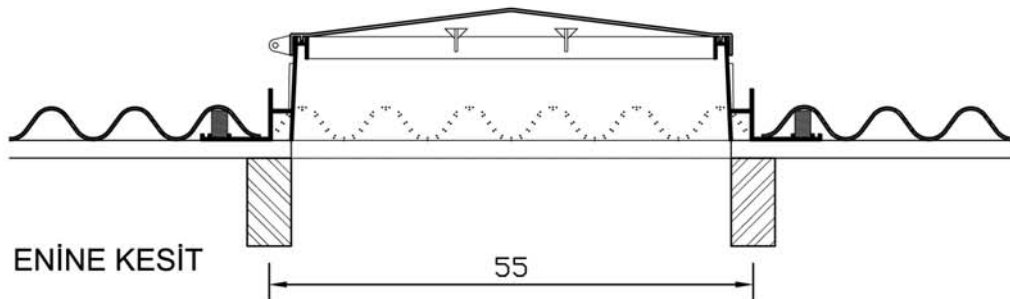




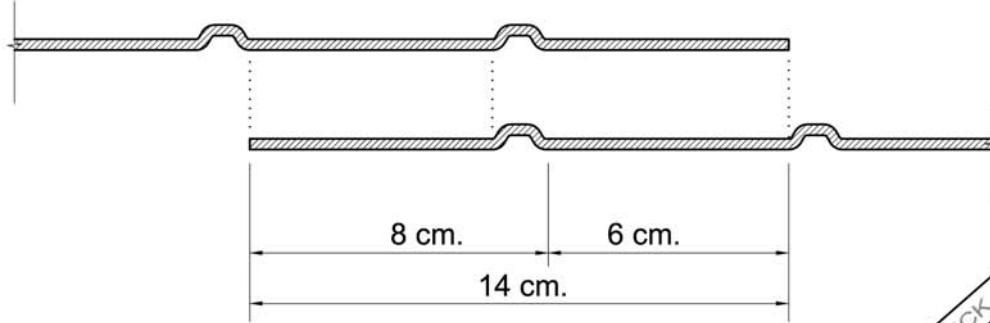
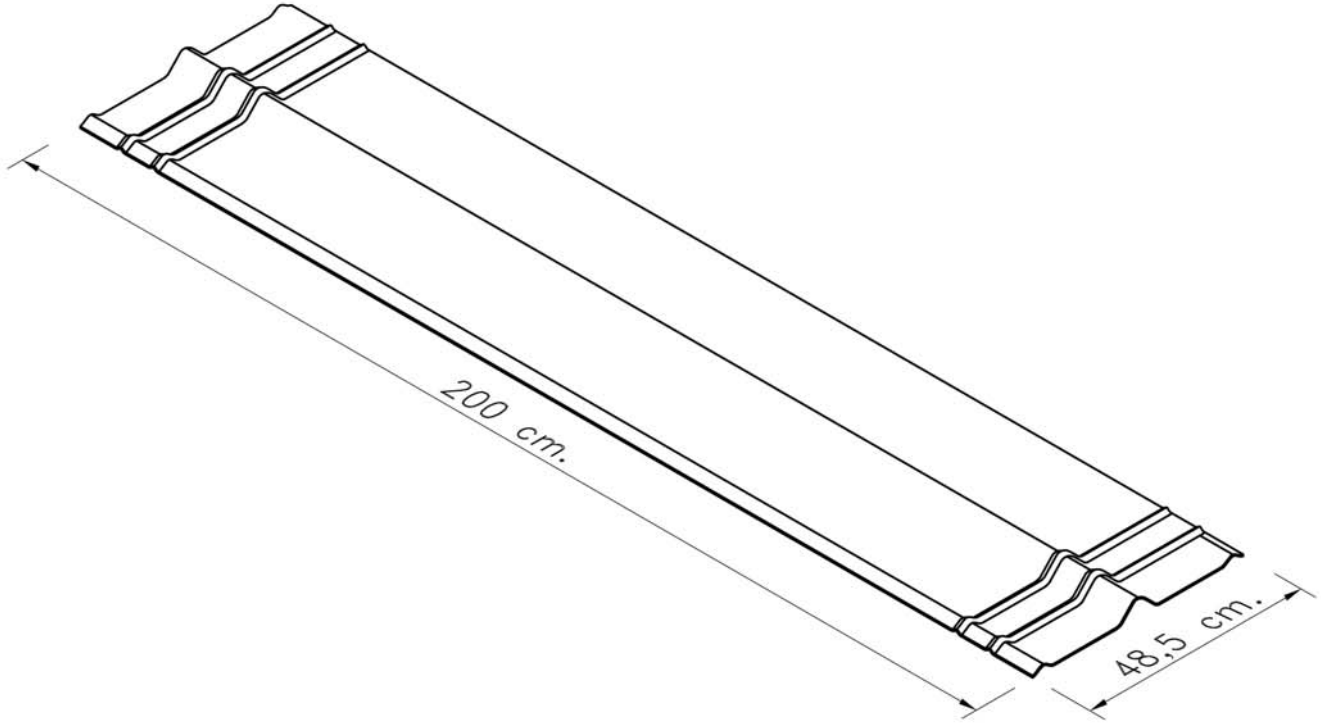
* ÖLÇÜLER, UNİVERSAL TİP KLÖBER
ÇATI KAPAĞI İÇİN GEÇERLİDİR.



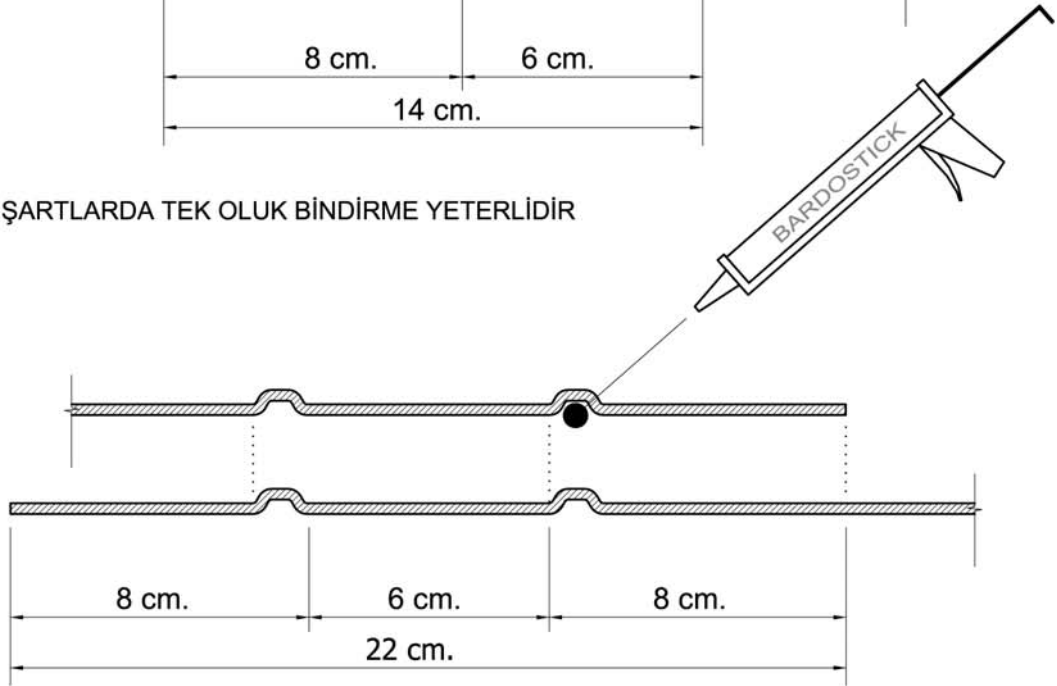
BOYUNA KESİT



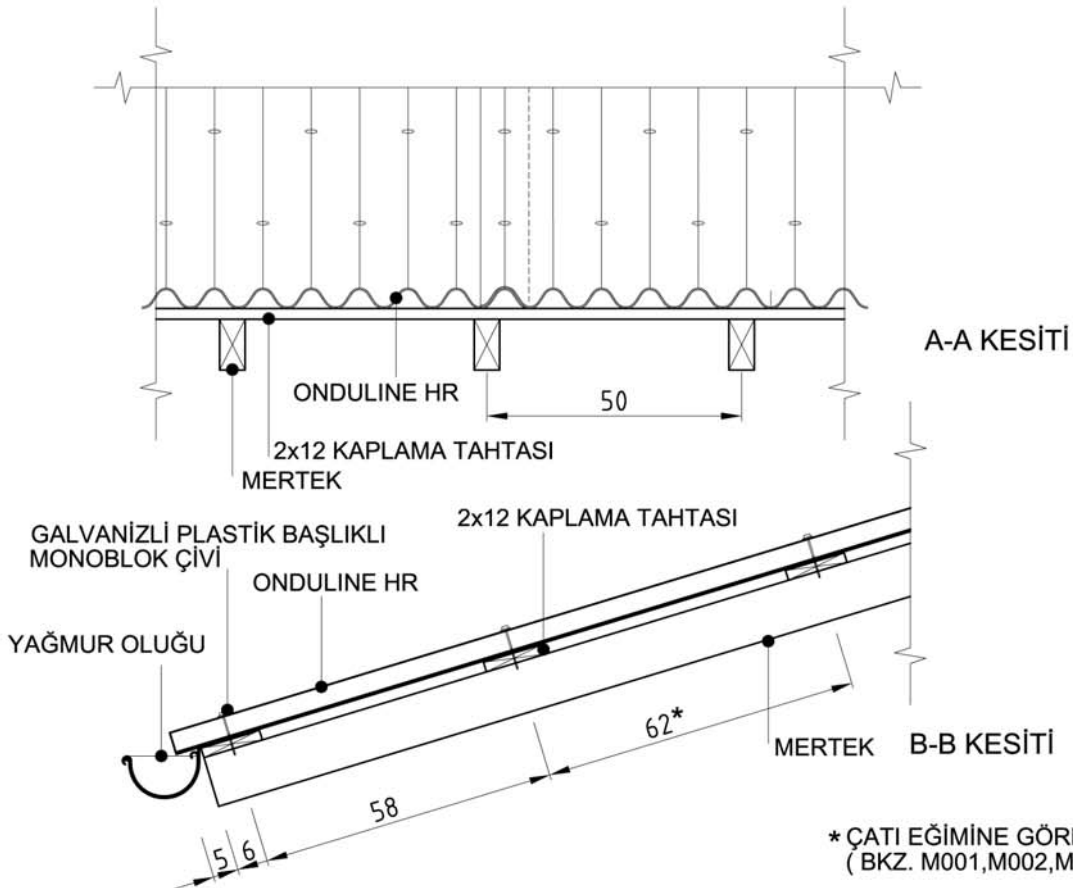
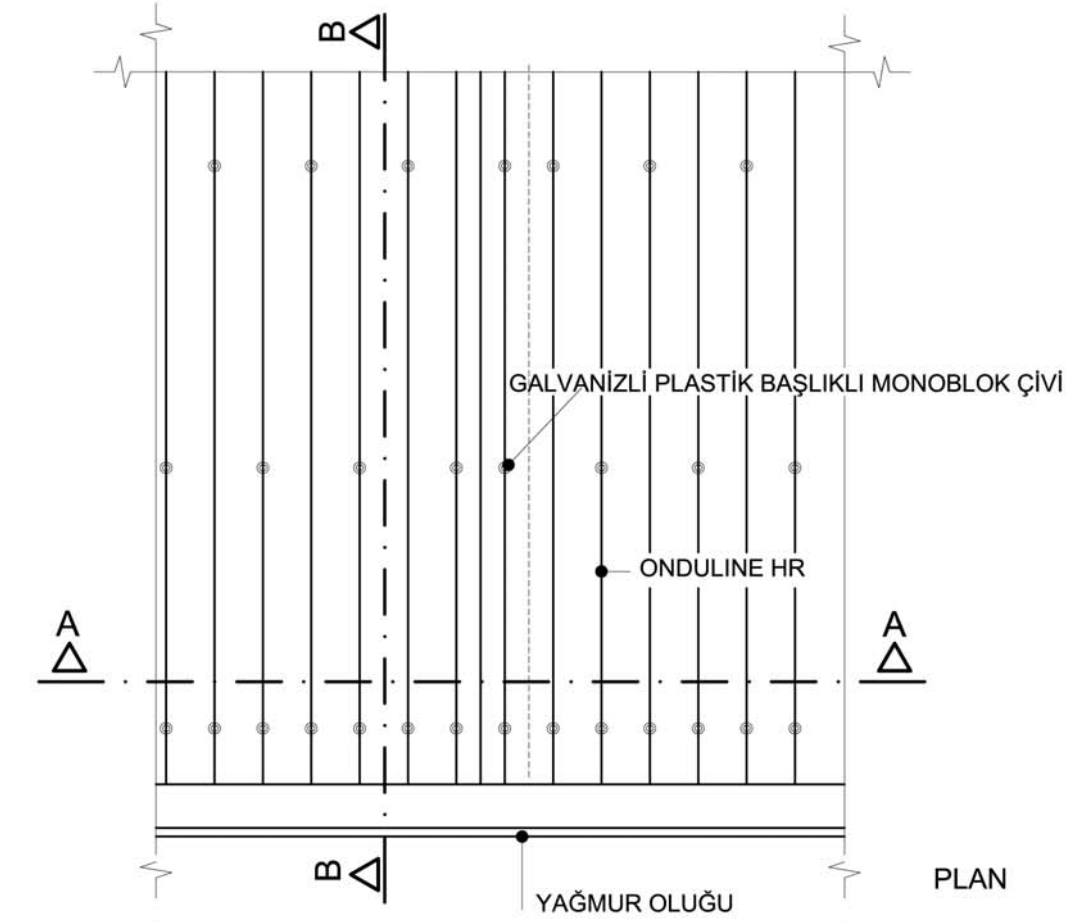
ENİNE KESİT

