U Value Insulation

Delivering Better Solutions

boardeX

exterior sheathing

Exterior Dry Wall Systems Application Manual

www.uvalueinsulations.co.uk

boardeX
exterior sheathing

Application Manual

Important warning about profiles used in drywall systems

In drywall system applications, the profiles used to form the framing are of vital importance as well as the boards used, in order to ensure that the manufactured construction is sound and long lasting. In different countries of the world, preferably galvanized or wooden profiles are used for the system to be durable as a whole.

Although galvanized profiles are widely used in our country, it can be observed that box steel profiles, which form a rigid system, are also used in some applications. These box profiles are much more affected by the temperature changes in the environment. Temperature differences such as summer-winter and day-night cause the frameworks made out of box profiles to shrink, thus causing cracks on the surface of the materials in the joints.

For example:

In case of a daytime-night temperature difference is 20 °C, with a southern facade receiving more sunlight, and the load-bearing system is made out of a box profile of 6000 mm in length; the amount of elongation due to temperature difference is calculated below:

Elongation amount (mm) = Elongation coefficient x Length x $\triangle$t (temperature difference)

= 1,1x10-5 x 6000 mm x 20 ^{0}C
= 1,32 mm

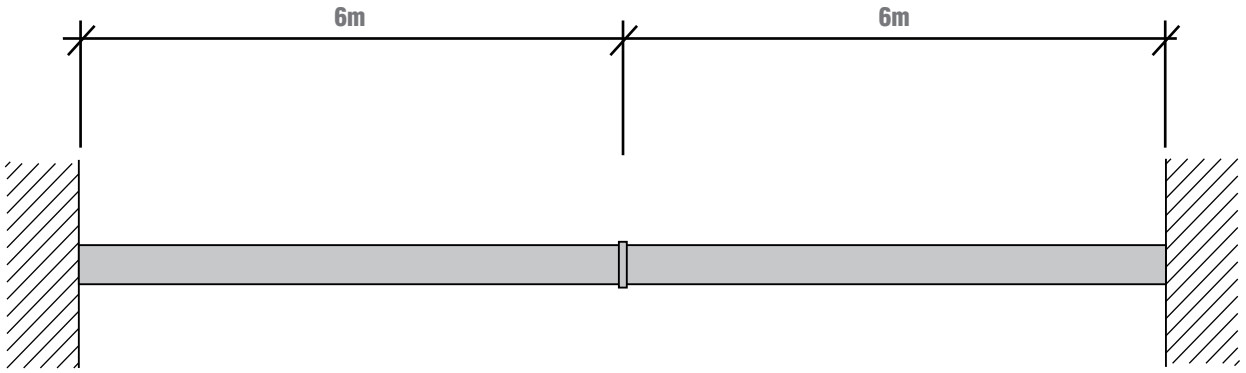


Figure 1: Welding of two 6 m long steel profiles

When two box profiles with a length of 6 m are welded without any space between them **(Figure 1)**, the total 2.64 mm elongation caused by temperature difference would result in either concave or convex bending in the profiles since there is no space to elongate, and this arch will cause cracking at weak points of the screwed material, most likely at the joints. **(Figure 2)**

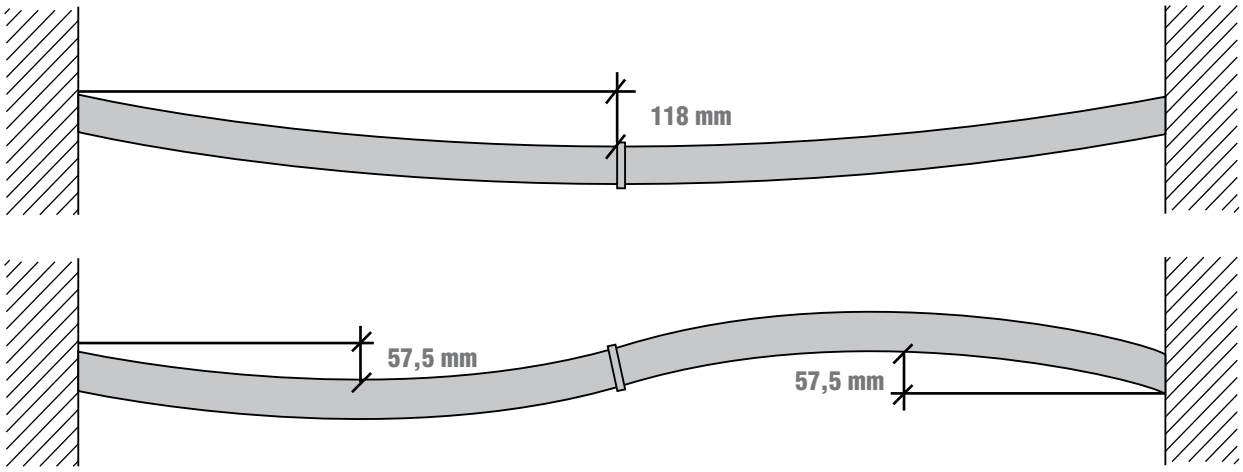


Figure 2: Concave or convex bending

In cases where the box profile must be used due to the style of the application, a spacing of at least 3 mm, preferably 5 mm, should be provided between the profiles to provide the necessary space for elongation or contraction of the profile. **(Figure 3)**

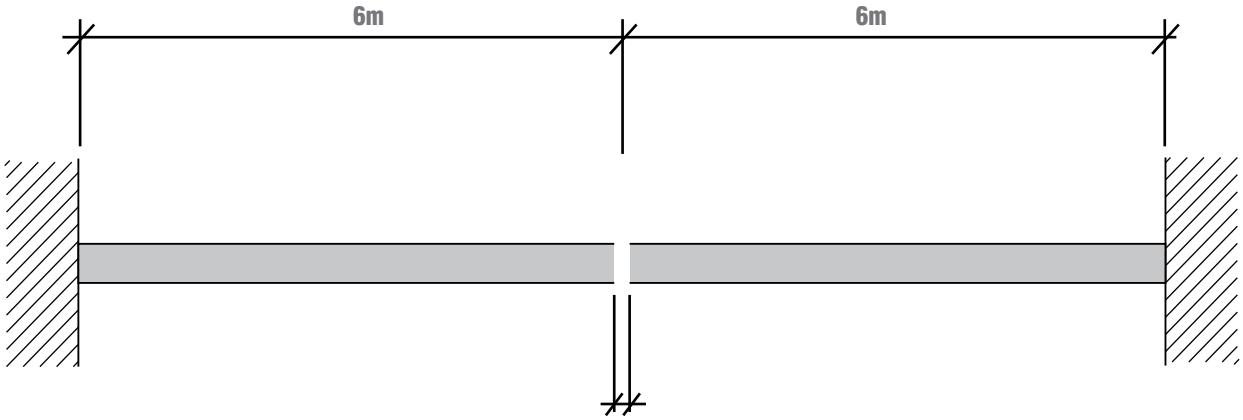


Figure 3: Leaving space between box steel profiles

In galvanized steel sheet profiles, a flexible structure is created that can respond to the contraction-expansion movement since system components interlace into each other at almost any point and a rigid connection could not be provided. When galvanized sheet metal profiles made of individual parts are used, the energy is absorbed in every point and none of the components of the system can cause cracks on any other component.

Another feature of steel sheet profiles, which makes them different to box profiles is “the galvanizing.” Normally steel is easily affected by factors such as water, moisture and steam, and it corrodes quickly. In the galvanizing process, the steel surfaces are covered with zinc using a hot-dipping method, so the profiles become long lasting and durable. As the box profiles are not zinc coated, they are painted with a primer for protection from rust. The primer paint is less effective and cannot attain the same properties given by zinc coating. Over time, the screw holes corrode as a result of condensation. For this reason, our company does not recommend the use of box profiles, despite them being commonly used in Turkey. The use of durable, long-life, galvanized steel sheet profiles in applications is vital for the system to remain stable for a longer period of time.

CEKETLEME SYSTEM

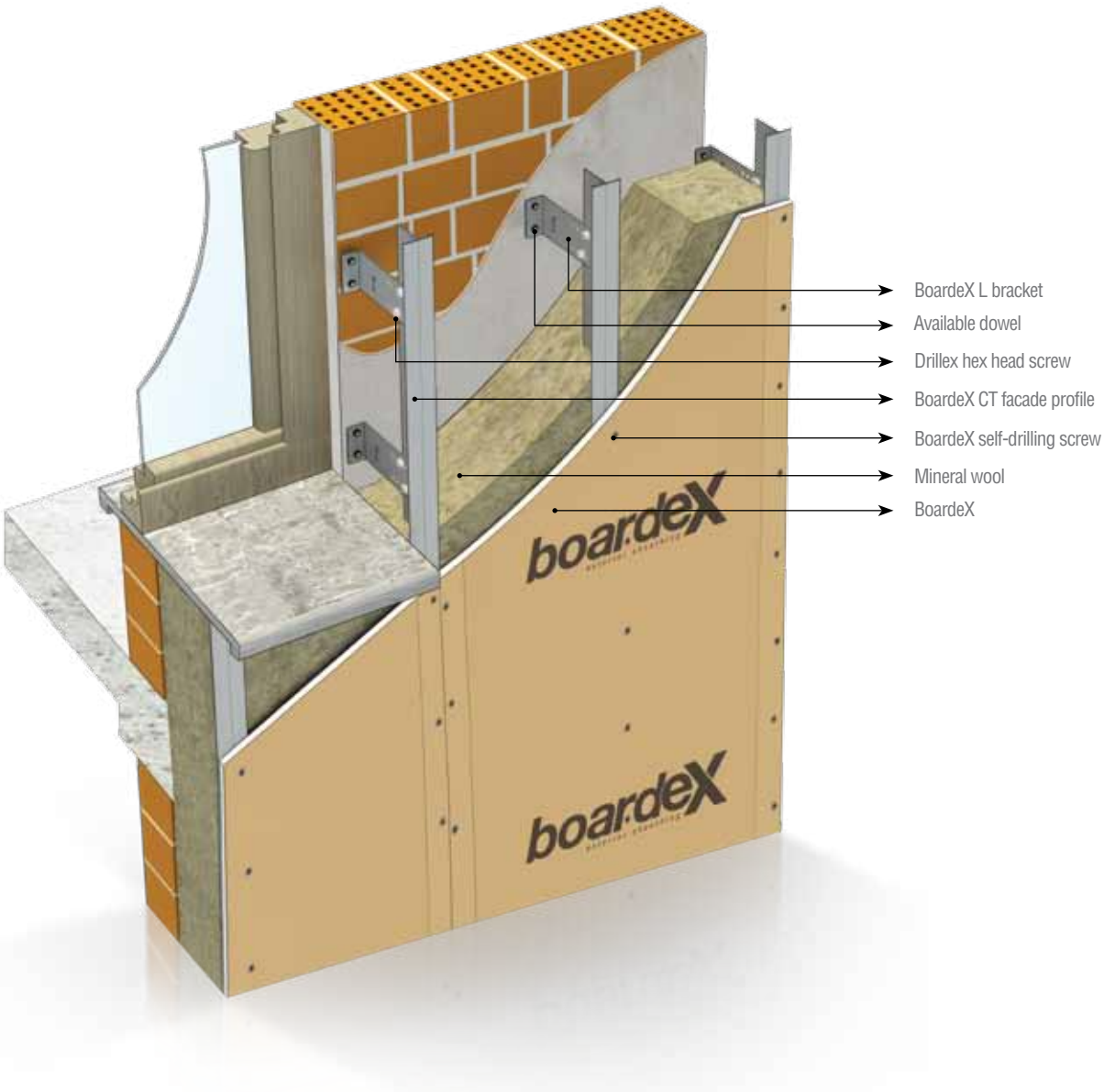
- **CEKETLEME** provides effective thermal insulation on the exterior walls of existing buildings using low density mineral wool to fill the gap created by the system. In particular, it provides design simplicity for exterior walls of the buildings required to reach the A or B energy classification
- **CEKETLEME** system allows a low density mineral wool at a maximum thickness of 15 cm to be applied in the gap between **BoardeX** and the existing wall.
- On the new **CEKETLEME** surface, sheating can be appliead as required and thickness of insulation can be choosen to create the desired heat insulation required.
- The Thermal insulation to be applied on **CEKETLEME**, should be carried out by taking the application principles recommended by IZODER into account.
- All kinds of coatings (metal coating, weather boarding, wood coating, decorative brick veneer, etc.) can be applied to finish on the smooth surface.
- The **CEKETLEME** surface provides a perfect finish for all types of ventilated facades. The ventilated facade system to be applied on the system surface should weigh max. 25 kg/m^2
- **CEKETLEME** system is designed to withstand a wind load of 150 km/h at a building higher than 100 m according to the selected profile axle spacing.
- **CEKETLEME** provides a smooth and plumb surface.

CEKETLEME System Auxiliary Materials

L Bracket **50-75 - 100 - 125 - 150**		It is a 2 mm thick bracket made out of special steel, which is used to ensure plumb wall and makes it possible for thicker insulation material to be used.
BoardeX **Fix T 75**		It is a 75 mm long Fix T fitting piece with a low thermal conductivity, which is made from special hard composite material, and which will be used to minimize heat bridges forming on the wall surface.
BoardeX CT **facade profile (50x50)**		It is a galvanised facade profile, which is 275 gr/ m^2 with 0.9 mm thickness, for the affixing of **BoardeX**.
BoardeX DKC **corner profile (30x30)**		It is a galvanised corner profile, which is 275 gr / m^2 with 0.5 mm thickness that is used to strengthen corners against impact.
Starter Track		It is a PVC based profile to seperate **BoardeX** from the floor
Mineral Wool **glass wool or rock wool**		Is an insulation material for internal and external use.
Steel anchor		It is used to fix the L brackets onto reinforced concrete surfaces.

BoardeX **self-drilling screw**		The specially designed corrosion-resistant screw is used for fixing exterior wall boards to profiles with a wall thickness of up to 2 mm.
Drillex hex head screw		It is a special screw to fix CT facade profiles onto brackets and to fix two pieces of metal to each other.
Existing Wall Mounted Dowels		Dowels are used with screws to install Fix T or L brackets onto existing wall surfaces such as bricks, aerated concrete, pumice blocks.

Material Analysis



Material Analysis

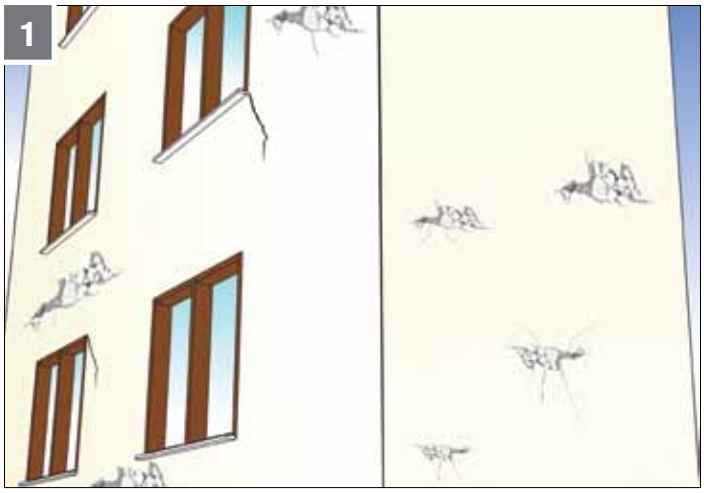
Name of the Material:	Consumption ✕=60 cm	Consumption ✕=40 cm
BoardeX	1,05 m²	
BoardeX L 75/100/125/150 bracket (30x75/100/125; 2 mm/150; 3 mm) or BoardeX Fix T 75	2,70 pcs	3,90 pcs
BoardeX CT facade profile (50x50; 0.9 mm; Z275)	1,90 m	2,80 m
Mineral Wool (low density)	1,05 m²	
BoardeX self-drilling screw(with 20 cm intervals)	15 pcs	20 pcs
Drillex hex head screw	5,4 pcs	7,8 pcs
Steel anchor	2,5 pcs	3,60 pcs
Existing wall mounted special dowel - screw	2,90 pcs	4,2 pcs
Starter Track	Varies according to the base perimeter	

✕60, states that the CT profile axle spacings are 60 cm

!!! The area of the wall for which the material analysis has been calculated is 3mx10m = 30 m² , and 5% tolerance has been included in the calculations.

CEKETLEME - Application

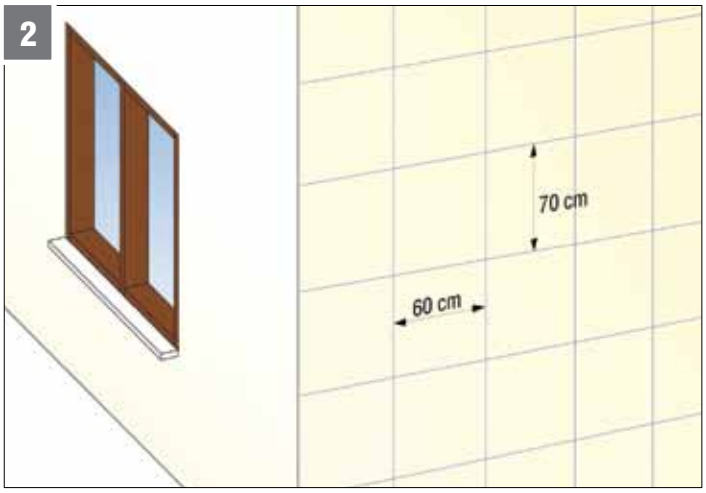
1



CEKETLEME

Is a system that surrounds the walls of buildings. This is used underneath classical Thermal insulation or any type of external coating materials.

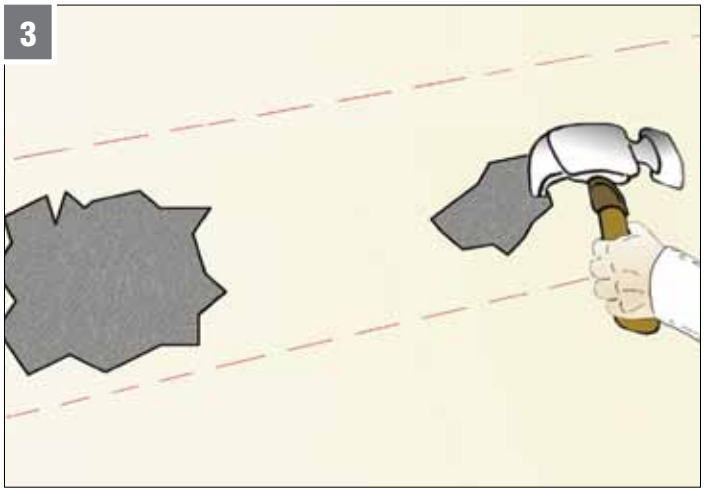
2



Determination of the line where the L brackets are to be fixed.

The line along which the L brackets are to be fixed is marked every 70 cm vertically and 60 cm horizontally with the help of a guiding string.

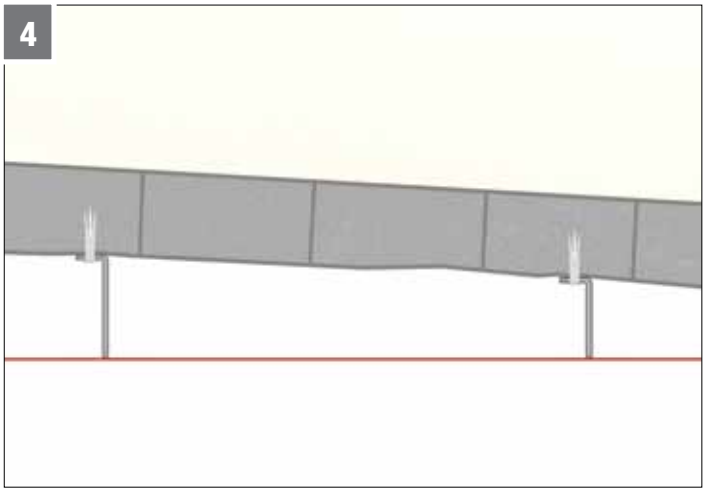
3



Surface preparation

If there is any loose plaster on the surface in the areas where brackets will be fixed, this is scraped away.

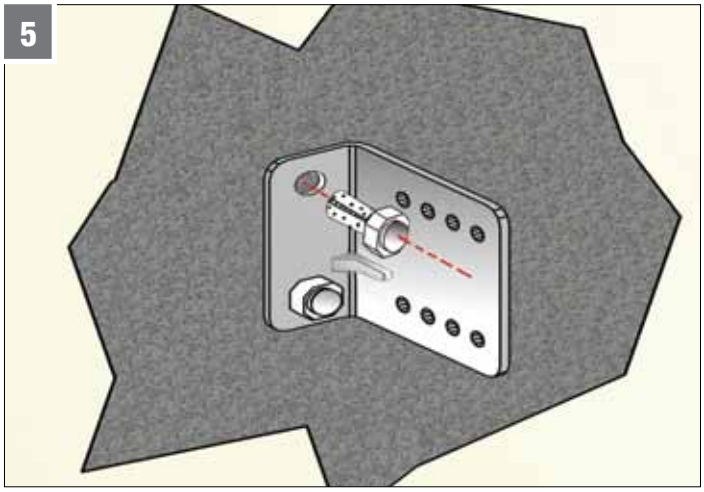
4



Selection of L brackets

L brackets of 75-100-125-150 mm in length are selected to attain the right plumbness to the wall and to use the insulation material at the appropriate thickness.

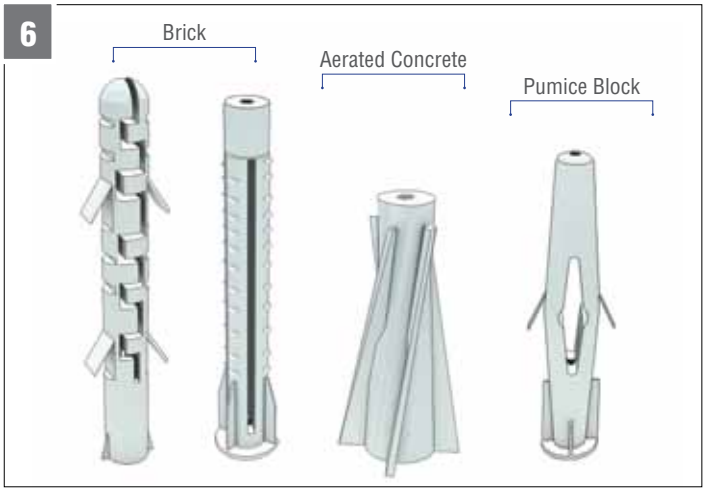
5



Installation of L bracket

The L brackets are fixed onto concrete sections, such as beam-column-floor at two points with steel anchors.

6

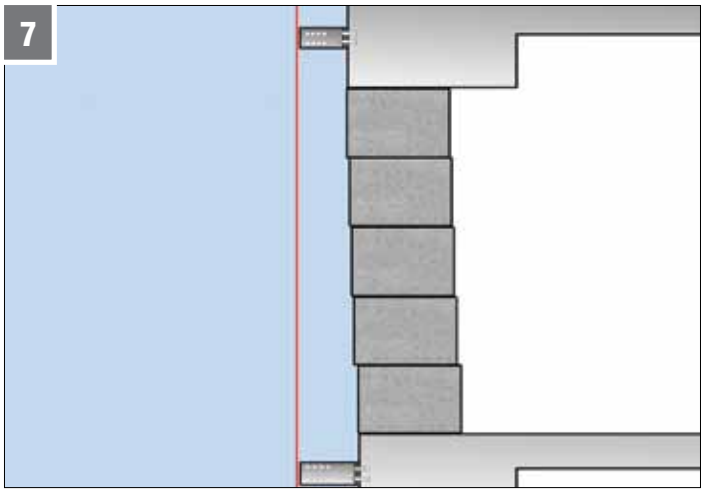


Special dowels

L brackets should be installed onto existing walls by using dowels suitable for the wall type (brick, aerated concrete, pumice block, etc.)

CEKETLEME - Application

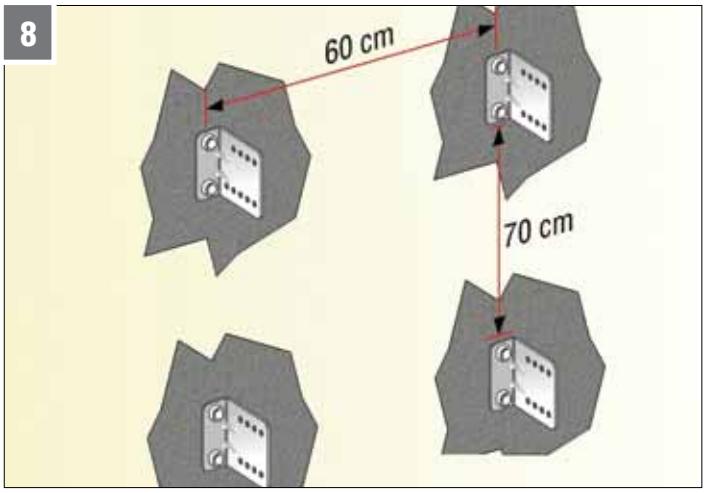
7



Position of L brackets

To make sure the wall is at the right plumbness, select L brackets of appropriate length according to the position of the rope pulled vertically and fix these brackets on the wall.

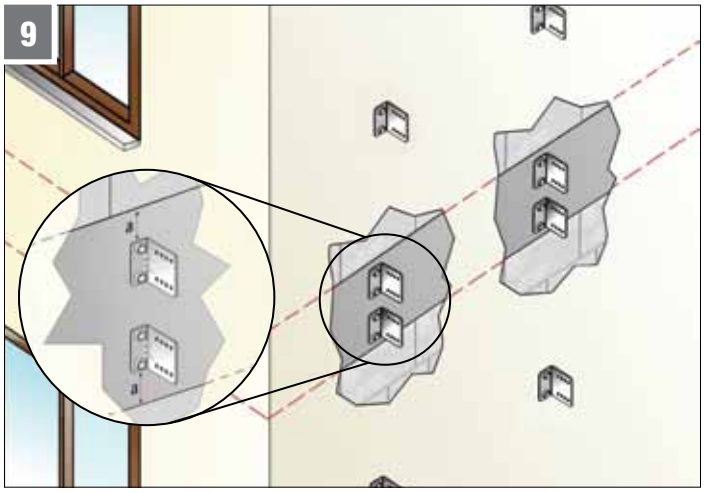
8



Position of L brackets

Consecutive L brackets are installed on the wall with 60 cm (or 40 cm) intervals horizontally and 70 cm intervals vertically.

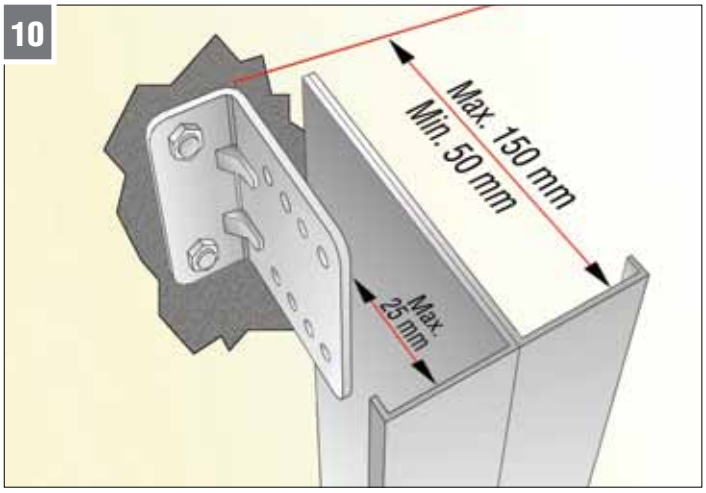
9



Position of L brackets

The L brackets corresponding to the reinforced concrete floor or beam are fixed by leaving equal distances between them (a) depending on the floor thickness. This distance should not be less than 3 cm.