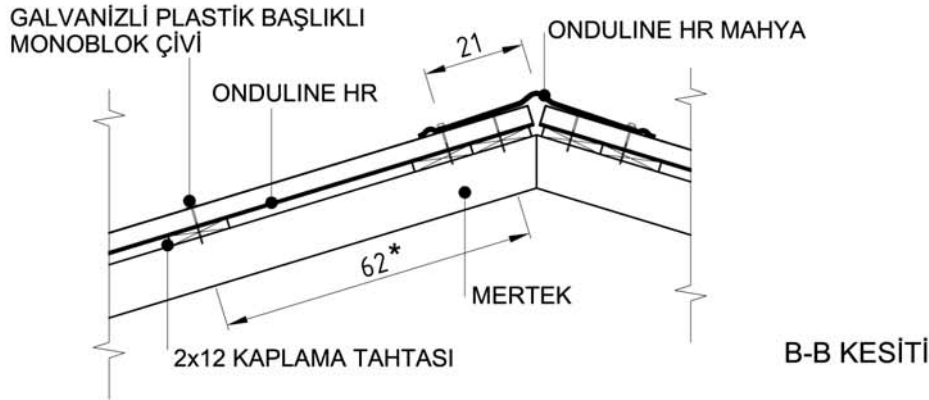
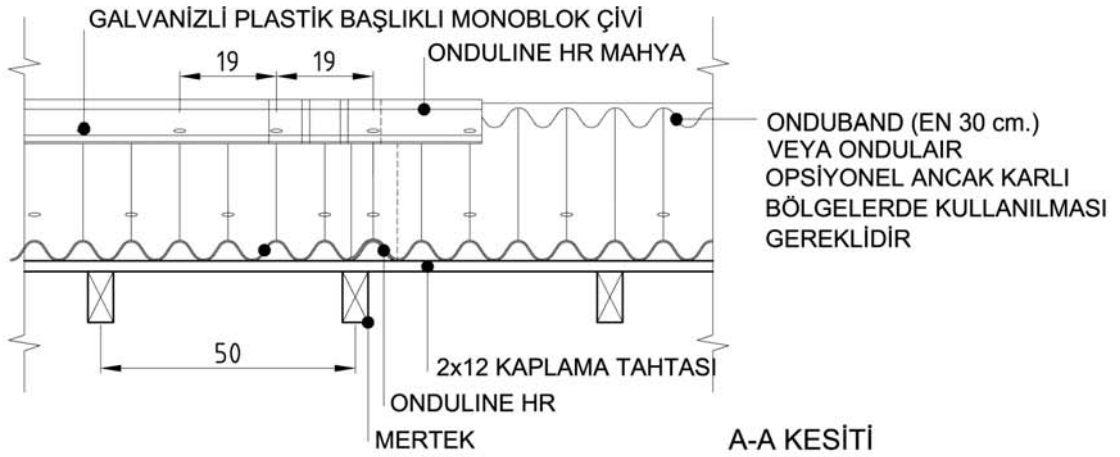
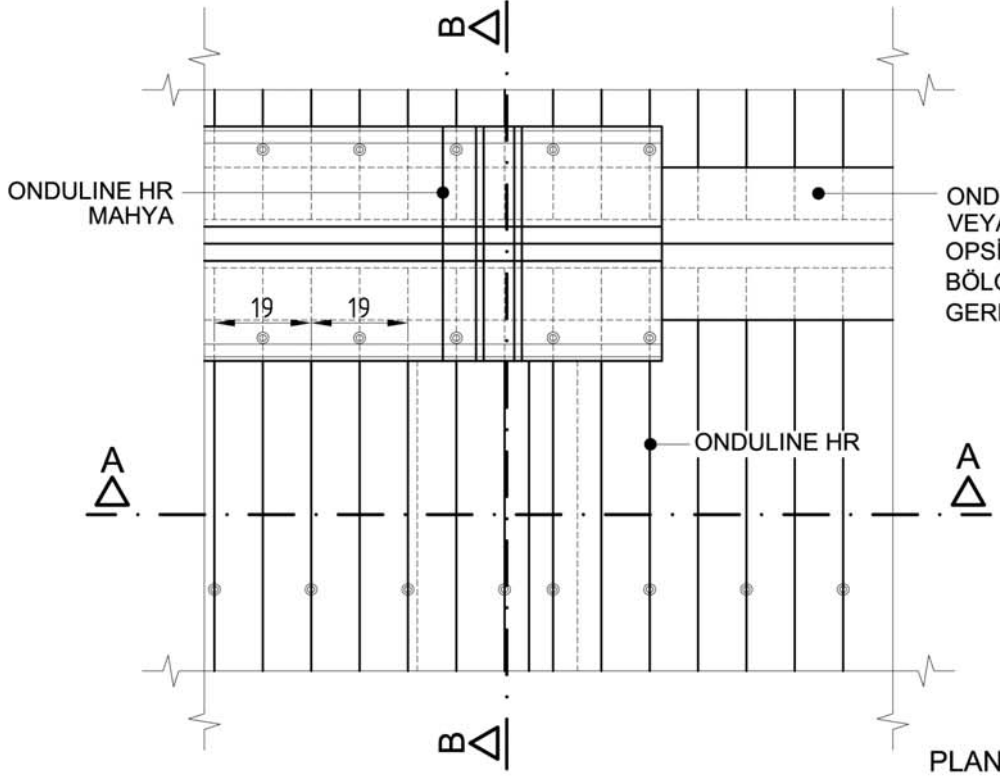


NORMAL ŞARTLARDA TEK OLUK BİNDİRME YETERLİDİR

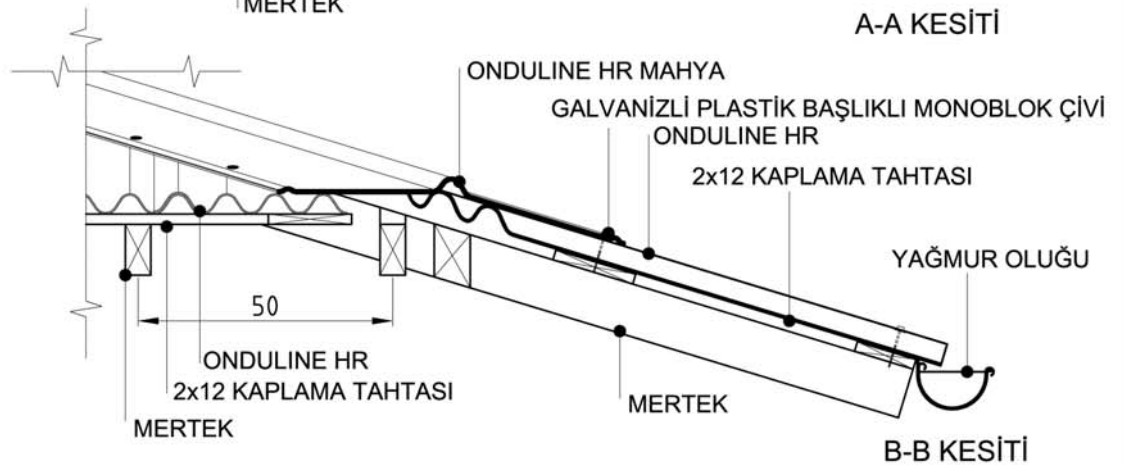
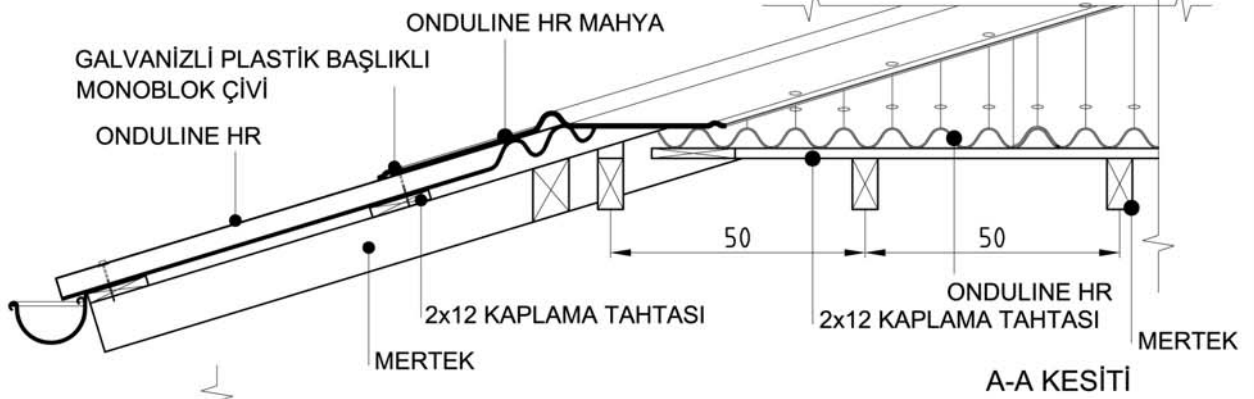
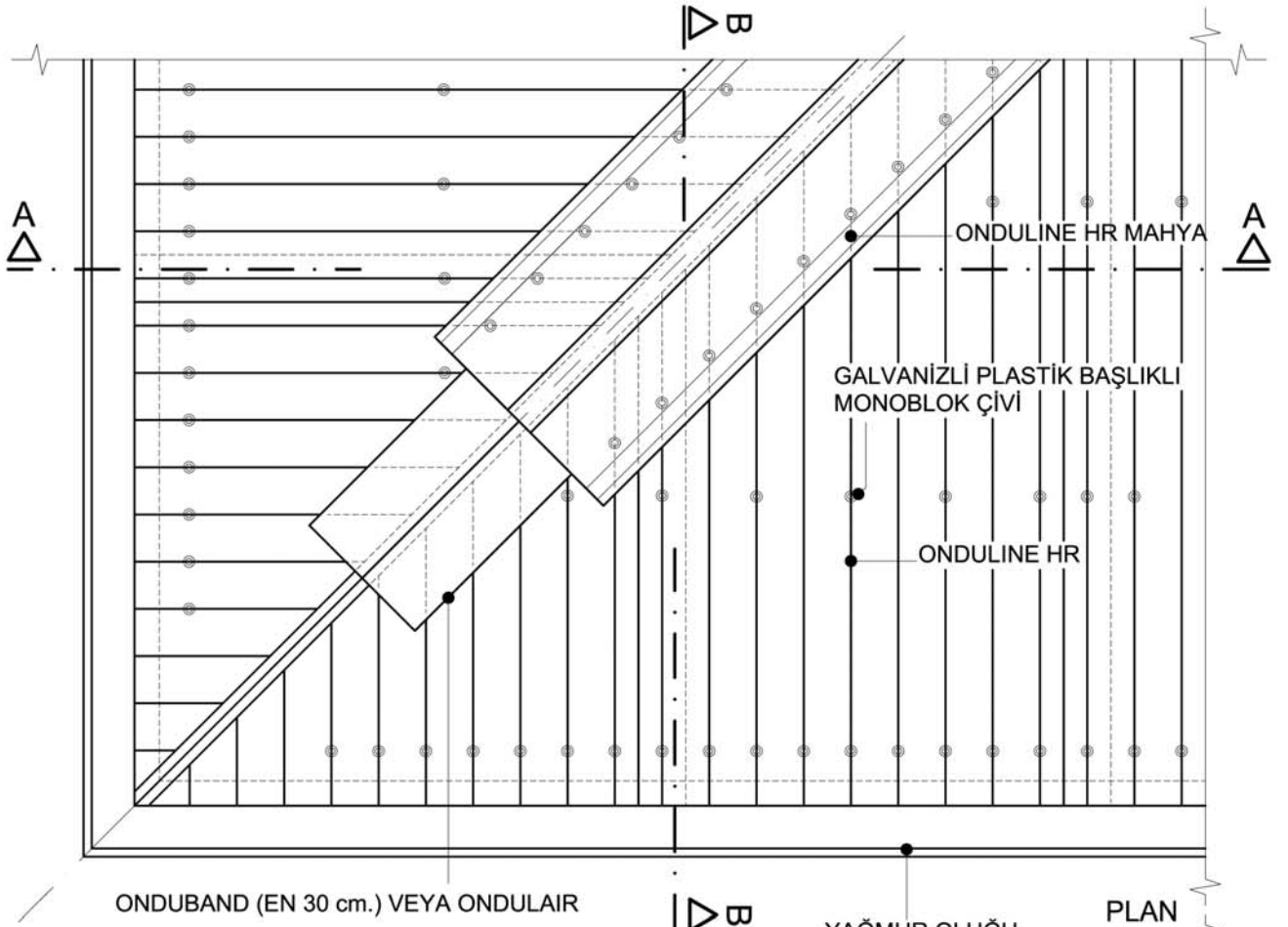