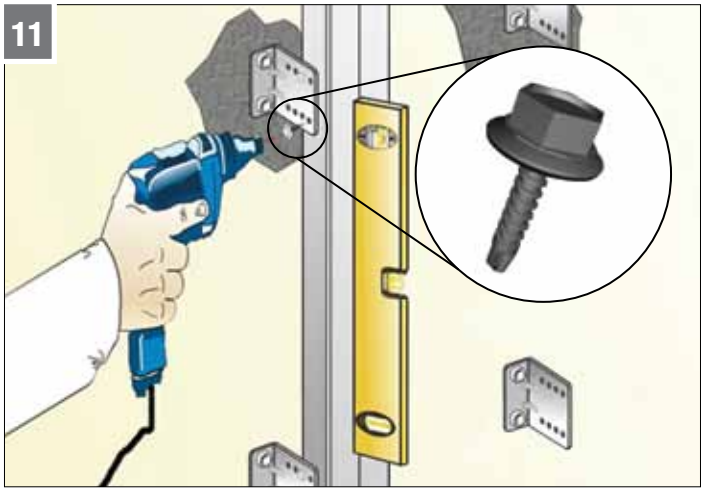
10



Installation of BoardeX CT facade profile

BoardeX CT facade profile, should be fixed at a distance of no more than 25mm from the L brackets. According to the thickness of the insulation material to be used, the distance between **BoardeX CT facade profile** and the wall is adjusted to be maximum 150 mm and minimum 75 mm.

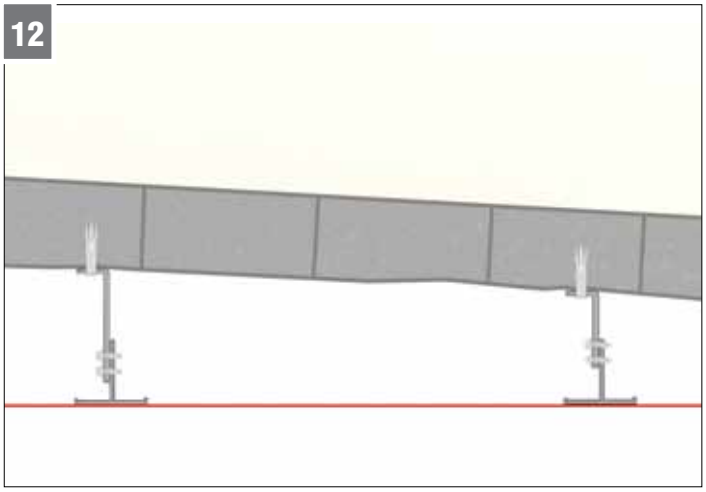
11



Installation of BoardeX CT facade profile

BoardeX CT front profile is aligned for plumbness and from the two points of the holes on the L brackets are fixed onto **BoardeX CT facade profile** by using Drillex hex head screws.

12



Levelling the BoardeX CT facade profiles

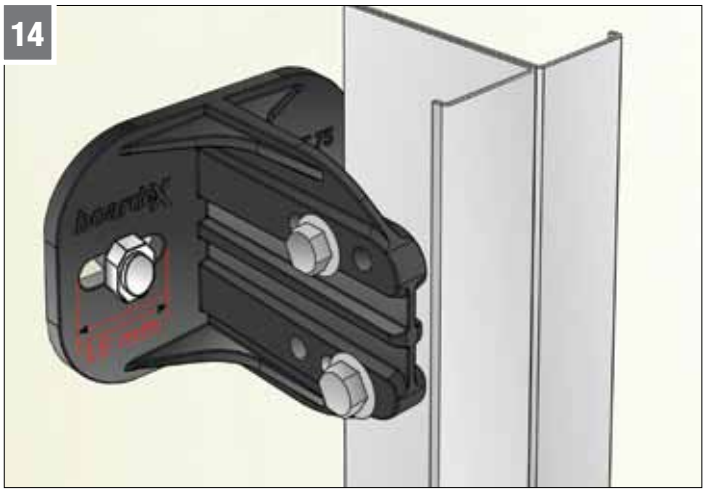
Along a piece of string tied from one end of the facade to the other, **BoardeX CT facade profile** is screwed onto L brackets and the facade is also levelled horizontally.

13

Fix T bracket

A Fix T bracket, made out of a special composite material, can be selected instead of L bracket.

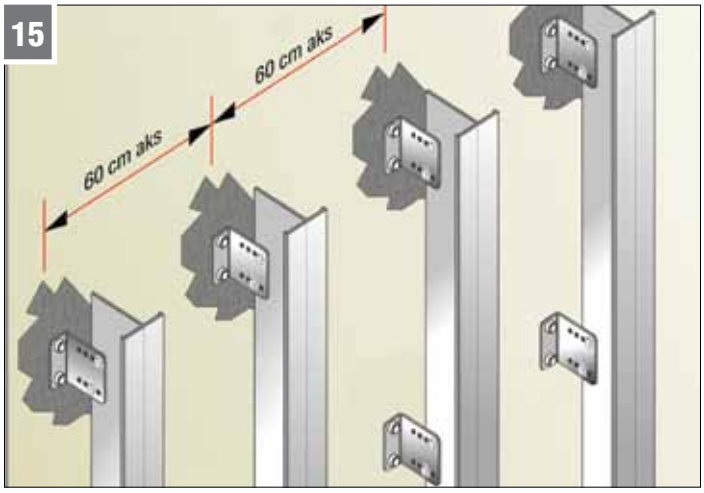
14



Fix T bracket

Fix T bracket has 15 mm movement capability in horizontal position. Fix T also makes it easier to fix brackets vertically on the same line.

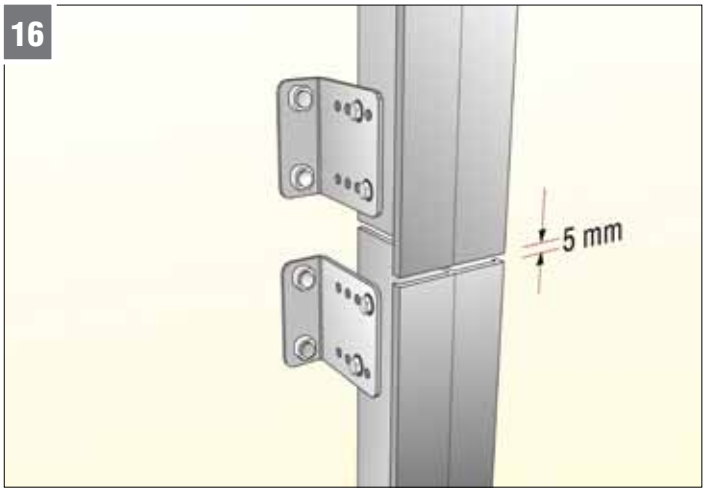
15



BoardeX CT profile axle spacings

Depending on the Project **BoardeX CT facade profiles** are fixed onto L brackets at 60 (or 40 cm) axle spacing.

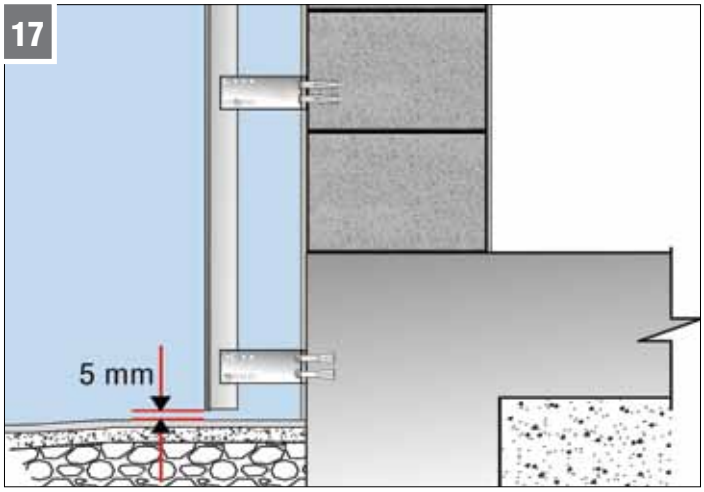
16



Distance between L brackets

Between subsequent vertical **BoardeX CT facade profiles** at least 5 mm space is left.

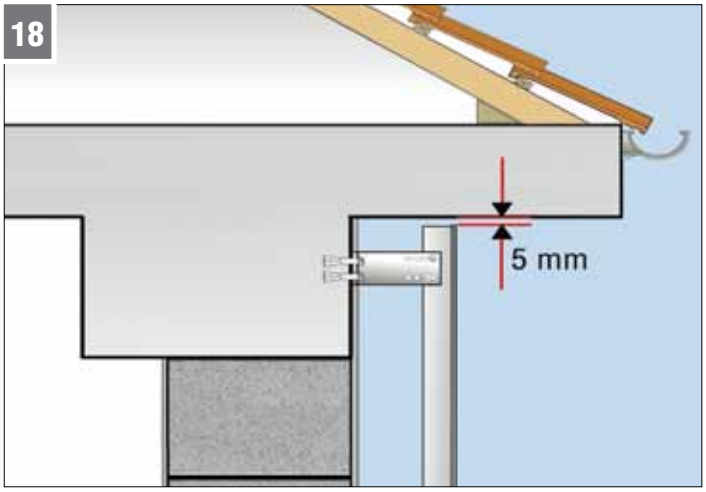
17



Connection of BoardeX CT facade profiles on the base

In order for the **BoardeX CT** profile not to touch the floor, A clearance of at least 5 mm should be left between **BoardeX CT** profile and the floor.

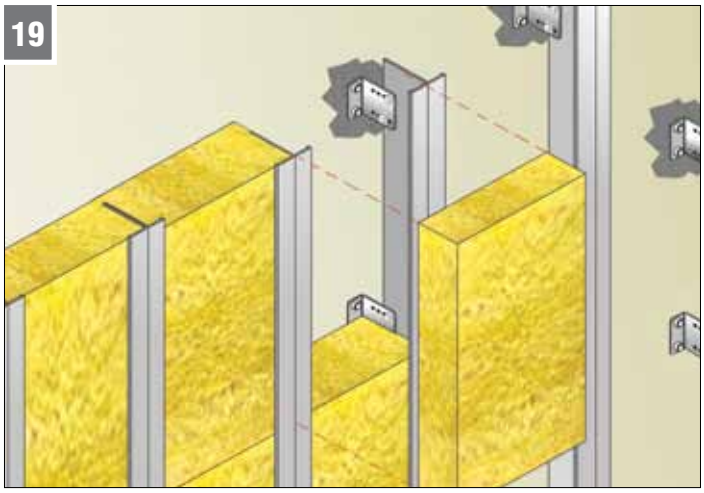
18



Connection of BoardeX CT facade profiles on the ceiling

In order for **BoardeX CT** profiles not to touch the ceiling A clearance of at least 5 mm should be left between **BoardeX CT** profile and the ceiling.

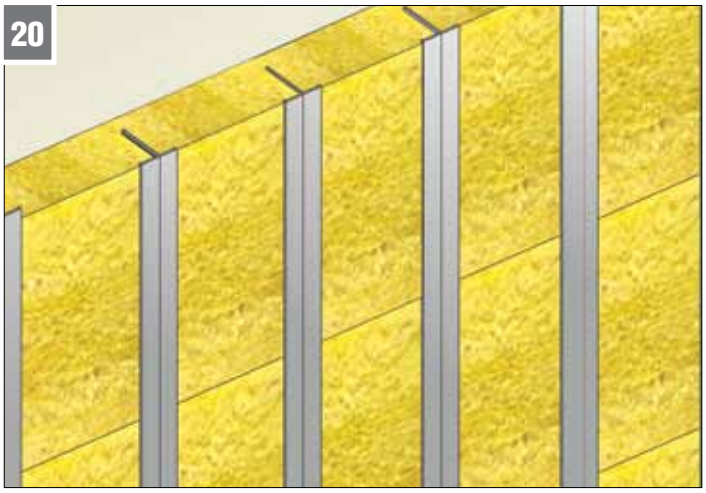
19



Layout of mineral wool

Low density mineral wool at selected thickness is filled between **BoardeX CT** facade profiles.

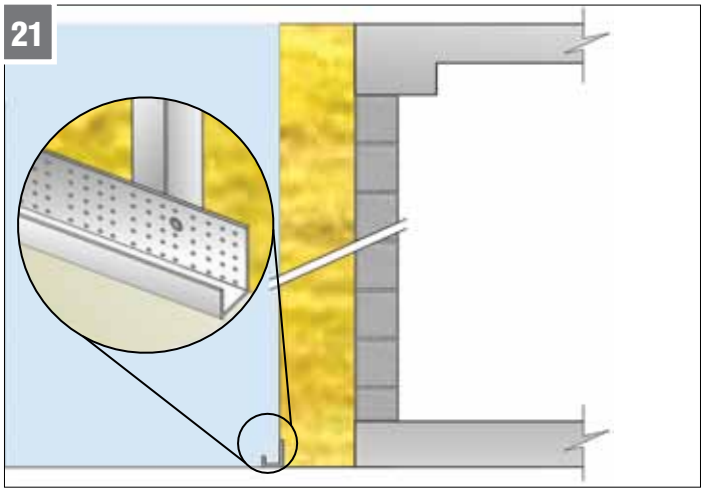
20



Layout of mineral wool

Mineral wool is placed with care to ensure continuity in thermal insulation, with no gaps between the profiles and covering the entire wall surface.