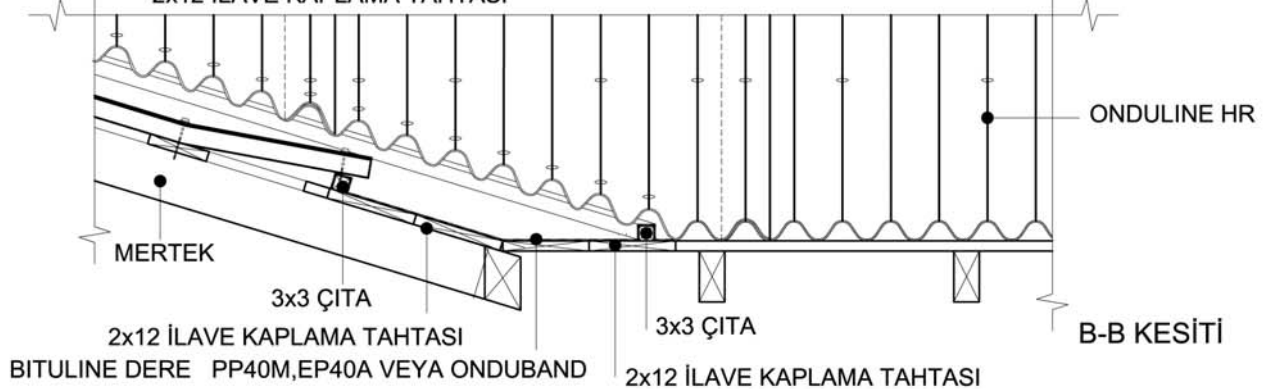
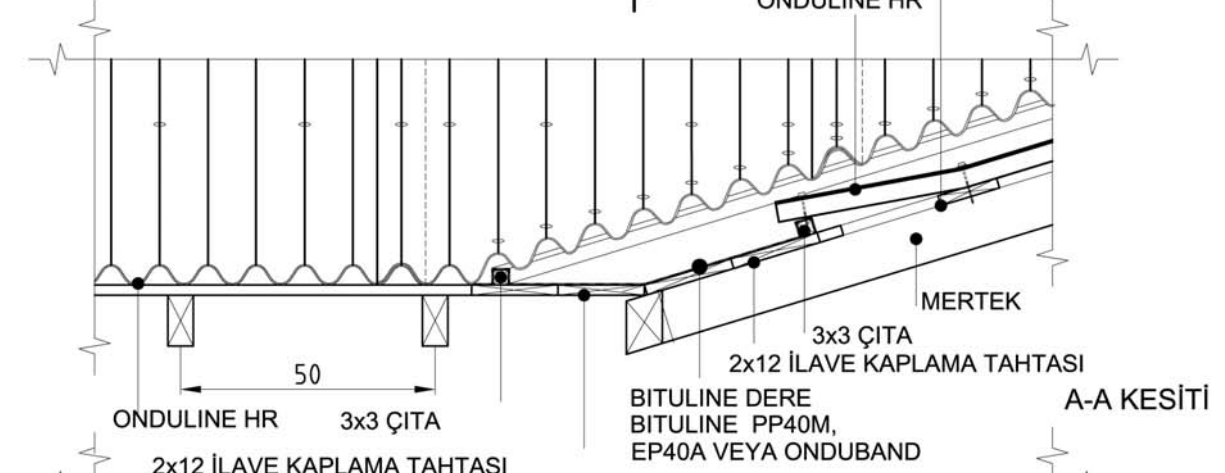
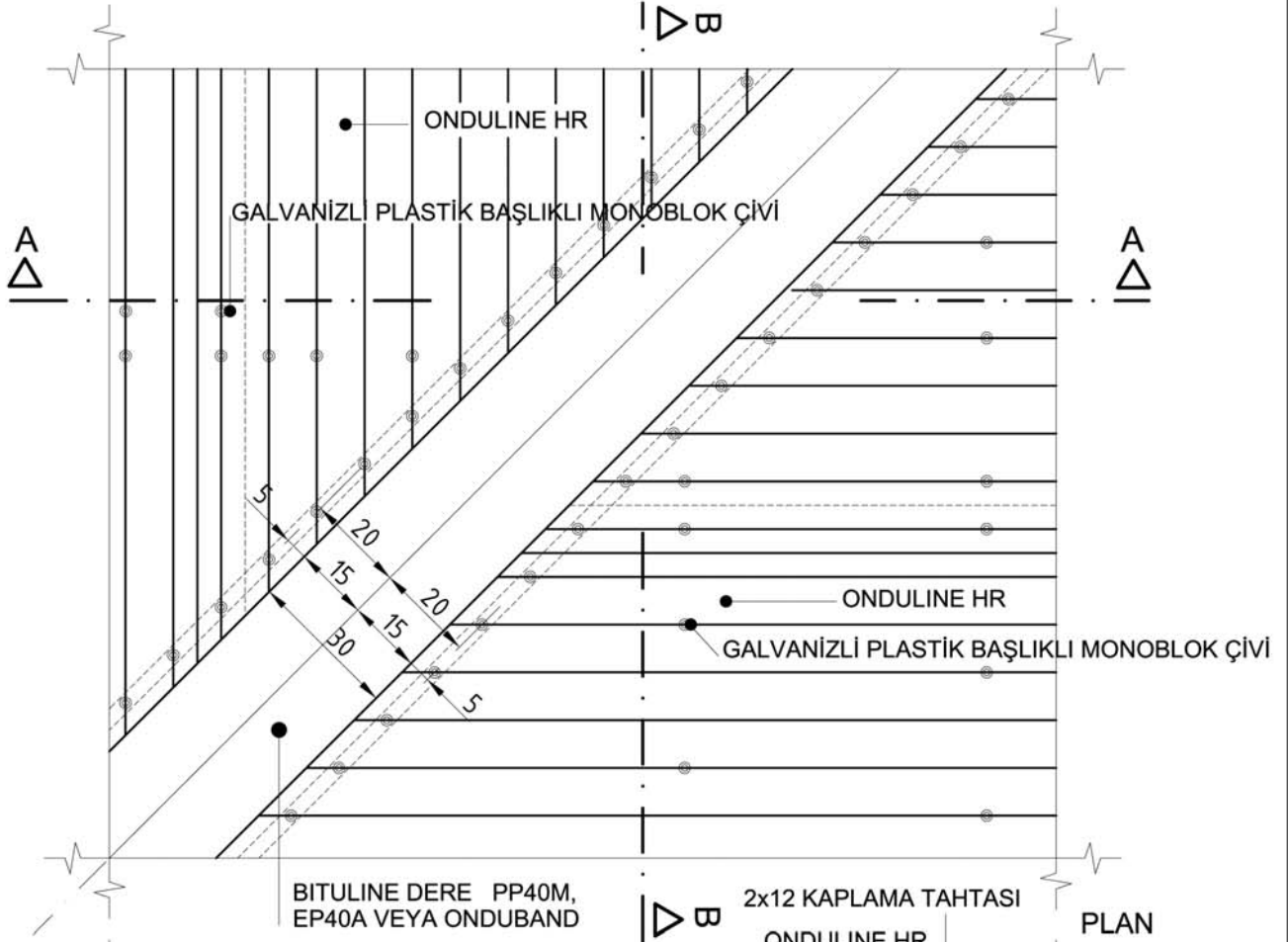
OLAĞANÜSTÜ YAĞIŞLI VE RÜZGARLI BÖLGELERDE AYRICA ÇATI EĞİMİNİN % 15 TEN AZ OLDUĞU ÇATILARDA ÇİFT OLUK BİNDİRME VE BARDOSTICK UYGULANIR

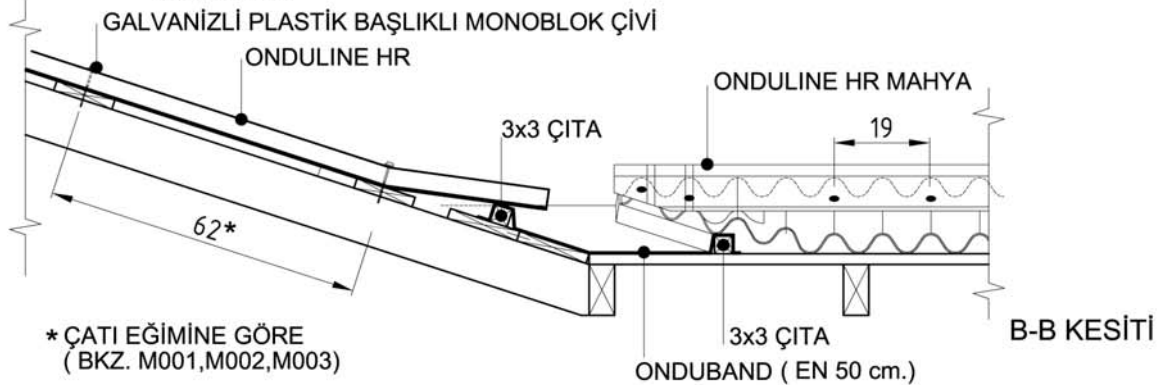
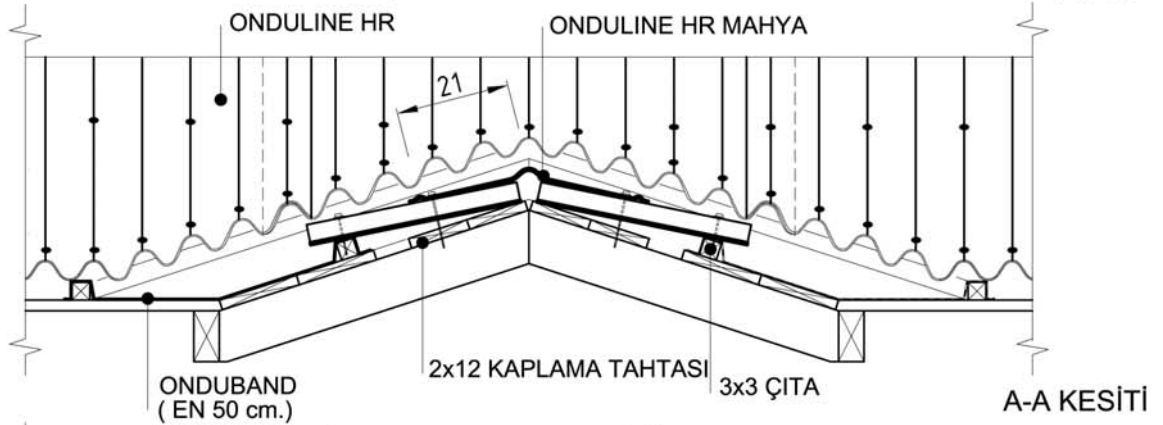
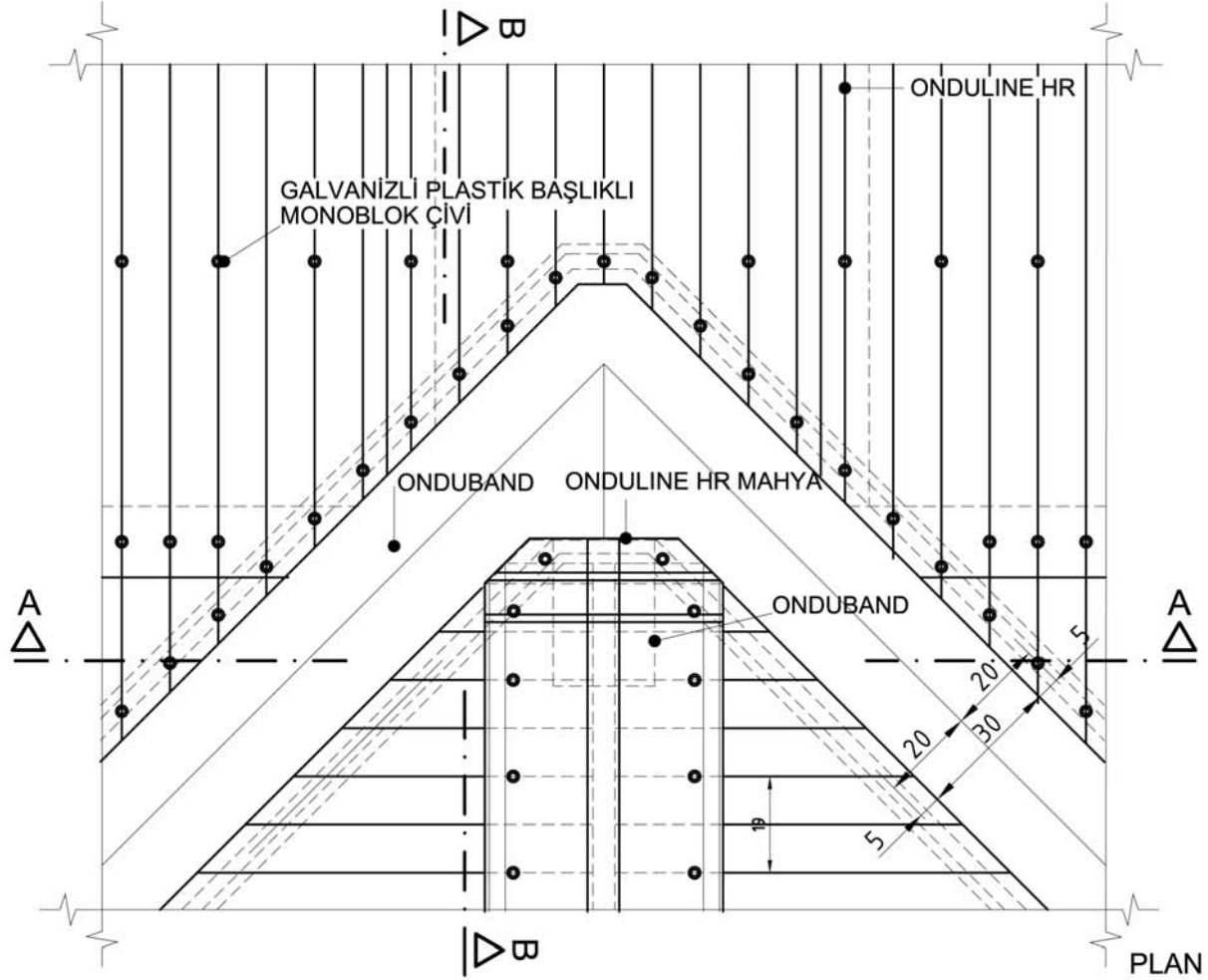