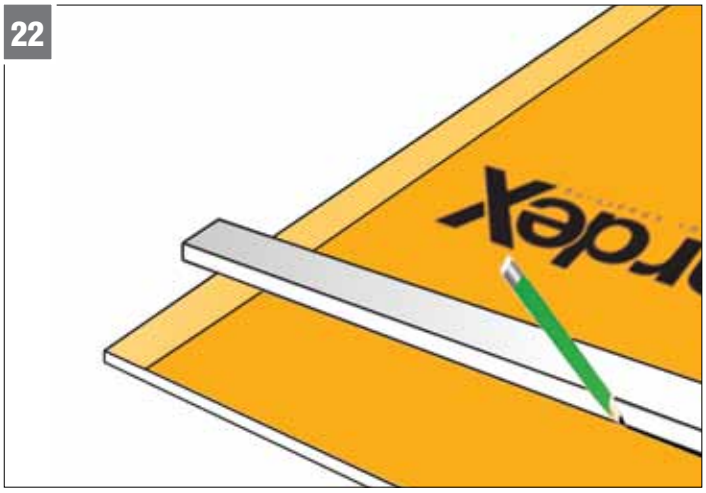
21



Placement of the starter track

To seperate **BoardeX** from the floor, a PVC-based starter track is fastened onto the **BoardeX** CT profile along the wall surface.

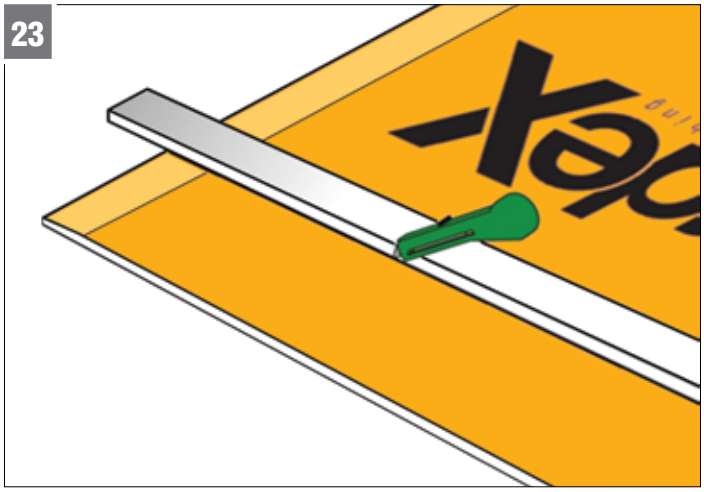
22



Cutting BoardeX

The **BoardeX** to be cut is marked on the surface with a pen.

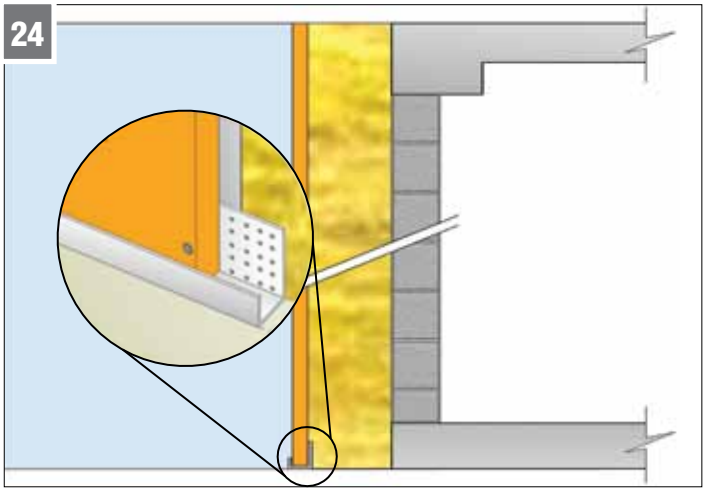
23



Cutting BoardeX

BoardeX is cut with the help of a gauge from the marked place using a knife. For **BoardeX** cutting, there is no need for spiral, jet stone, or any other dust emitting tools.

24



Screwing of BoardeX

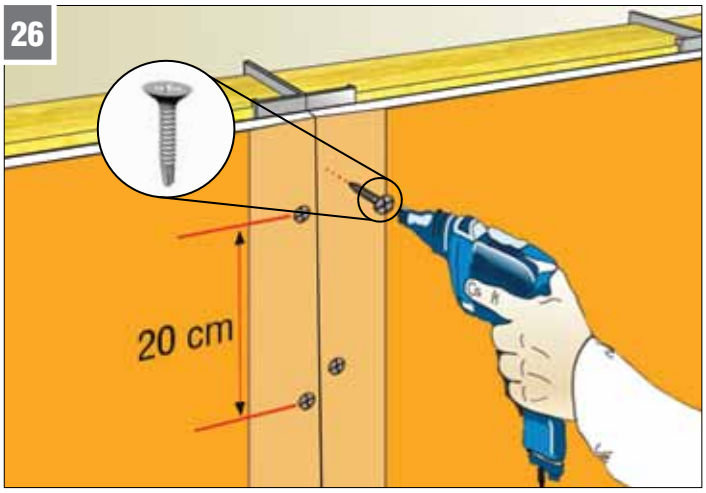
BoardeX is inserted into the starter track previously fixed onto the **BoardeX CT facade profiles** and screwed onto the profiles.

25

Screwing of BoardeX

BoardeX is placed in such a way to bring the flanks of the CT profiles in the middle.

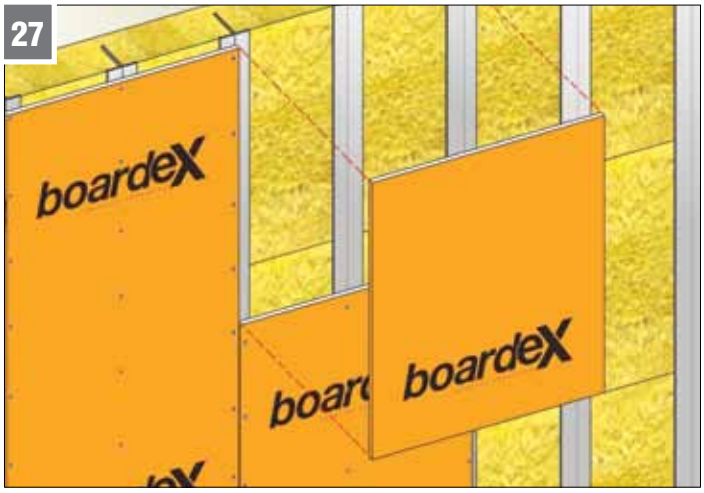
26



Screwing of BoardeX

BoardeX is fixed onto profiles by BoardeX self-drilling screws and are fixed at a maximum of 20 cm vertical intervals. The heads of the screws should be flush with the **BoardeX** surface and should not penetrate into the core.

27



Screwing of BoardeX

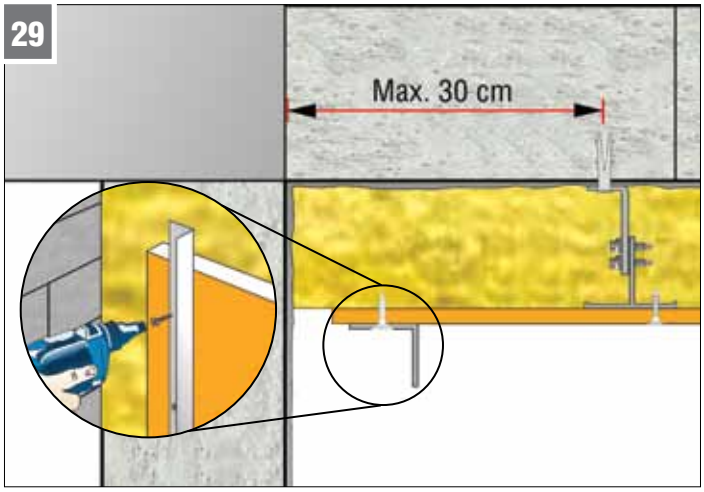
The **BoardeX** joints are made in an interlaid pattern horizontally so that the whole surface is covered.

28

Screwing of BoardeX

Perfectly levelled and vertically aligned **BoardeX** surface is ready for coating materials to be applied on the surface. **BoardeX** can be exposed to external weather conditions for 12 months without any coating on the surface.

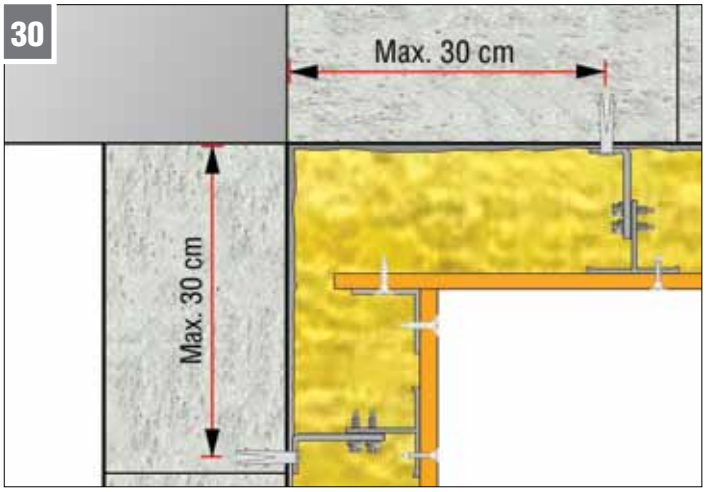
29



Combining interior corners

The bracket corresponding the interior corner should be at a maximum distance of 30 cm from the corner. Where an interior corner is to be formed, a DKC corner profile is fixed onto the **BoardeX CT.**

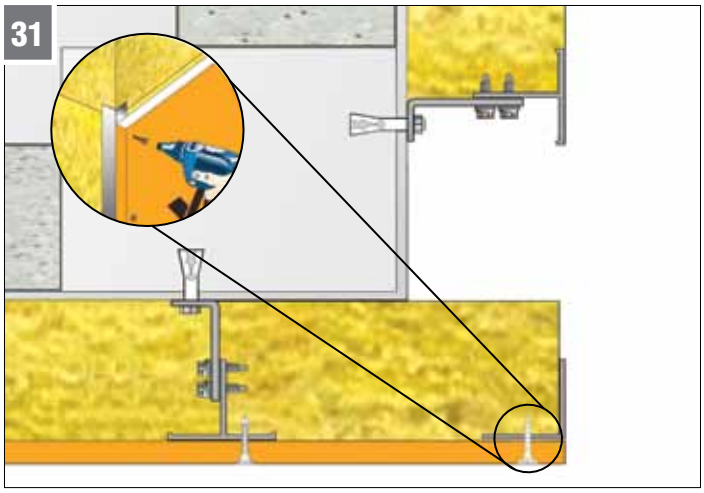
30



Combining interior corners

Then the formation of corner is completed by fixing the **BoardeX** onto DKC corner profile from the other part of the interior corner.

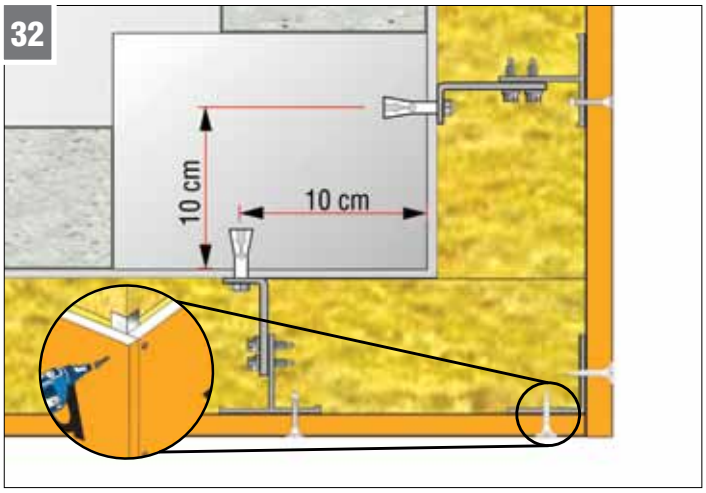
31



Combining exterior corners

The bracket corresponding the exterior corner should be at a maximum distance of 10 cm from the corner. Where an internal corner is to be formed, **BoardeX** is fixed onto a DKC corner profile.

32



Combining exterior corners

Then the formation of exterior corner is completed by fixing the **BoardeX** onto DKC corner profile from the other part of the exterior corner.

Thermal Insulation Application on boardeX exterior sheathing Surface

33

Thermal insulation application

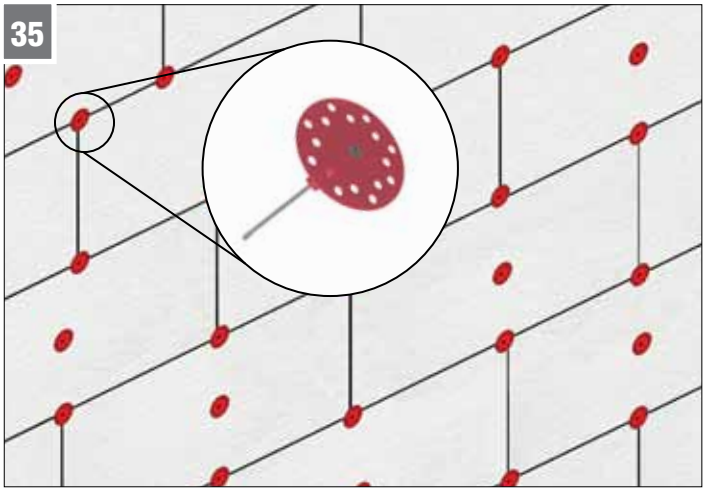
Before the application of Thermal insulation, PROBASE, a cement based adhesive mortar, is applied on the surface with the help of a notched trowel.