* ÇATI EĞİMİNE GÖRE
(BKZ. M001, M002, M003)

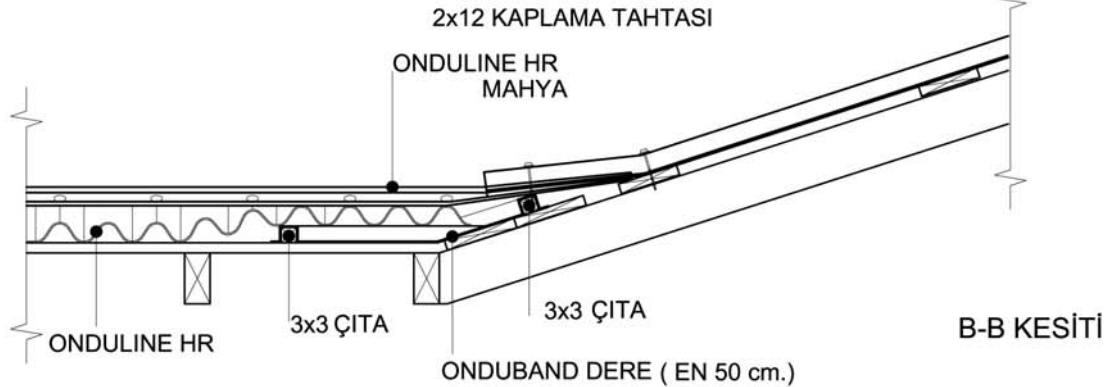
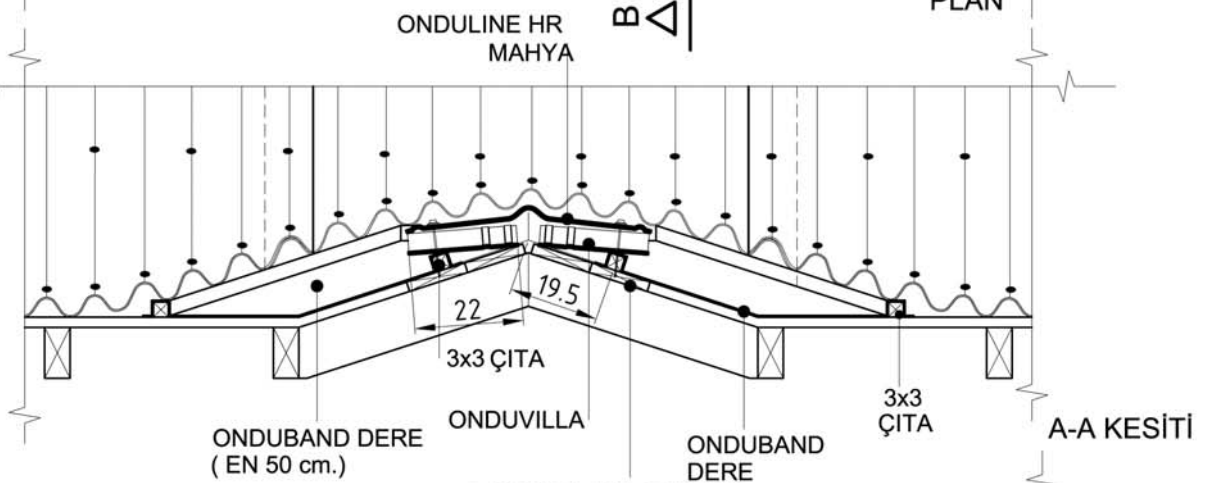
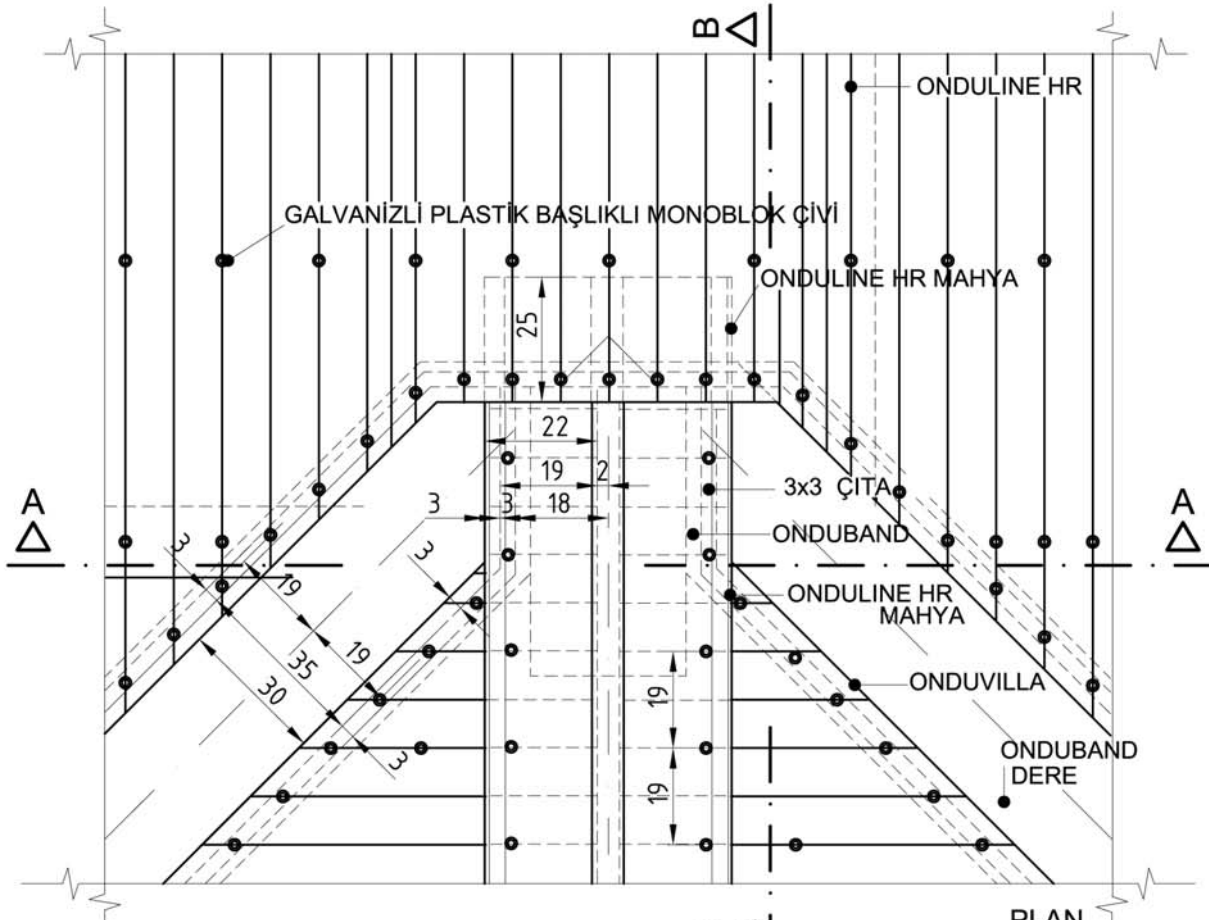




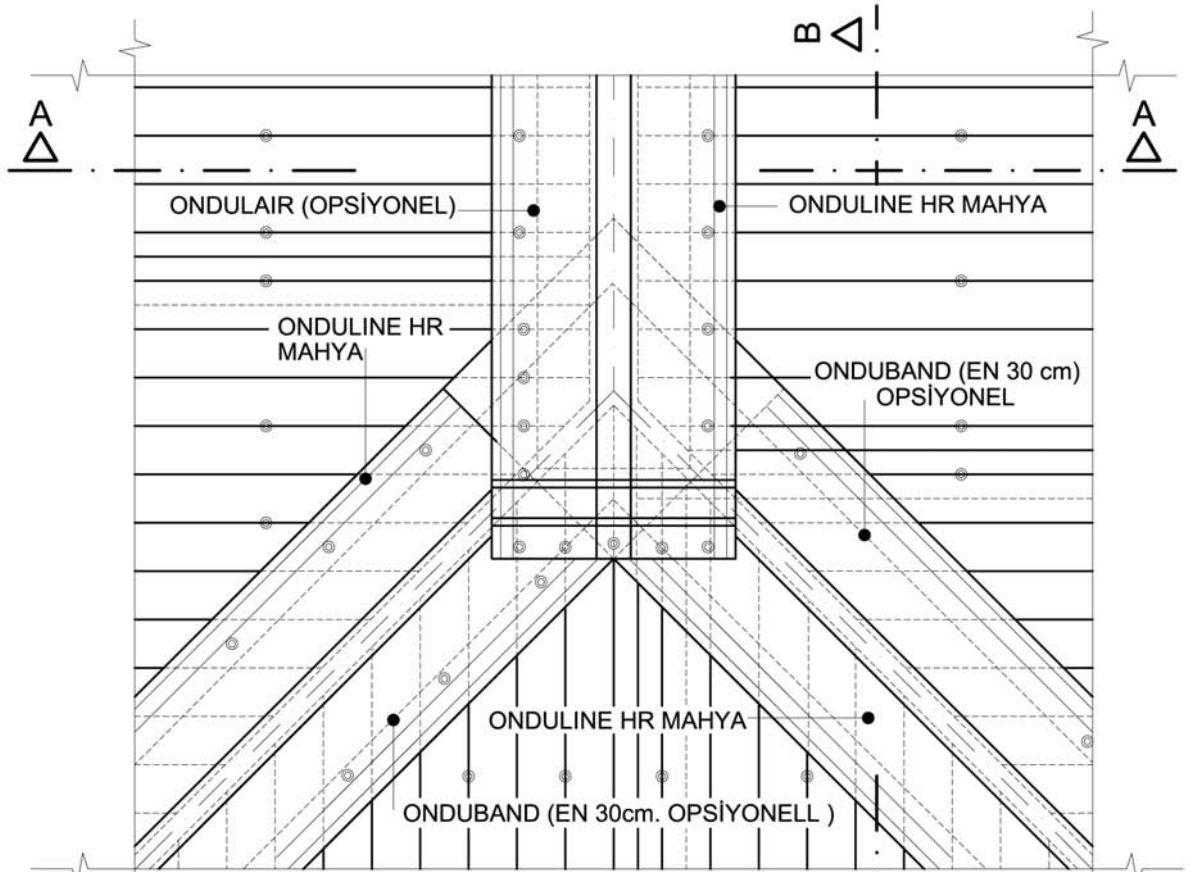


* ÇATI EĞİMİNE GÖRE
(BKZ. M001, M002, M003)

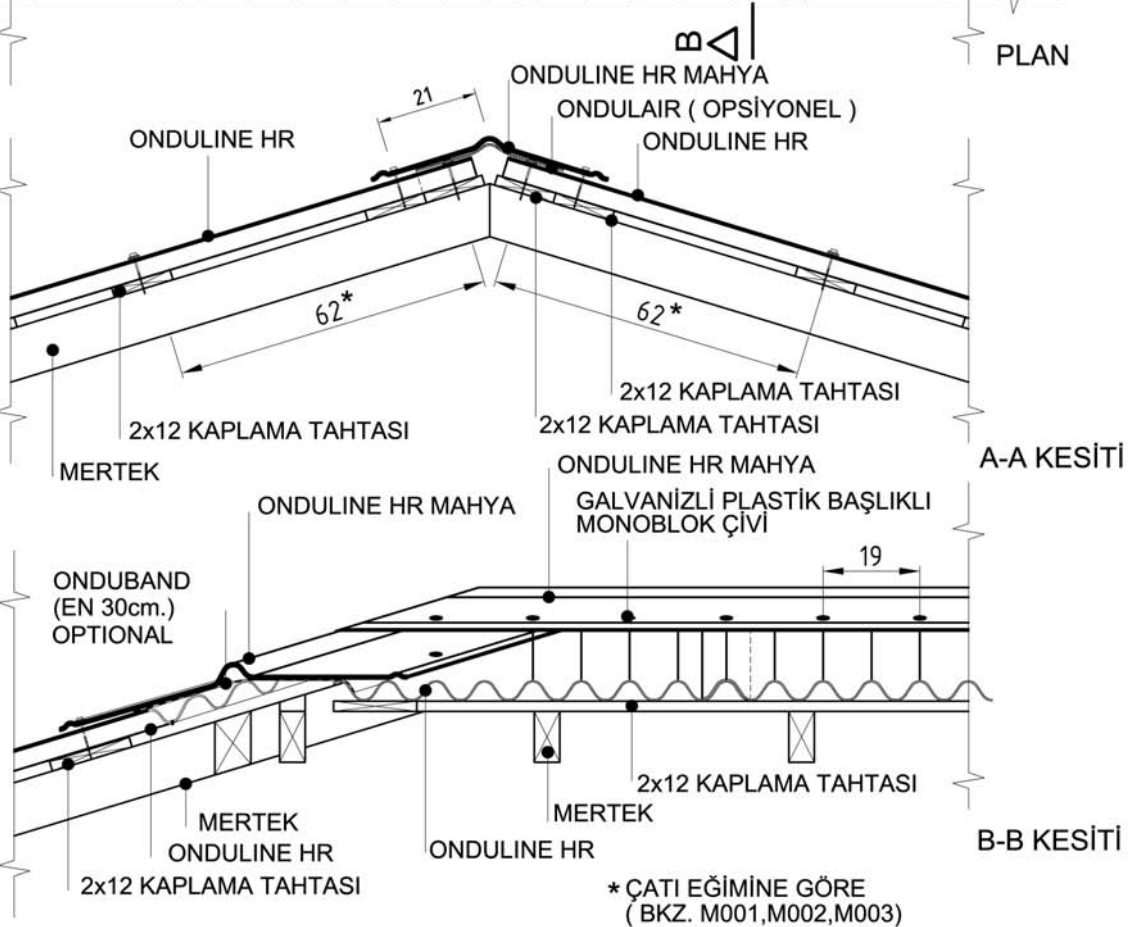
DERE İMALATINDA BITULINE PP40MVEYA EP40A KULLANILABİLİR (EN 50cm.)

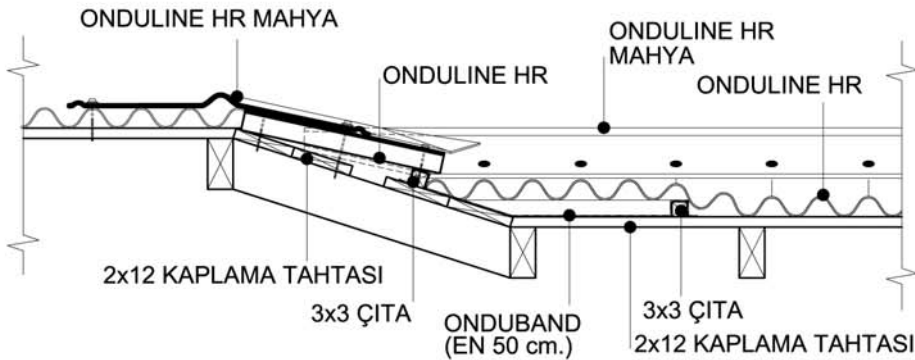
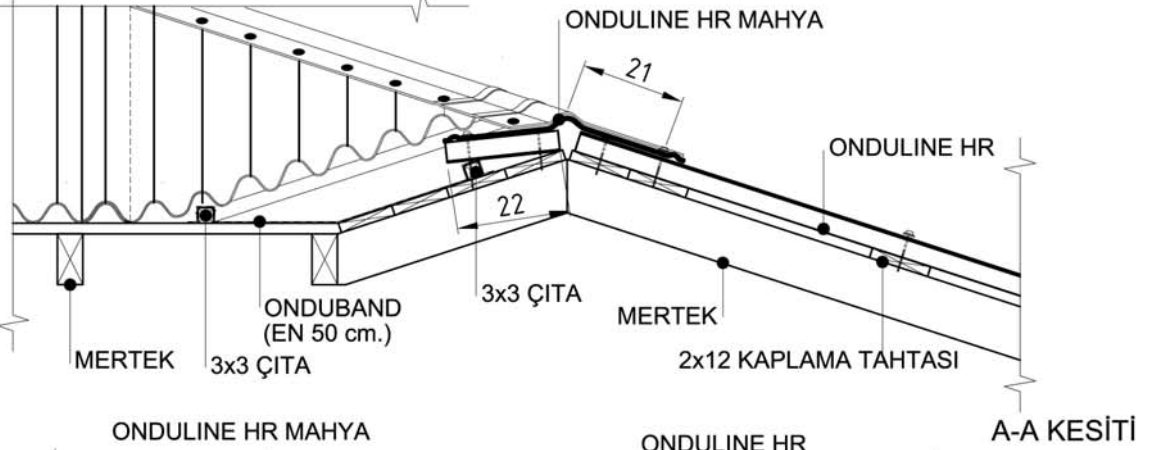
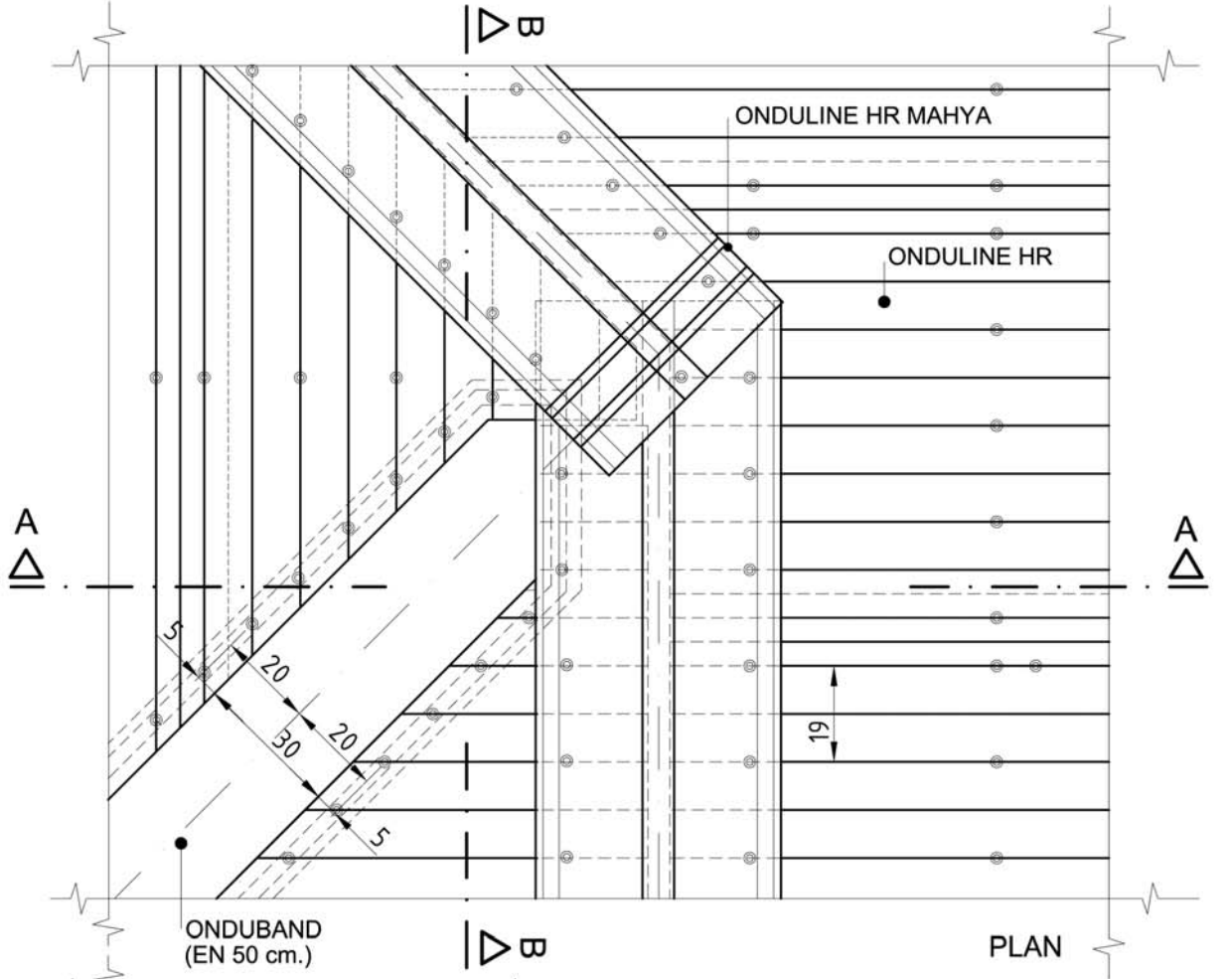


DERE İMALATINDA BITULINE PP40MVEYA EP40A KULLANILABİLİR (EN 50cm.)