34

Thermal insulation application

The insulation material (EPS, XPS or rockwool) selected as per the project is adhered on the **BoardeX** surface.

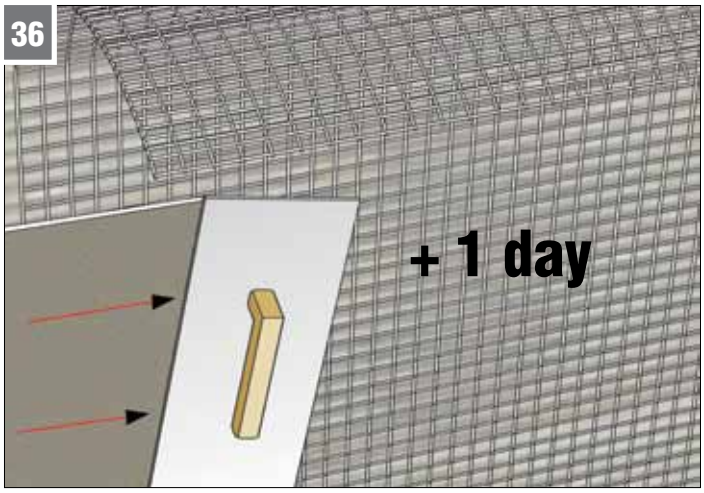
35



Fixing of insulation material

The insulation material is fixed to the CT profile over **BoardeX** with the self-screflange tipped, parachute head dowels from the locations corresponding to the profiles.

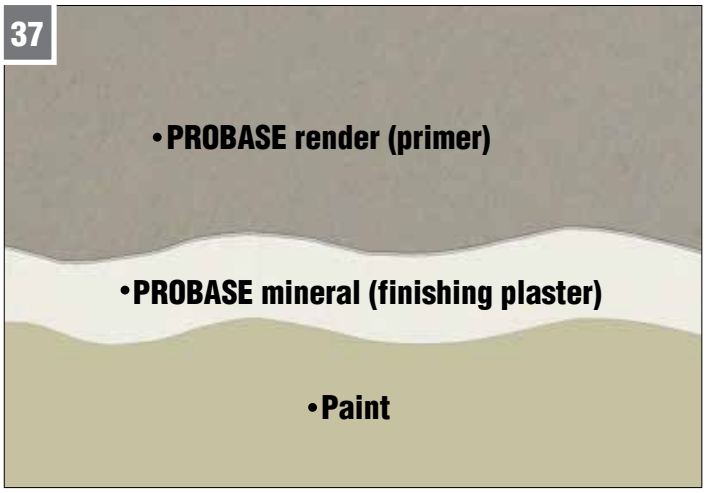
36



Thermal insulation application

After the PROBASE RENDER is applied to the entire surface, the alkali-resistant plaster mesh with a weight of 160 gr/m^2 is installed on to the primer surface and the surface is made ready for finishing work to be carried out after 1 day.

37



Surface finish

After the application of primer and mineral plaster (finishing plaster) on the surface of the insulating material used in the Thermal insulation, the surface is completed by painting.

Coating different types of materials on boardeX exterior sheathing surface

38

Joint filling

If the **BoardeX** surface is to be coated with another material, the joints are filled with an appropriate sealant resistant to water and moisture.

39

Metal cladding material

BoardeX can be finished with metal coating materials. For this application, the load bearing system of the coating material must be fixed onto the **CEKETLEME** system profiles over **BoardeX**.

40

Wood cladding

The **BoardeX** surface can be completed by installing wood or cement based decorative cladding materials. For this application, the cladding material should be fixed onto **CEKETLEME** system profiles over **BoardeX**.

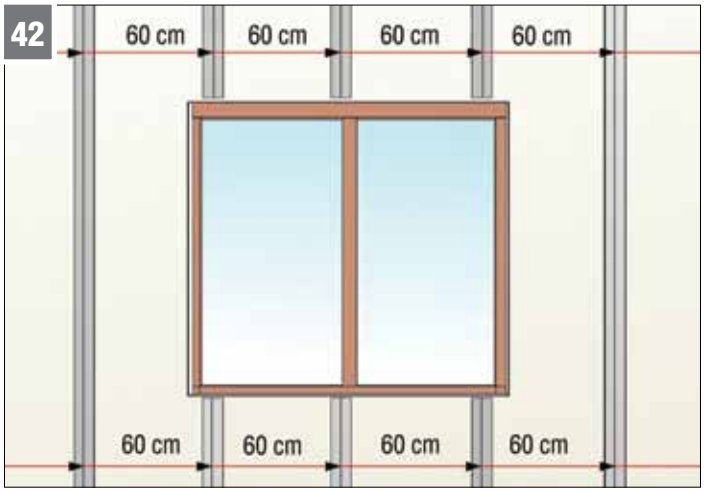
41

PVC Siding application

The **BoardeX** surface can be completed with PVC Siding material. For this application, the PVC Siding material should be fixed onto **CEKETLEME** system profiles over **BoardeX**.

Details

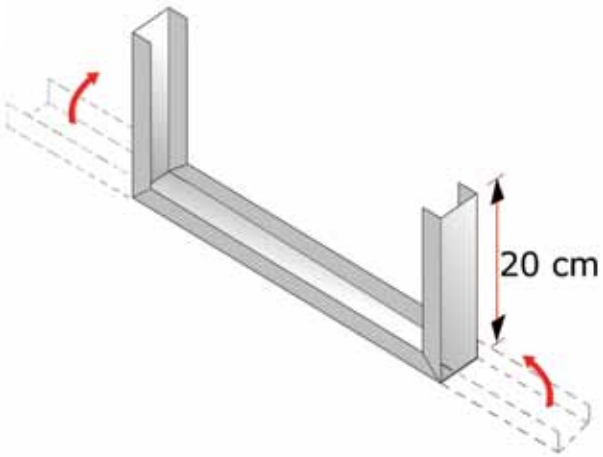
42



Window application details

Depending on the Project, the CT profiles at axle spacing of 60 cm (or 40 cm), are fixed onto L brackets above or below the windows.

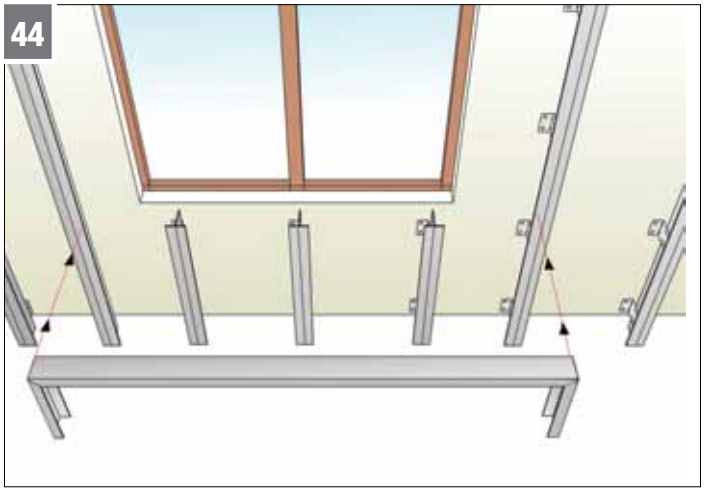
43



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a way to turn the side flanks 20 cm upwards.

44



Application of lintel profile

Lintel profile is inserted over the CT profile.

45

Fixing of lintel profile

The lintel profile is fixed onto CT profiles by screflange with **Drillex** hex head screw at two points.

46

Application of lintel profile

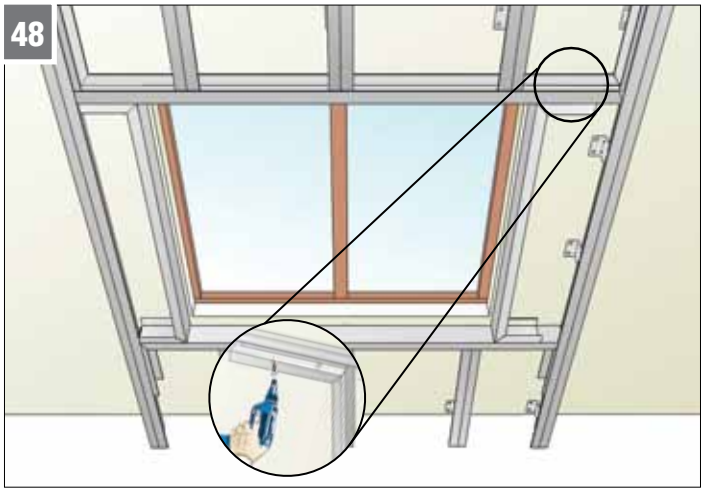
The lintel is fixed onto CT profiles above the window as well.

47

Preparation of lintel side profile

Lintel profiles are prepared and placed on the sides of the window.

48



Fixing lintel side profiles

Vertical lintel profiles are fixed onto horizontal lintel profiles by using **Drillex hex head screws**.

49

Placement of mineral wool

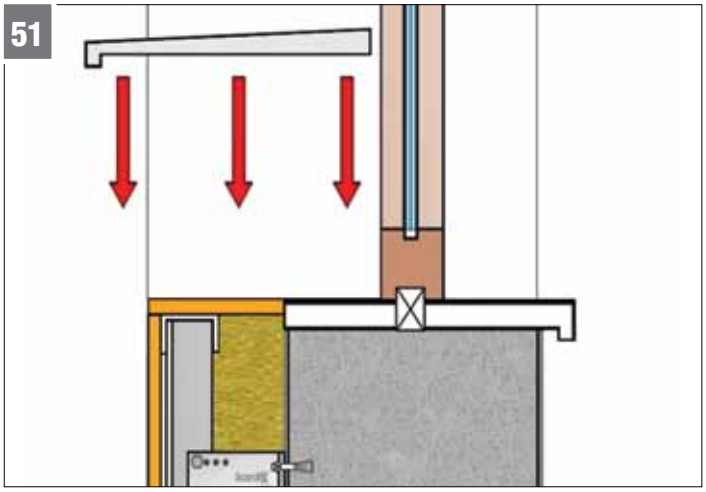
To ensure the continuity of the insulation in the cavity of profiles, low density mineral wool is placed in such places.

50

Screwing BoardeX onto lintel

On the horizontal and vertical lintel profiles, appropriate size of **BoardeX** is cut and screwed on.

51

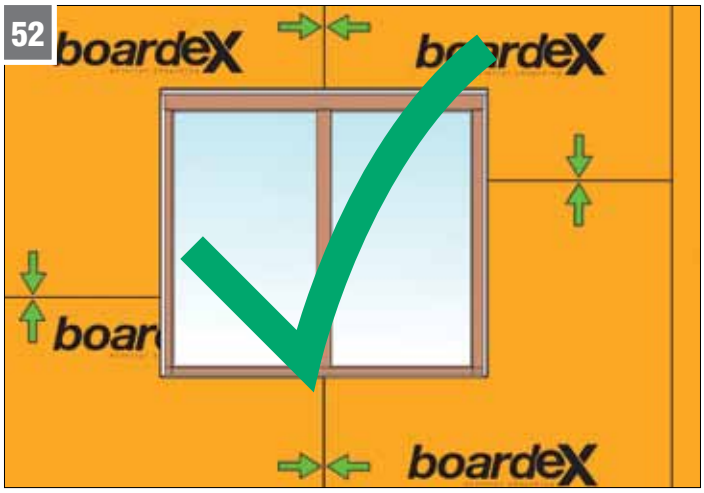


Placement of the window sill

The new window sill is fixed onto the **BoardeX**, which was fixed onto the lintel profile. The width of the window sill should be chosen in accordance with the wall thickness.

CEKETLEME - Application

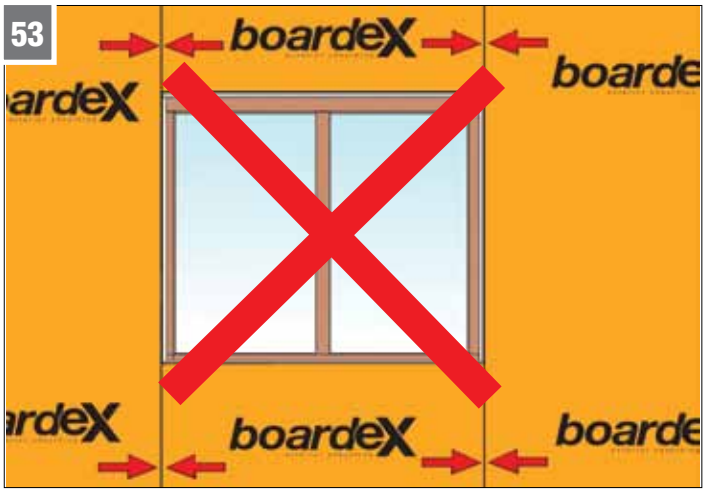
52



Right Application

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

53

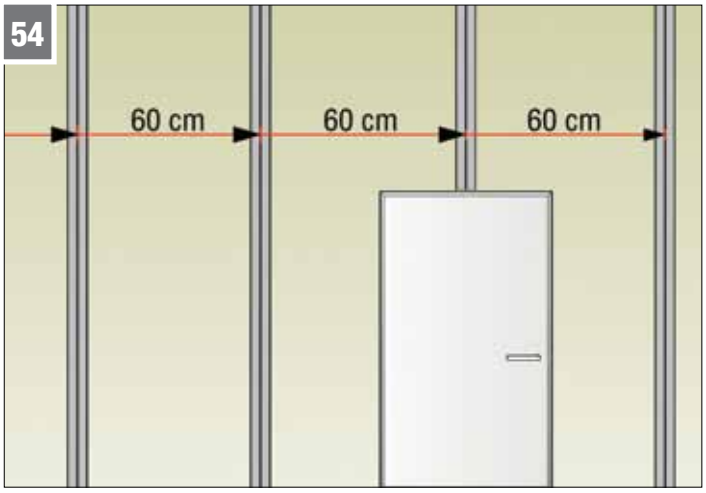


Wrong Application

BoardeX joints in the window cavities should not coincide with the window edge profiles.