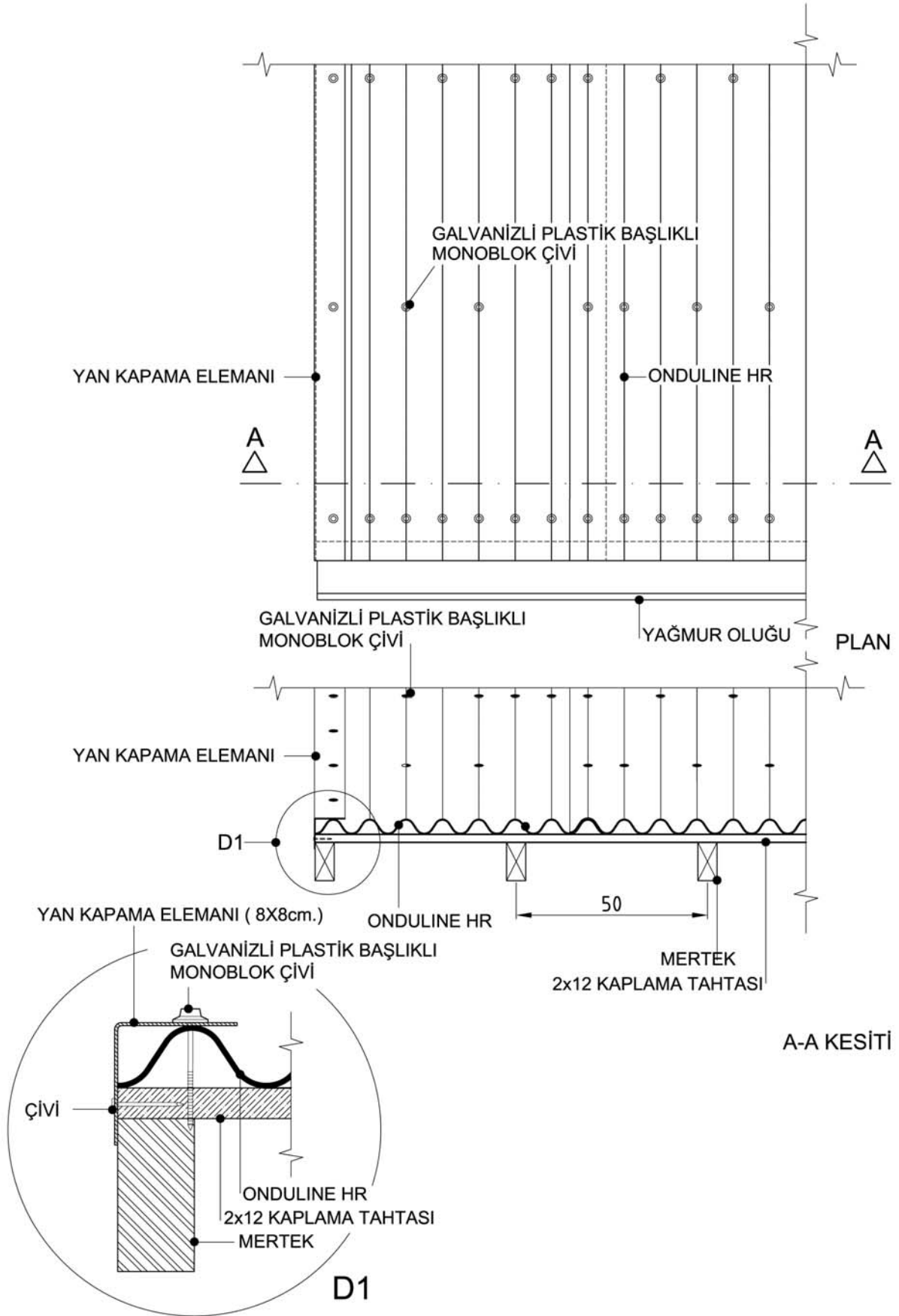


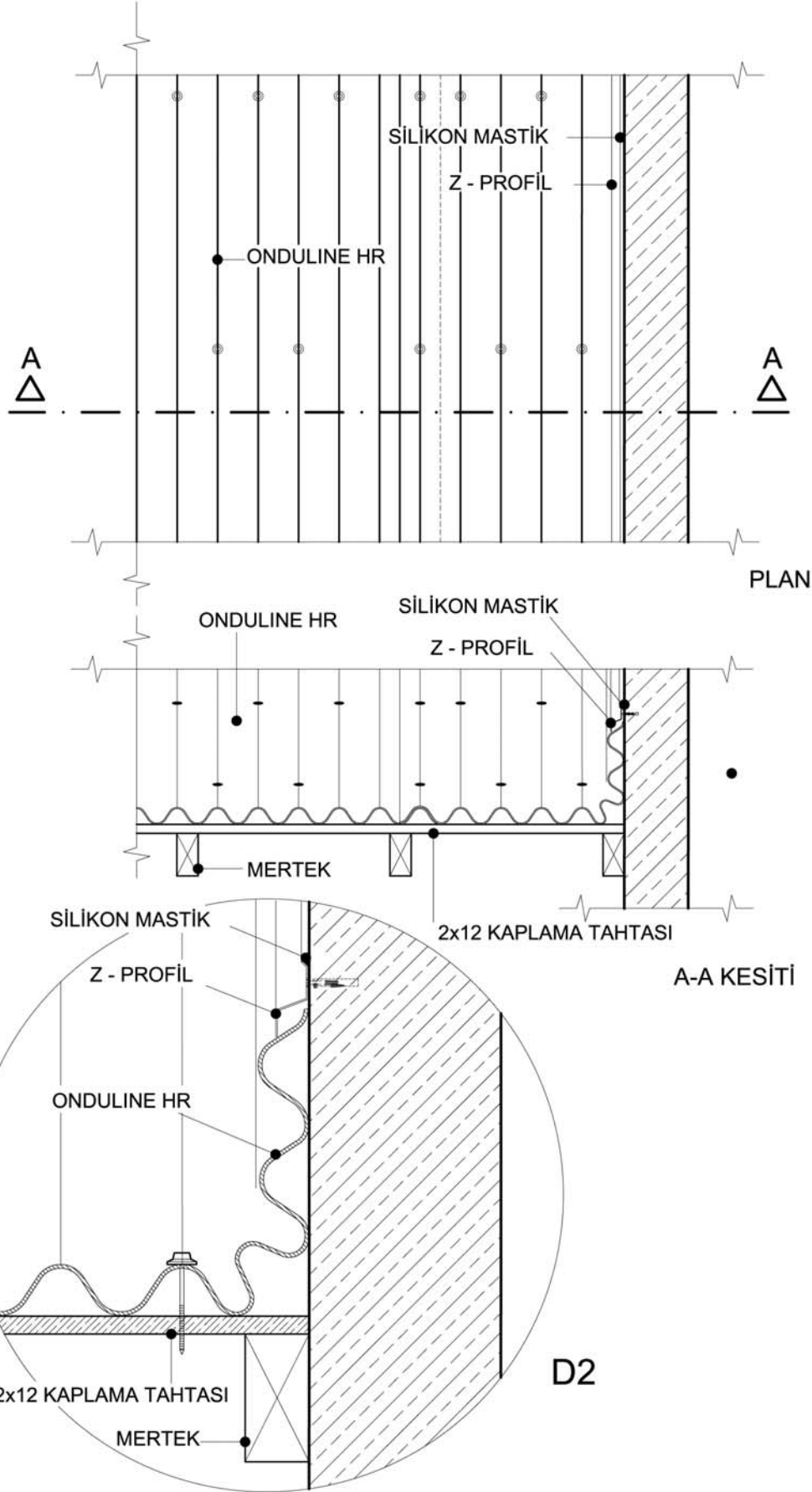
PLAN

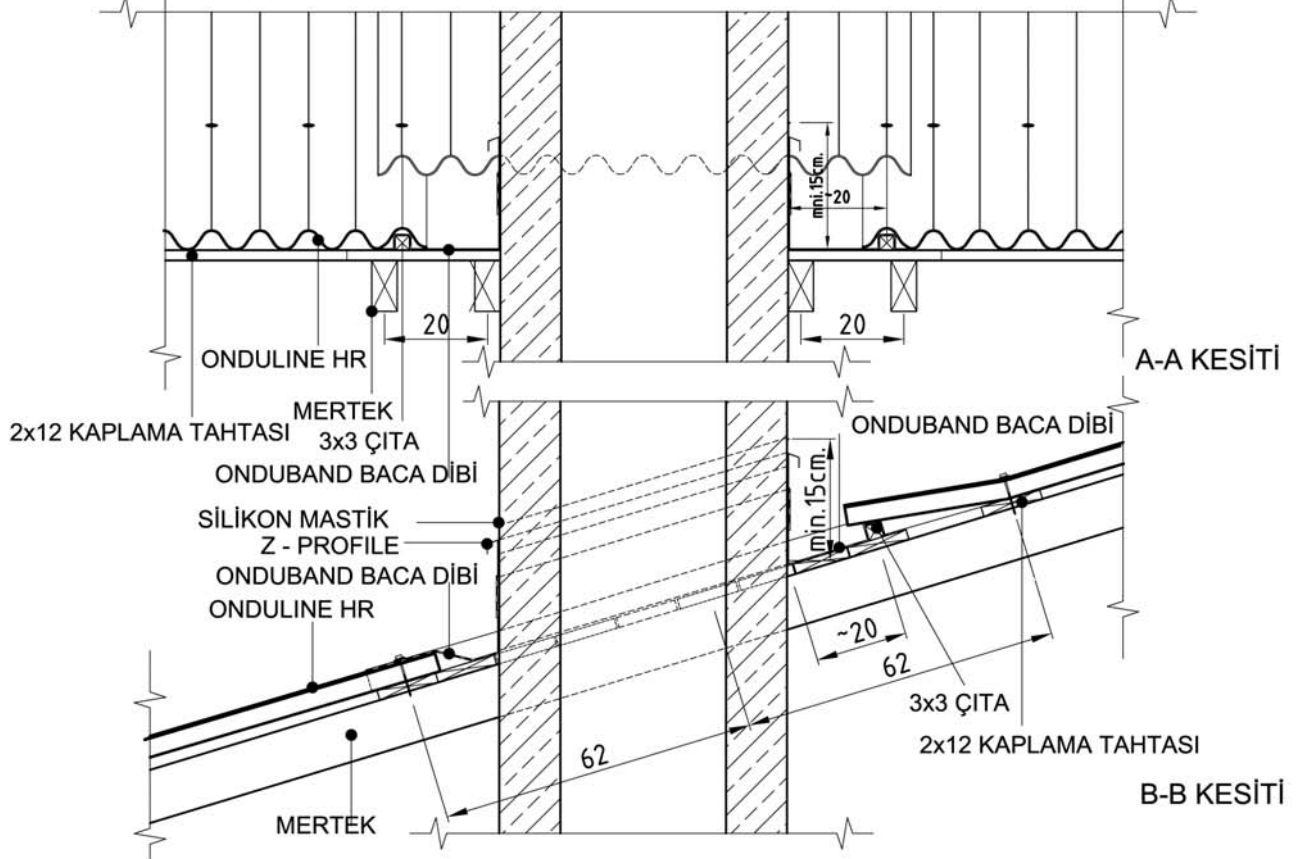
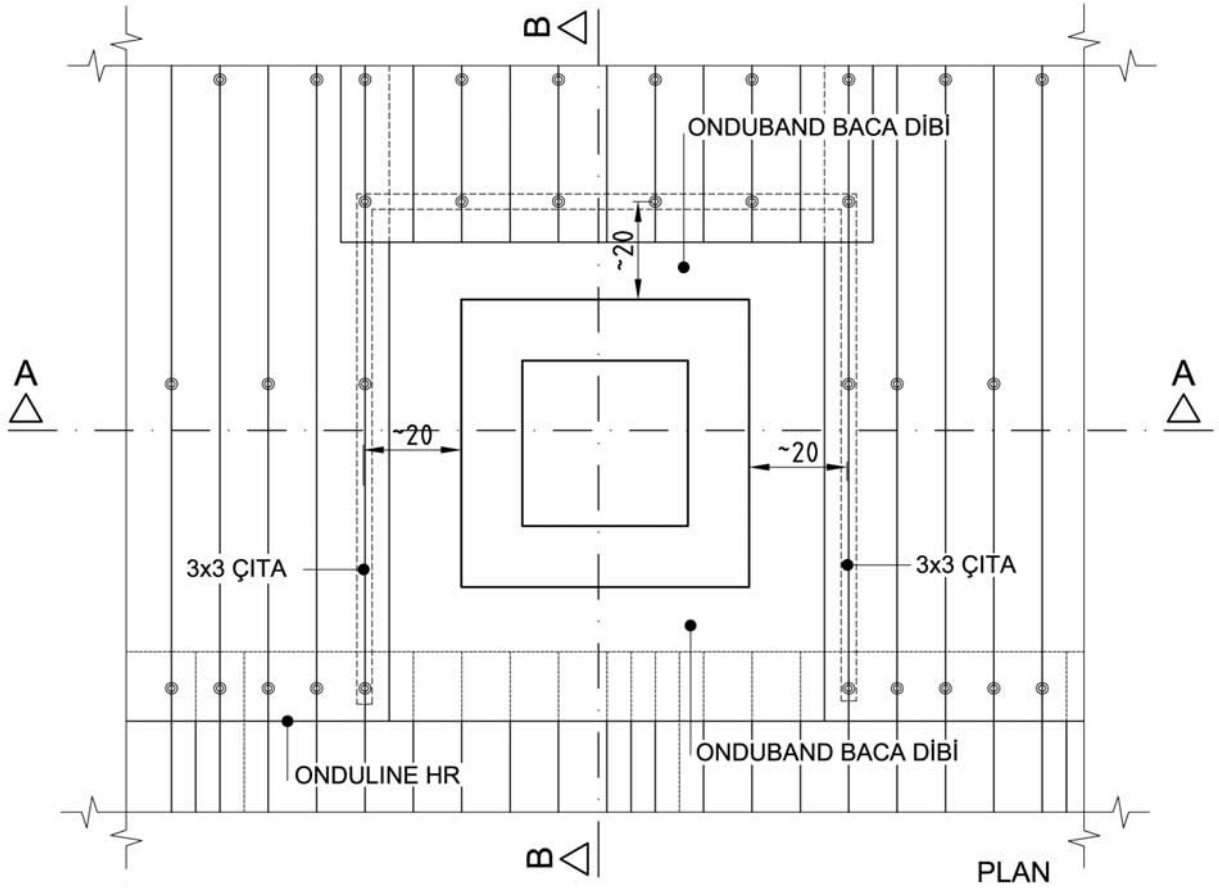