Doorway detail

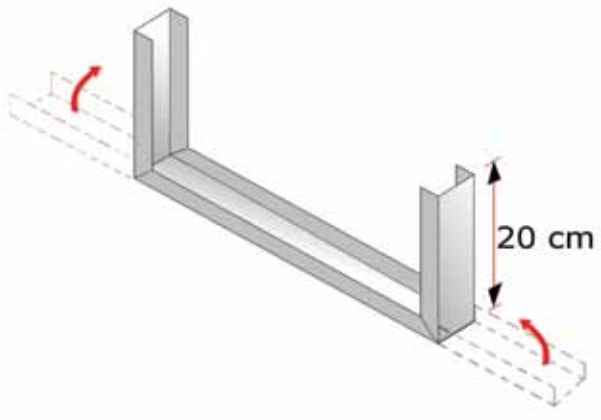
54



Doorway detail

Depending on the Project, the CT profiles above the door at 60 (or 40 cm) axle spacing, are fixed onto L brackets.

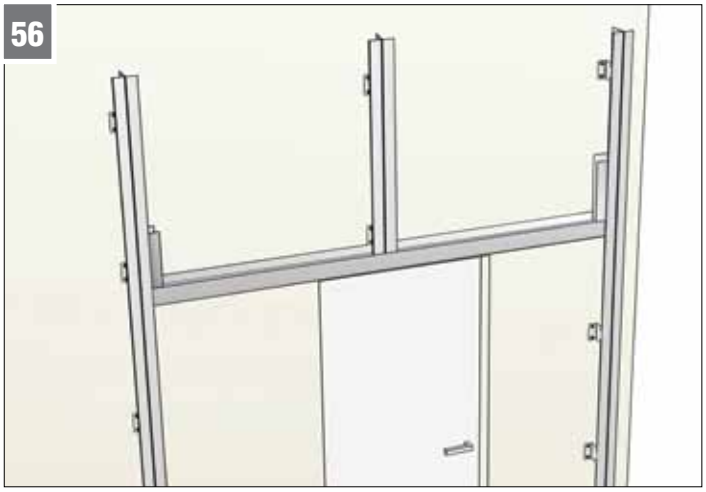
55



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

56



Application of lintel profile

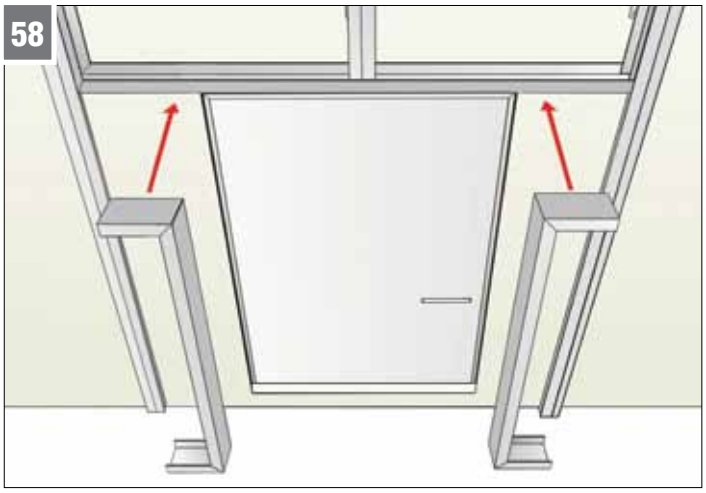
Lento profile is passed through from the lower part of the CT profile.

57

Fixing of lintel profile

The lintel profile is fixed onto CT profiles by screflange with Drillex hex head screw at two points.

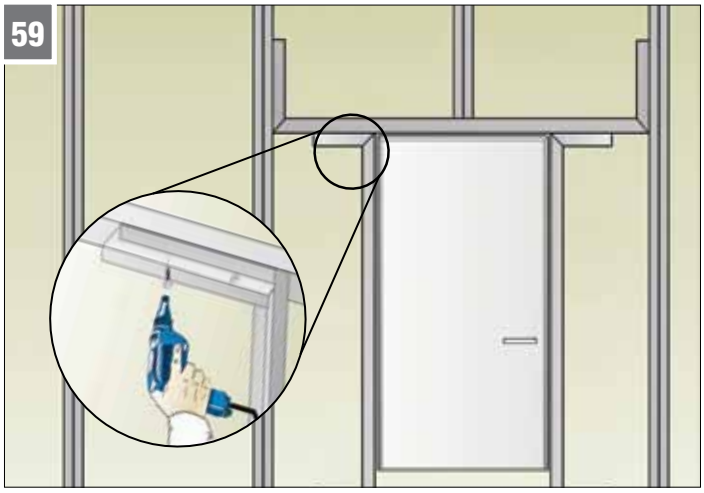
58



Preparation of the edge support profile

Lintel profile screws are prepared and placed on the sides of the door.

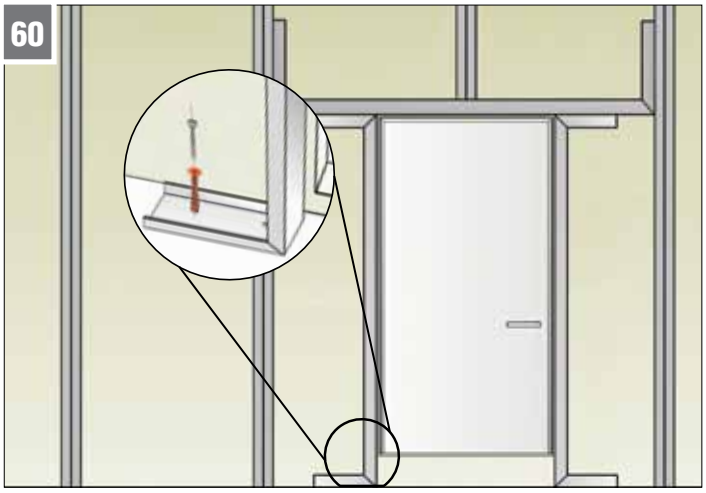
59



Fixing the edge support profiles

The vertical lintel profiles are fixed by using Drillex hex head screws at the point where they combine the horizontal lintel profiles on the top.

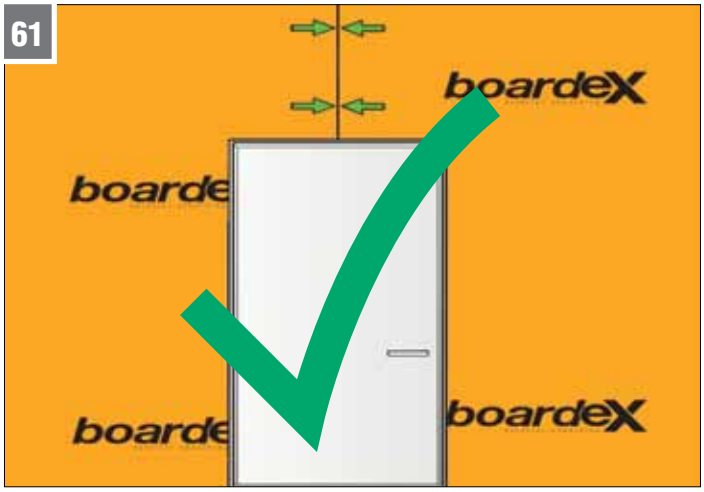
60



Fixing the edge support profiles

The vertical lintel profiles are fixed by using dowel screws at the point where they combine with the base at the lower section.

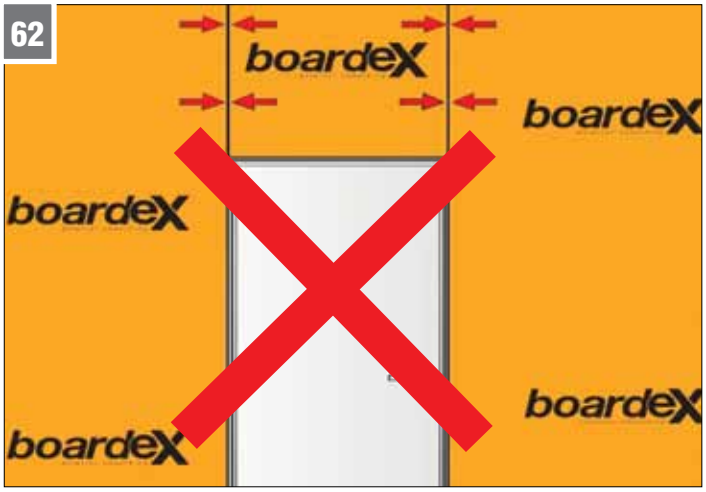
61



Right Application

BoardeX joints in the door cavities should be fixed so that they would be above or below the lintel.

62



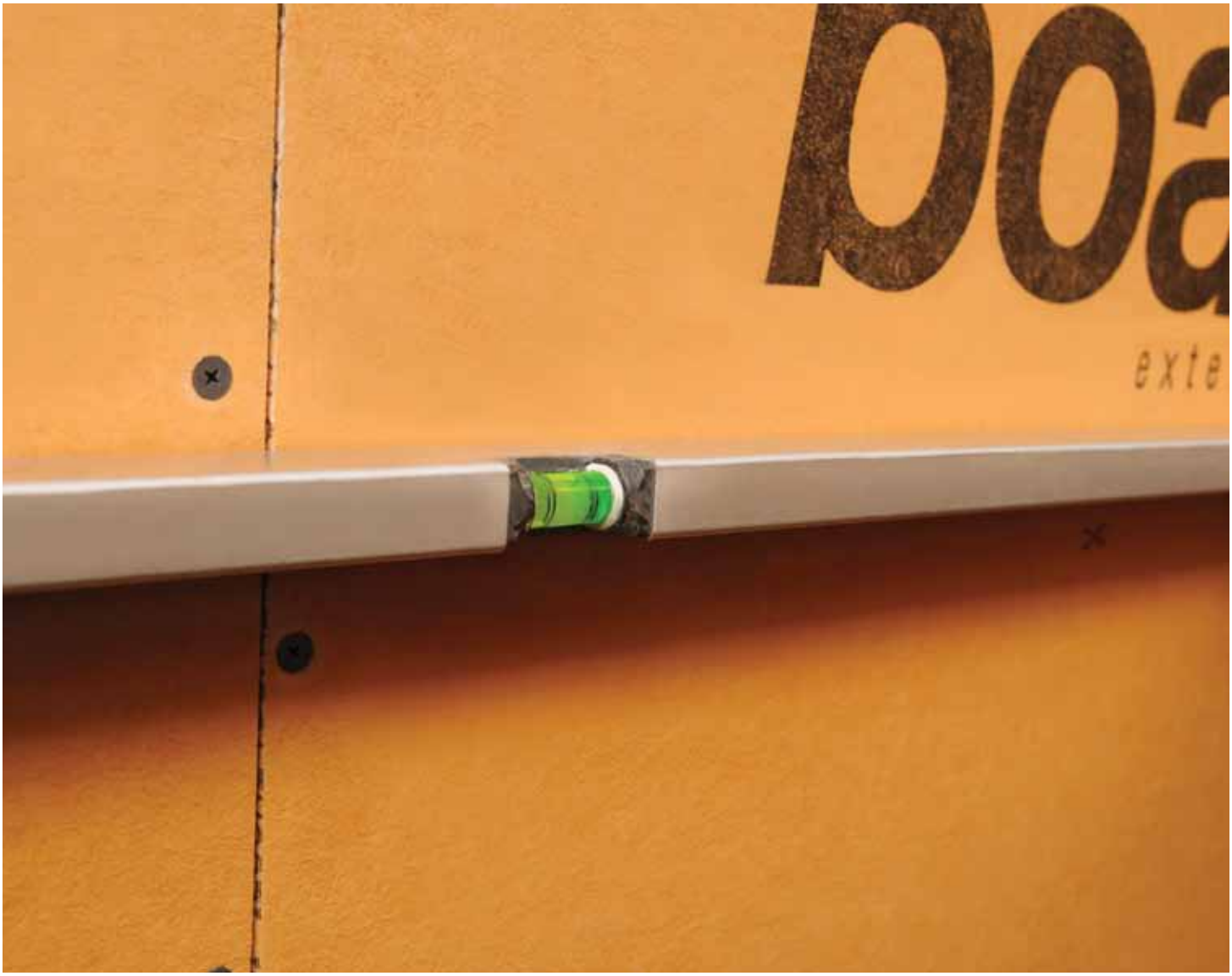
Wrong Application

BoardeX joints in the door cavities should not coincide with the edge profiles.

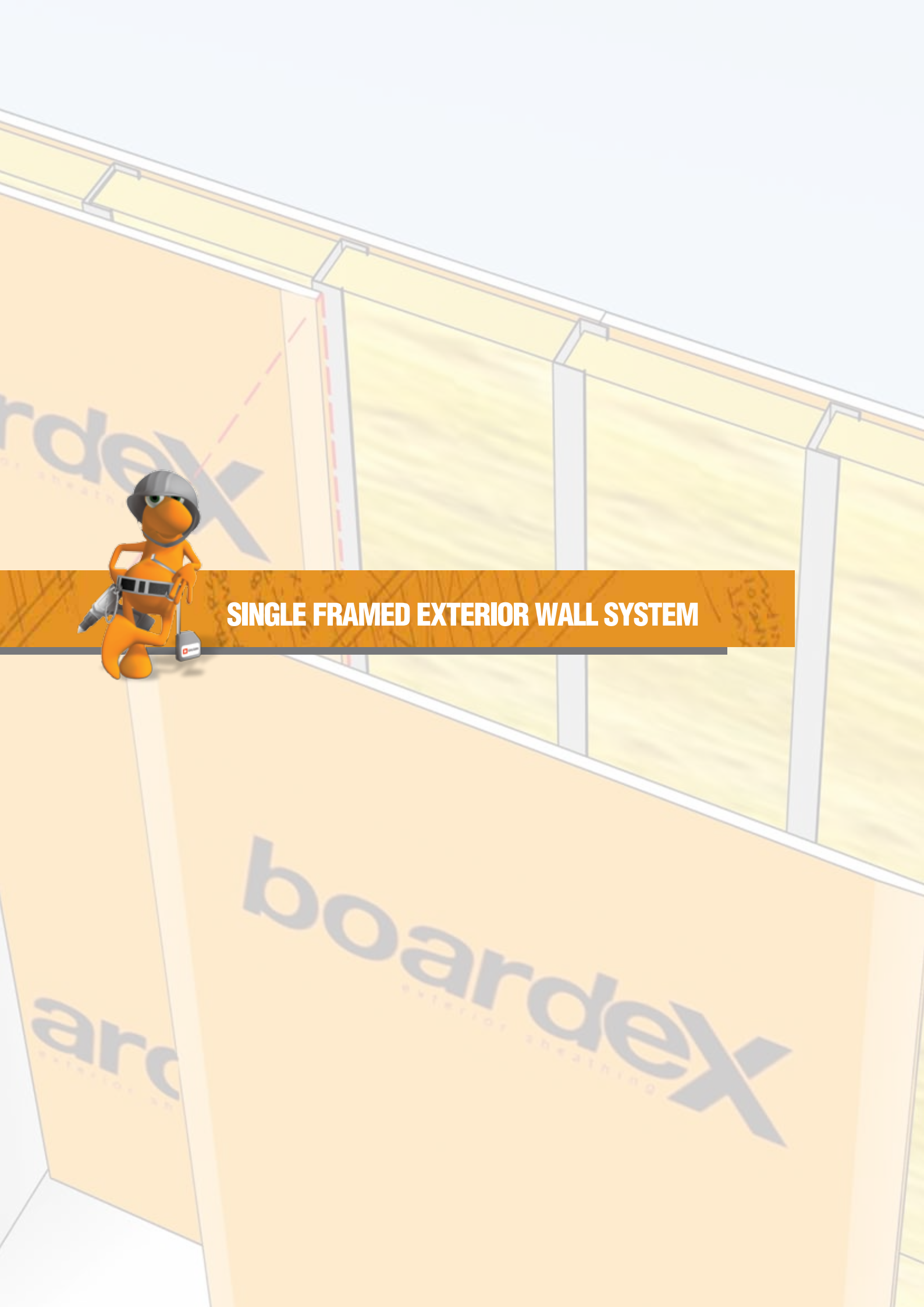
Frequently asked questions on CEKETLEME Exterior Wall System

QUESTION	ANSWER
What brackets are used for existing walls (aerated concrete, brick, pumice block, etc.)?	L brackets are secured on these walls by means of suitable dowels.
What should the density of the mineral wool be between the profiles?	If the density of mineral wool (glass fibre or rock wool) is high, it does not mean that it will provide more thermal insulation. Care must be taken to ensure that mineral wool is placed between the profiles without leaving any gaps.
Does the mineral wool need to be fixed on the existing wall?	Mineral wool does not need to be fixed to the existing wall when fully compressed between CT profiles as they do not sag.
Can we install BoardeX horizontally?	Since **BoardeX** flexural strength in bending is the same in both directions, it can be installed both horizontally and vertically.
Should BoardeX joints staggered?	The joints of **BoardeX** must be staggered.
Why do we need to use a starter track?	A PVC-based starter track is used to make sure the **BoardeX** plasterboard does not contact the floor.
Should there be dilatation?	If no cladding or Thermal insulation is going to be applied on the surface of CEKETLEME, maximum dilatations of 6 metres and 25 metres are allowed vertically and horizontally, respectively. Appropriate PVC profiles are installed for these dilation allowances.
Why should there be 20 cm intervals between the screws?	Screw spacings were determined to be 20 cm at most with the calculations made for the system to cover the wind loads.
Can we carry out fixing by using gypsum board screws in the CEKETLEME system?	Plasterboard screws should not be used because they are not resistant to corrosion. Corrosion resistant BoardeX self-drilling screws are used in exterior facade manufacturing
What needs to be done to reduce thermal bridges	In order to prevent heat bridging, mineral wool should be applied everywhere in a way not to cause any gaps. To reduce heat bridges, Fix T fittings made of composite material can also be used instead of metal L brackets
Can we install CEKETLEME system by using box profiles?	Box profiles can cause cracks at joints due to the contraction-expansion difference in temperature changes. In addition, the box profile creates more heat bridges due to its cross section. For this reason, application with box profile is not preferred.
Do we need extra insulation on the BoardeX surface in the CEKETLEME system?	Additional insulation can be installed on the surface of **BoardeX** achieve the more insulated exterior wall. In addition, the **BoardeX** surface also provides a smooth substrate for the application of any type of coating material.

BoardeX provides a levelled smooth surface

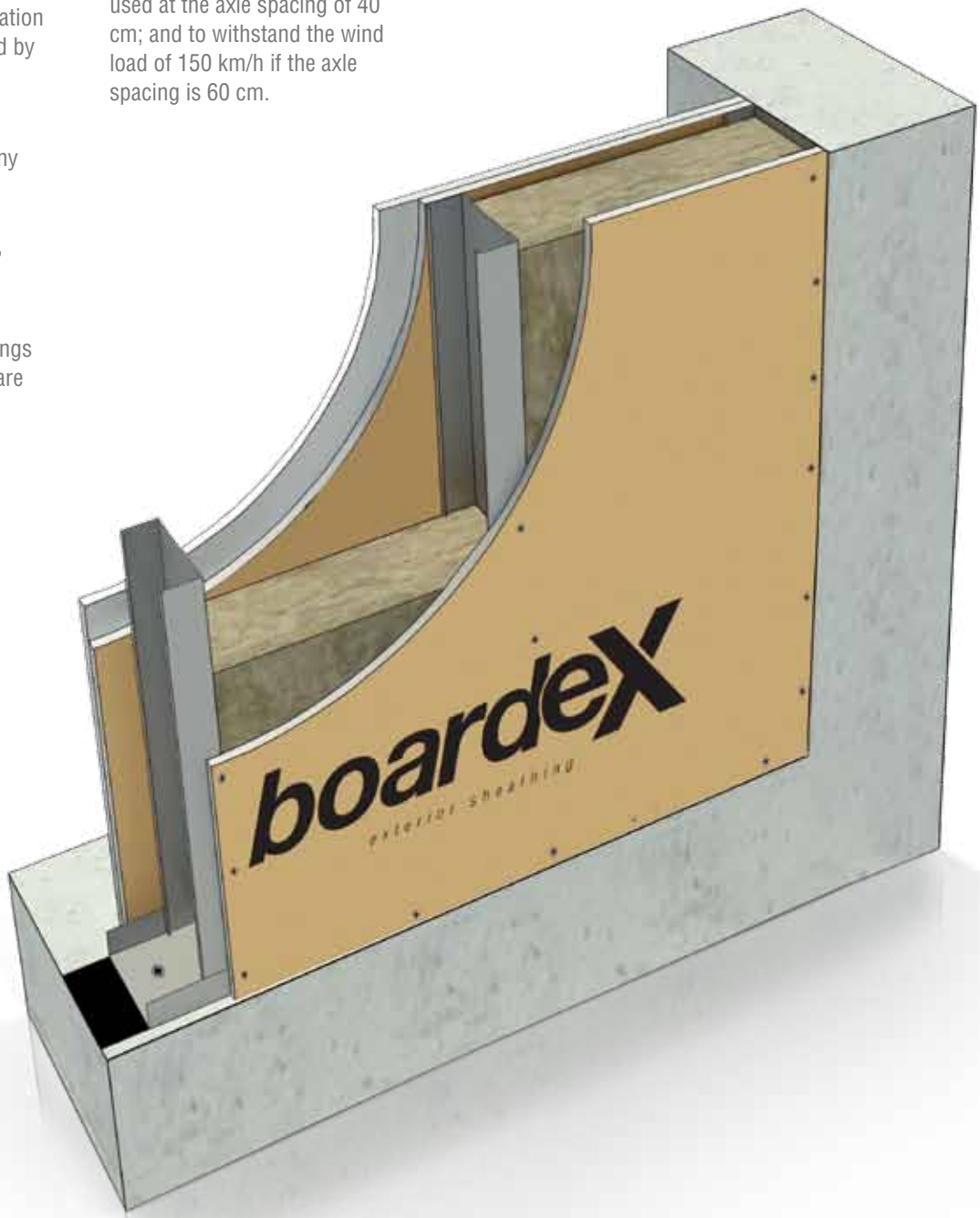


and a smooth substrate for the coating materials to be installed on it.



SINGLE FRAMED EXTERIOR WALL SYSTEM

- **Single framed** exterior wall system is used for exterior wall systems in reinforced concrete or steel buildings with less number of floors (2-3 floors) where faster production is desired.
- In order to increase the thermal insulation and to ensure continuity, the Thermal insulation is carried out by installing an insulation material on the surface at the desired thickness. The installation of Thermal insulation should be carried out by taking into consideration the application principles recommended by IZODER.
- The obtained smooth surface is coated with any kind of coating material (metal coating, weather boarding, wood coating, decorative brick veneer, etc.)
- The usage area of buildings of which external walls are manufactured by **Single framed** external wall system increases. **More floor area is gained.**
- As for the interior finishing, all wet productions such as screed and plaster can be completed before the gypsum board plaster is fixed as the last layer. Folloflange these applications, the wall surface is completed by fixing the final layer plasterboard on **BoardeX.**
- **Single framed** exterior wall system is designed to withstand the wind load of 166 km/h at a building higher than 100 m if the **DC** 100 profile 0.9 mm thick is used at the axle spacing of 40 cm; and to withstand the wind load of 150 km/h if the axle spacing is 60 cm.



Single Framed Exterior Wall System Auxiliary Materials

DU 50-75-100 **profile** **38x38 mm**		**Single frame exterior system** is used to form the exterior drywall system by fixing to the floor and ceiling.
BoardeX **DC 100** **profile 47x47 mm**		**BoardeX DC 100** profile of **single framed exterior wall system**. It is a galvanized profile, which is 275 gr / m^2 with 0.9 mm wall thickness.
Resilient tape **50-75-100**		It adheres under the galvanized steel sheet profiles in the construction of the exterior wall. 50, 75 and 100 mm wide, self-adhesive resilient tape and contribute to sound and heat performance.
Starter Track		It is a PVC based profile to isolate **BoardeX** from the floor
Mineral Wool **Glass wool or rock wool**		It is used to fix the L brackets onto reinforced concrete surfaces.
Dowel-screw		Plastic dowels and washer-head screw set used for fixing the galvanized profiles on the floor in the construction of the exterior wall. It consists of 8 mm plastic dowel and 45 mm washer-head screw.

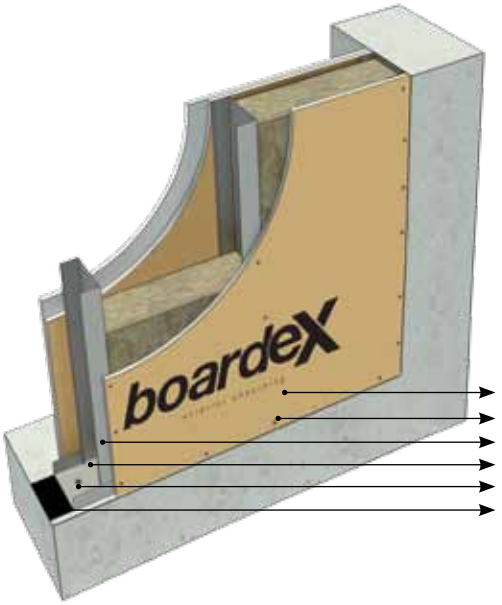
Self-drilling screw 35

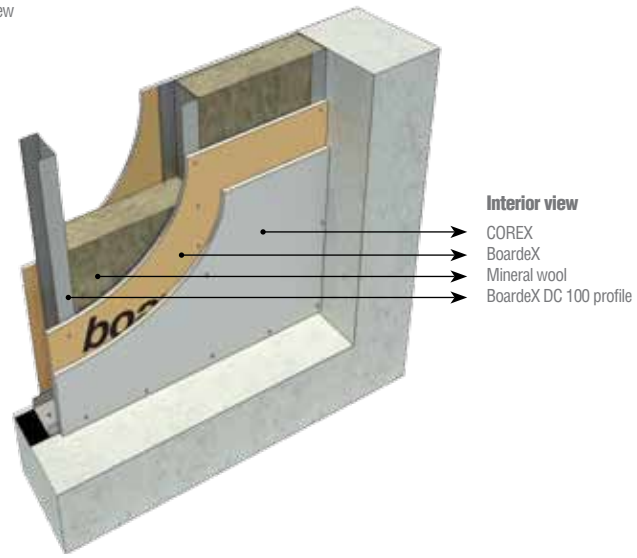
It is the screw that is used to fix the plasterboards facing the interior side onto **BoardeX** up to 2 mm wall thickness.

BoardeX
self-drilling screw

The specially designed corrosion-resistant screw used for fixing exterior wall boards to profiles with a wall thickness of up to 2 mm.

Material Analysis





Material Analysis

Name of the Material	Consumption	
	✕=40 cm	✕=60 cm
BoardeX	2,10 m²	
COREX	1,05 m²	
Boardex DC 100 profile (47x47; 0.9 mm; Z275)	2,90 mt	2,10 mt
DU profile (38 x 38; 0.6 mm; Z100)	0,84 mt	
BoardeX self-drilling screw(with interior 40 cm, exterior 20 cm intervals)	37 pcs	23 pcs
Self-drilling screw 35 (with 30 cm intervals)	16 pcs	12 pcs
Dowel-screw	5,25 adet	
Resilient tape 100	1,50 mt	
Joint tape or paper tape	1,80 mt	
DERZTEK joint grouting plaster	0,40 kg	
Mineral wool (low density)	1,05 m²	
Starter Track	Varies according to the base perimeter	

✕=40, states that the DC profile axle spacings are 40 cm.