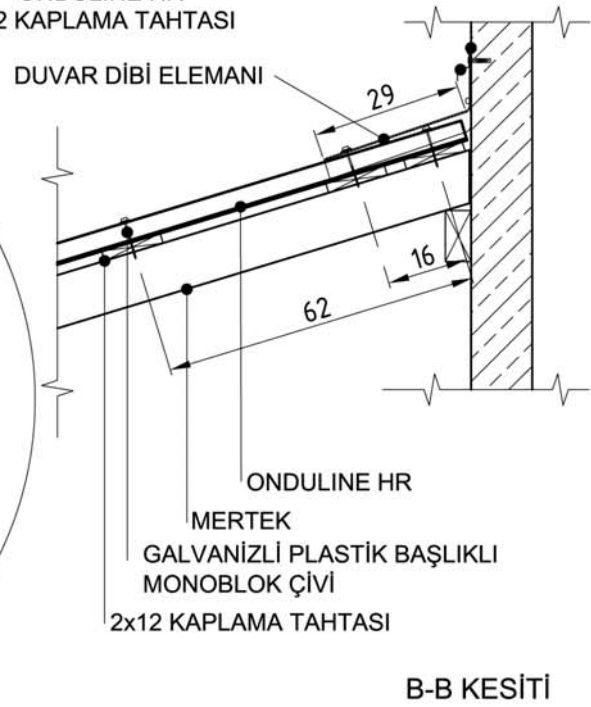
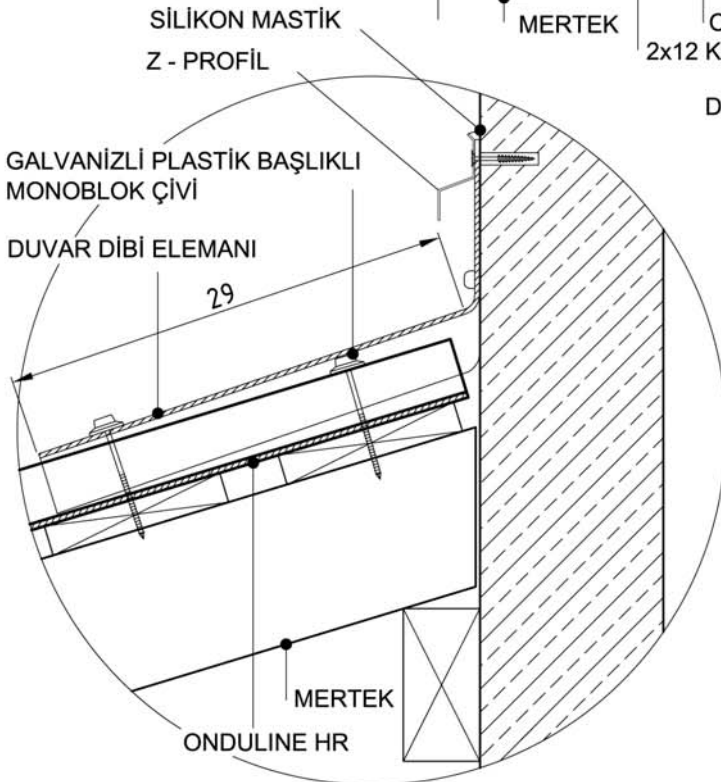
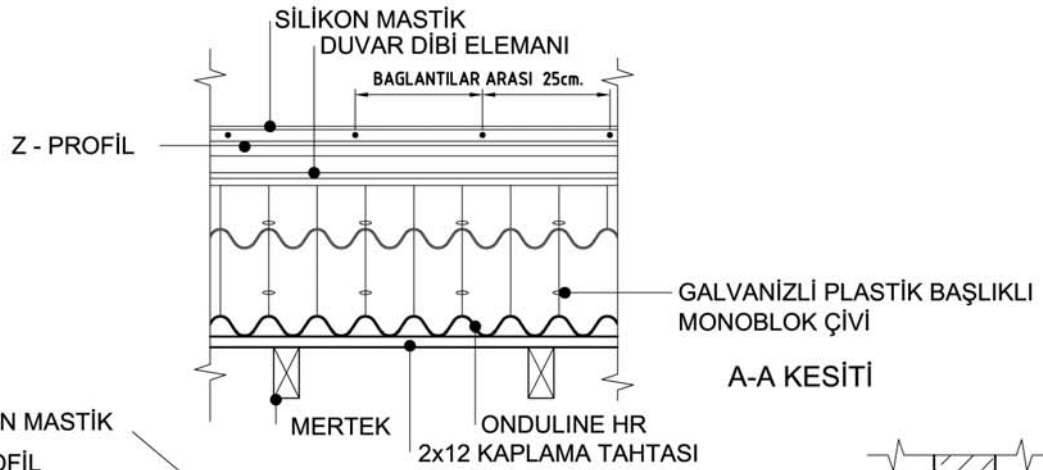
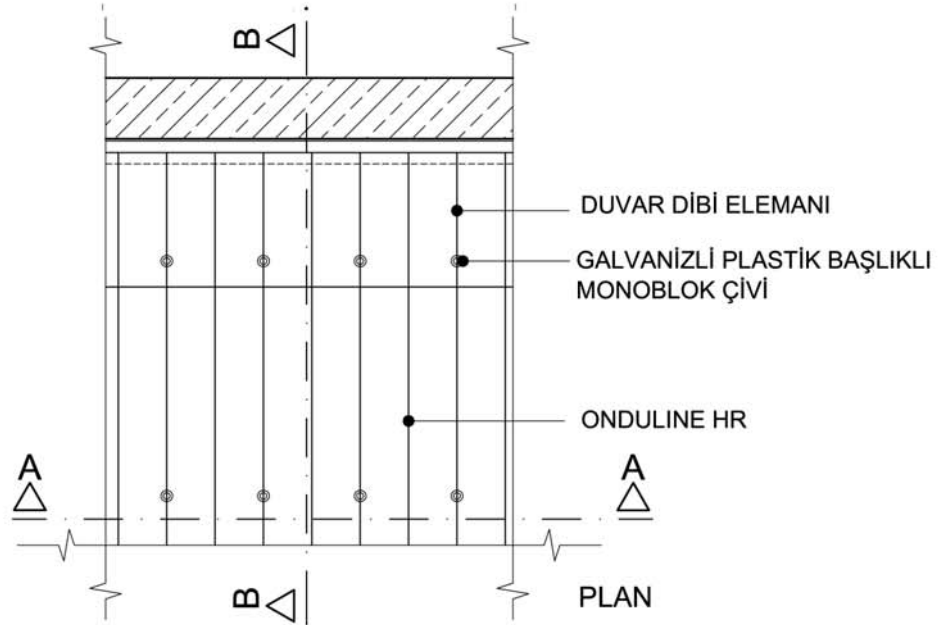


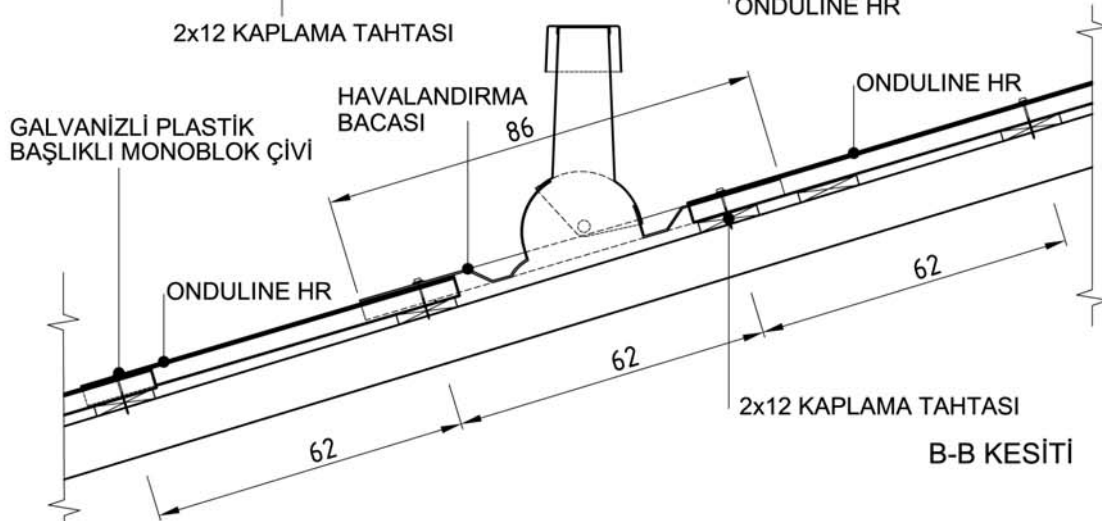
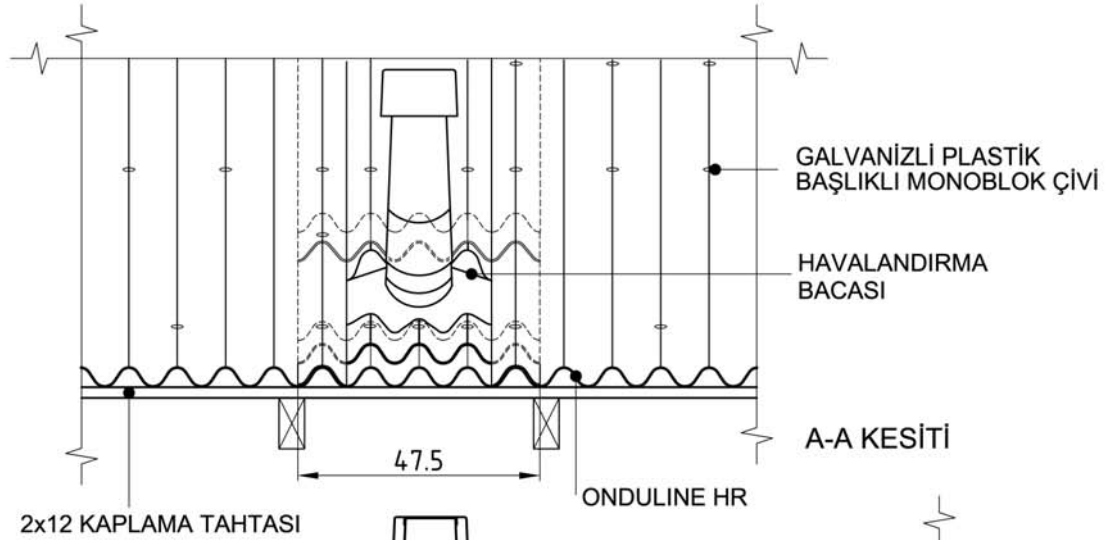
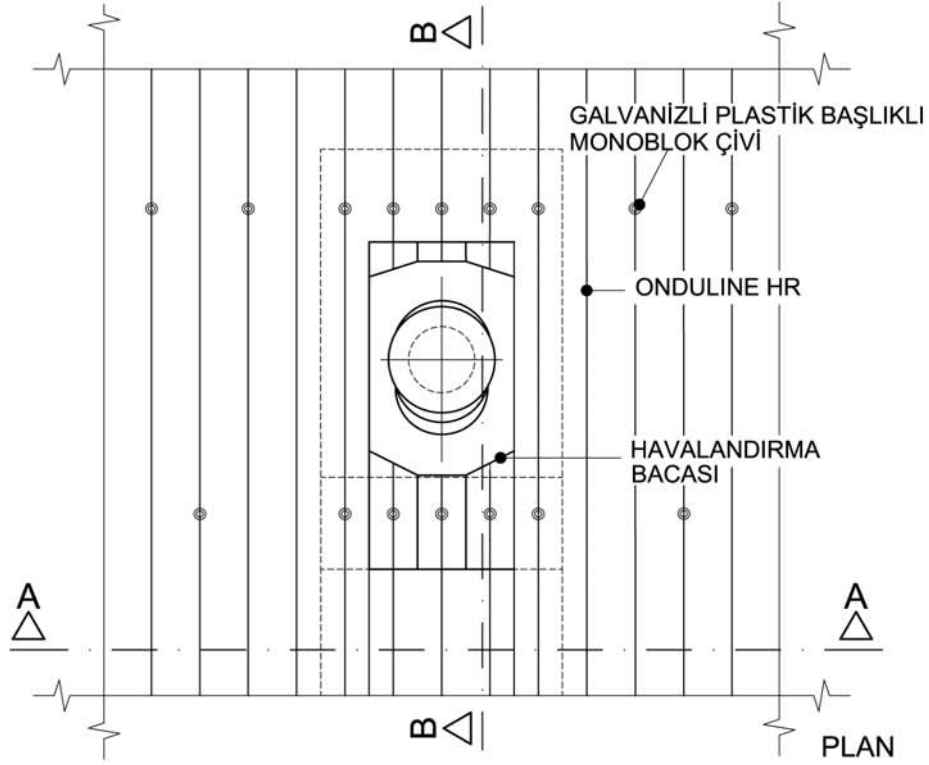
DERE İMALATINDA BITULINE PP40MVEYA EP40A KULLANILABİLİR (EN 50cm.)

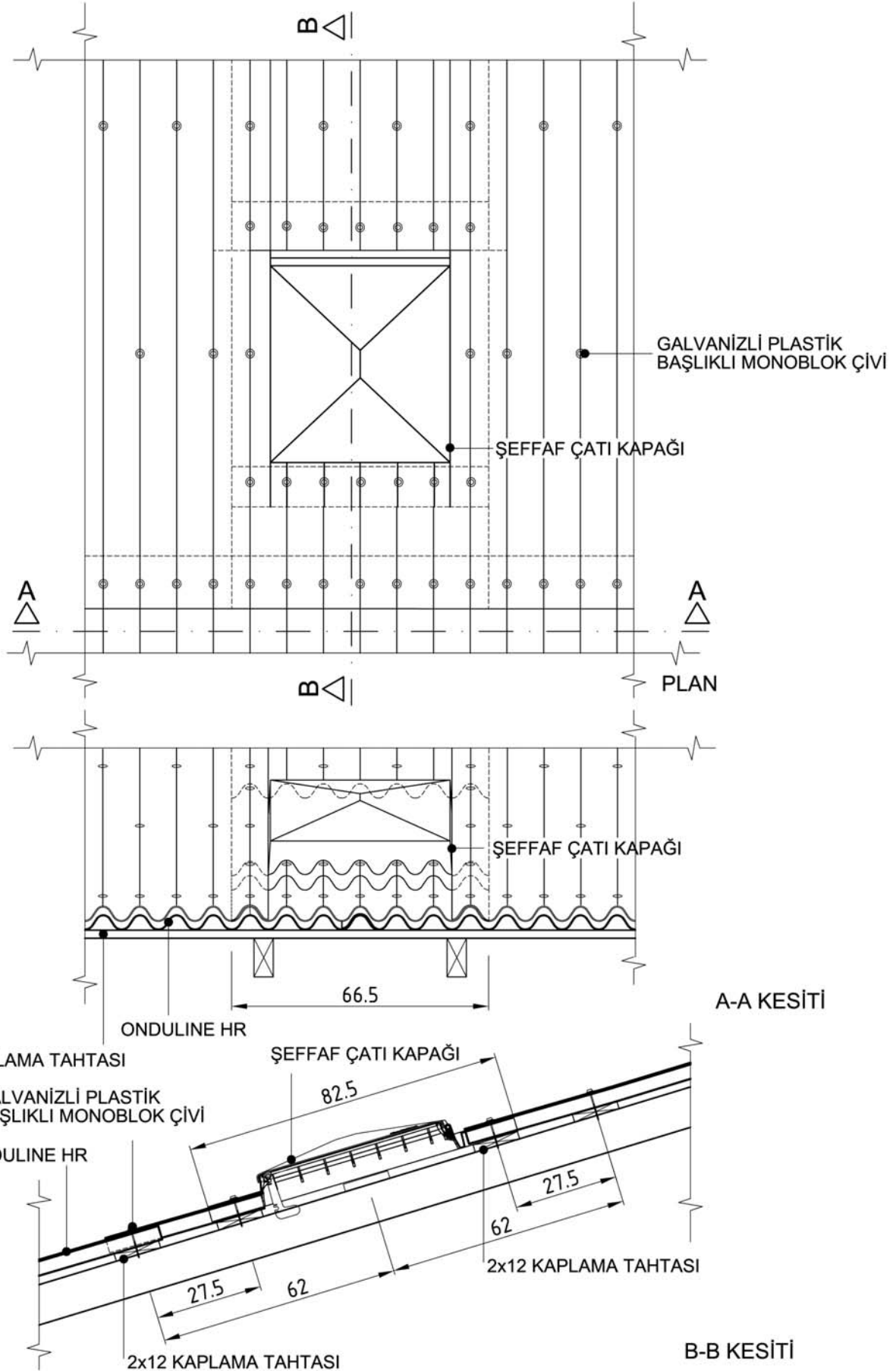




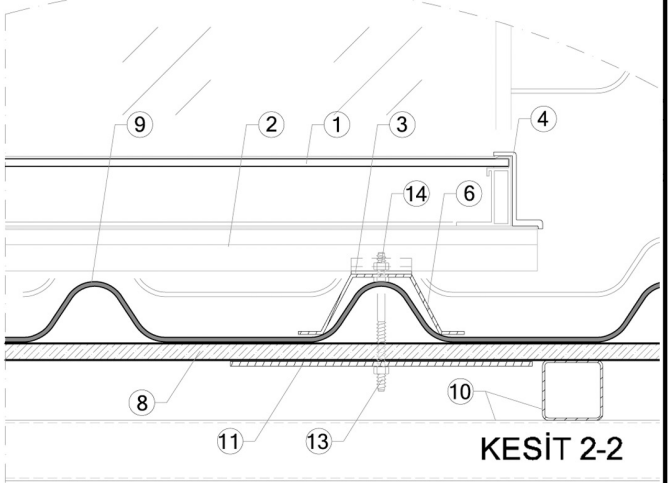
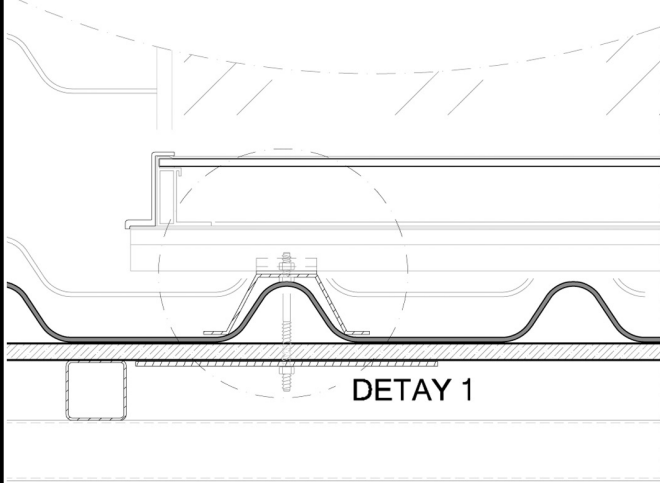
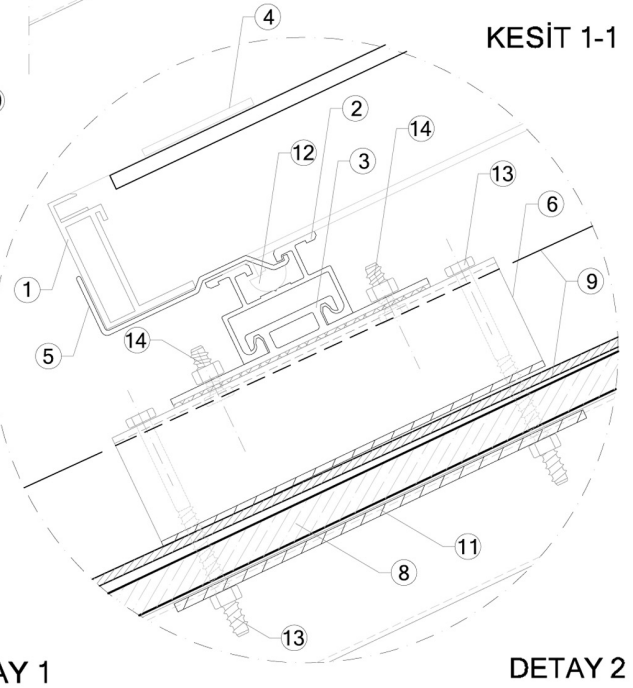
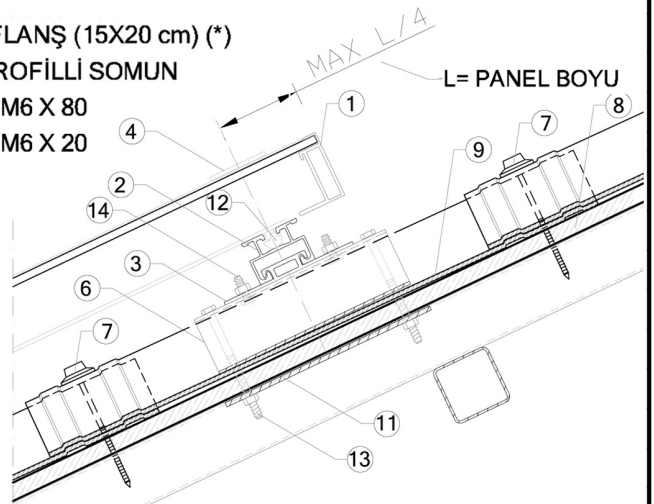
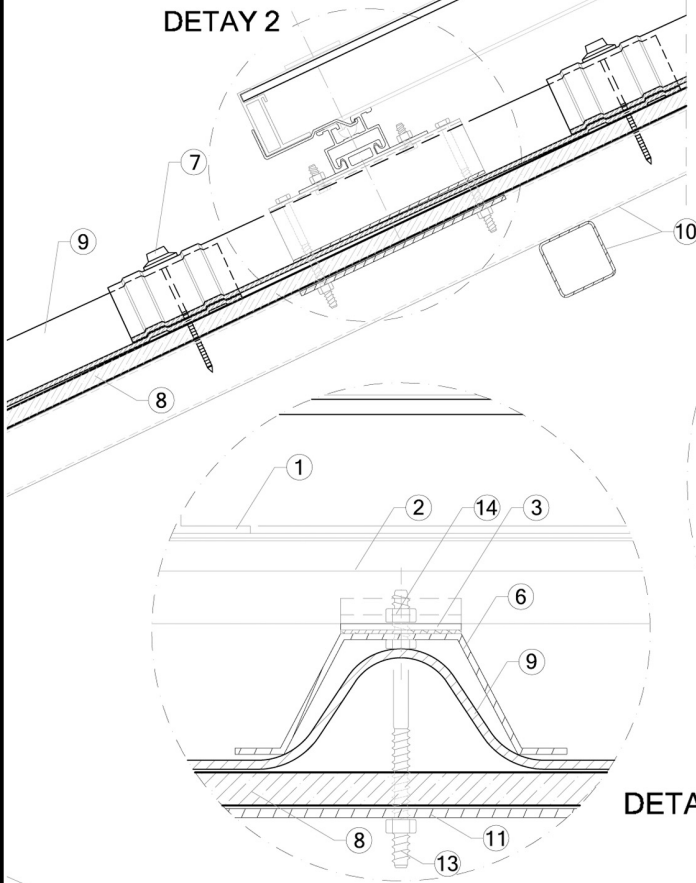








- ① ONDUSOLAR PANEL
- ② ALÜMİNYUM RAY 30 x 40 mm (*)
- ③ RAY BAĞLANTI ELEMANI (*)
- ④ ALÜMİNYUM PANEL TUTUCU (*)
- ⑤ ALÜMİNYUM PANEL TAŞIYICI (*)
- ⑥ ONDULINE UYUMLU BAĞLANTI - OMEGA 2
- ⑦ GALVANİZLİ PLASTİK BAŞLIKLİ MONOBLOK ÇİVİ
- ⑧ OSB (d: 1,1cm)
- ⑨ ONDUVILLA 40/106 veya ONDULINE HR
- ⑩ 40x40x2mm.KUTU PROFİLİ
- ⑪ DEMİR FLANŞ (15X20 cm) (*)
- ⑫ ÖZEL PROFİLLİ SOMUN
- ⑬ CİVATA M6 X 80
- ⑭ CİVATA M6 X 20



* Broşürde gösterilen detaylar OSB üzerine yapılacak uygulamaları içermektedir. Betonarme döşeme, çelik aşıç, mertek gibi alt yapılarda bu prensipler dikkate alınarak rijit bağlantılar yapılmalıdır.