!!! The area of the wall for which the material analysis is conducted has been calculated to be 4mx2,5m = 10m², and 5% tolerance has been included in the calculations

Note: For more information, please refer to "BoardeX system book" or www.boardeX.com website.

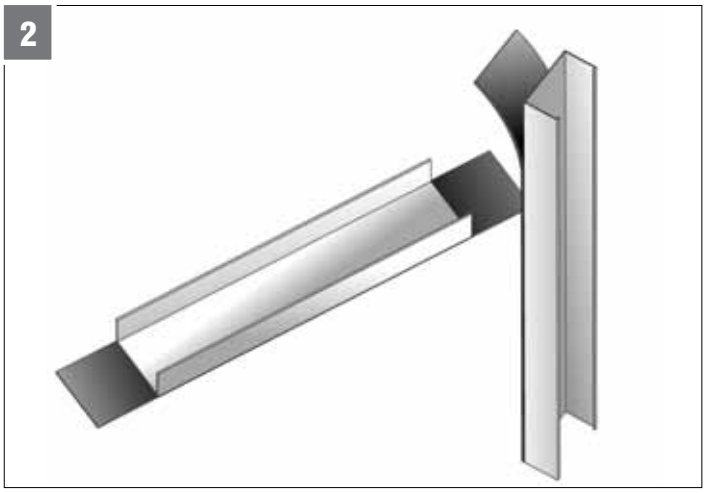
Single Framed Exterior Wall System - Application

1

Single Framed Exterior Wall System

Single Framed exterior wall system is used in external walls of reinforced concrete or steel buildings with less number of floors where fast manufacturing is required.

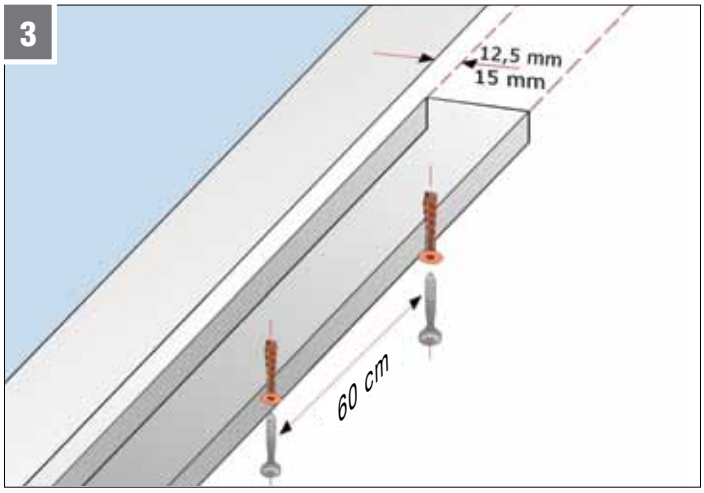
2



Preparation of resilient tape

A resilient tape with a width of 10 cm is affixed onto the bottom of the **BoardeX** Wall C 100 and Wall U 100 Profiles.

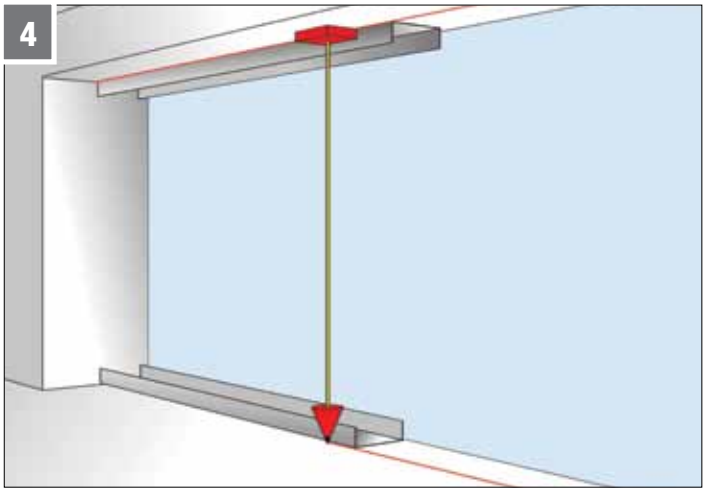
3



Screwing Profiles

The **DU** 100 profile, depending on the thickness of the **BoardeX** to be selected, is fixed to the ceiling using dowel screws with 30 cm intervals so that it is 12.5 or 15 mm inward from the carcass limit with respect to its thickness.

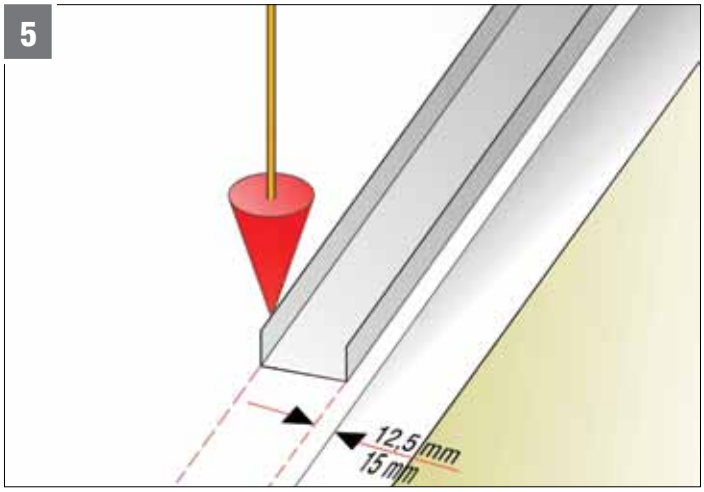
4



Screwing Profiles

The **DU** profile line on the ceiling is transferred to the floor with plumbing.

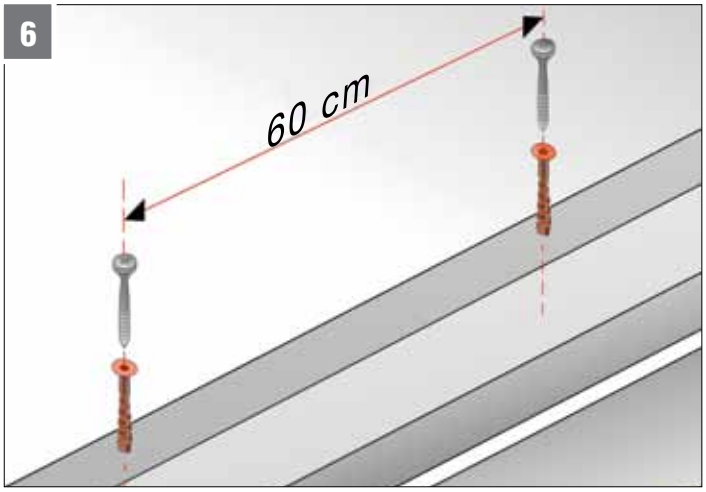
5



Screwing Profiles

DU 100 profili, seçilecek **BoardeX** kalınlığına göre karkas sınırından 12,5 veya 15 mm içeride kalacak şekilde tabana yerleştirilir.

6

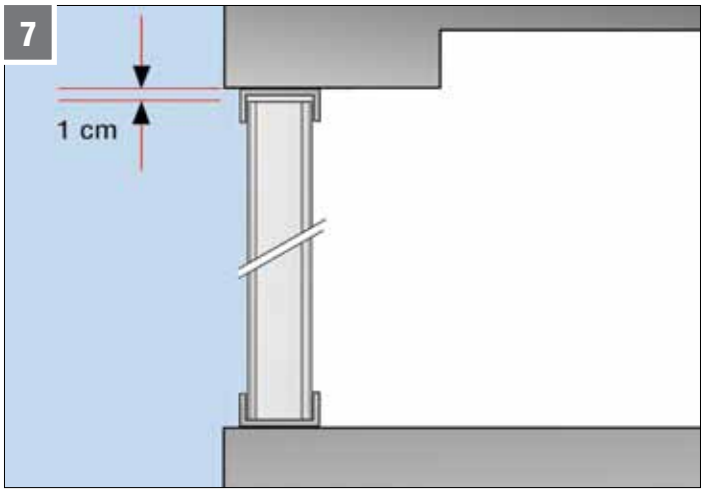


Screwing Profiles

The **DU** 100 profiles are fixed to the floor using dowel screws with 30 cm axle spacing.

Single Framed Exterior Wall System - Application

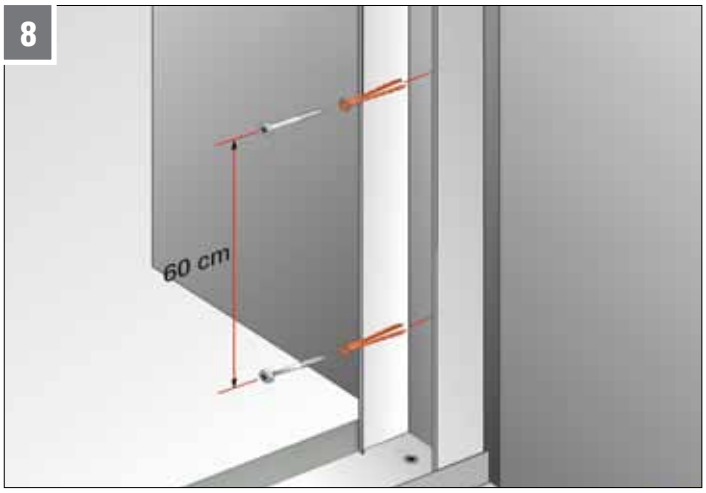
7



Preparing Profiles

The **DC** 100 profiles should be cut at least 1 cm shorter than floor height.

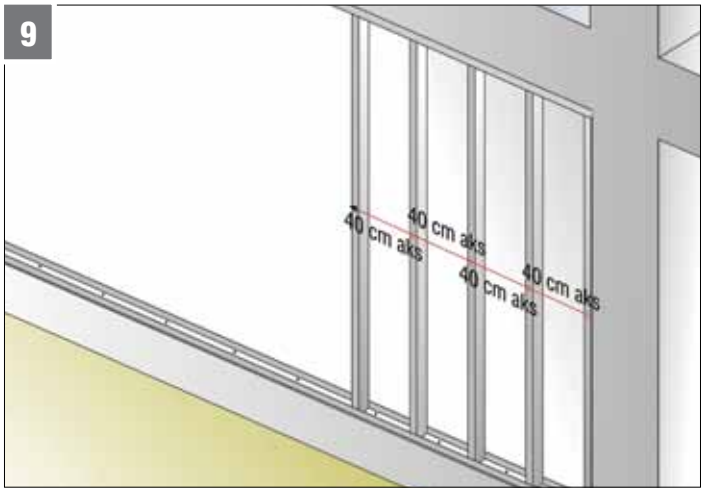
8



Screwing Profiles

The first **DC** 100 profile, for which a resilient tape was attached to the bottom previously, is fixed to the existing column by using dowel screws with a maximum of 60 cm intervals.

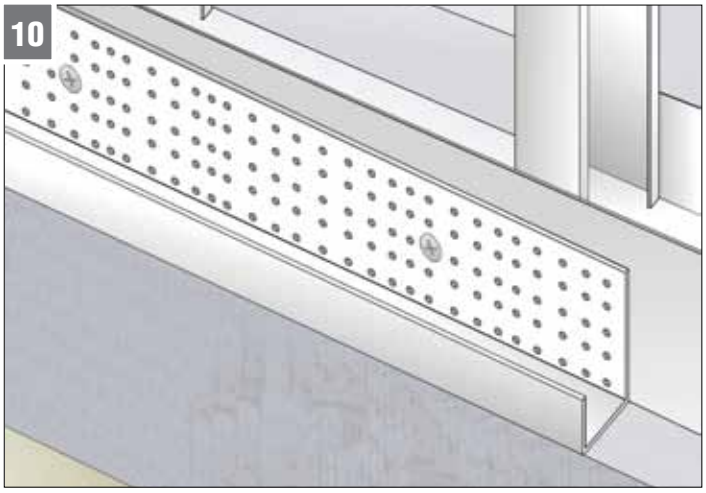
9



Placement of DC 100 profiles

DC 100 profiles are placed in **DU** 100 profiles with 40 cm axle spacing.

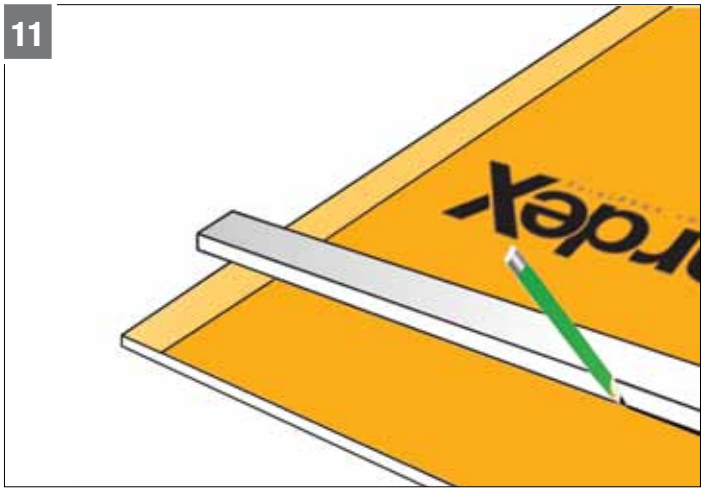
10



Placement of the starter track

Before **BoardeX** is fixed onto the profiles, the PVC based initial profile is fixed to the **DU** 100 profile by placing on the floor.

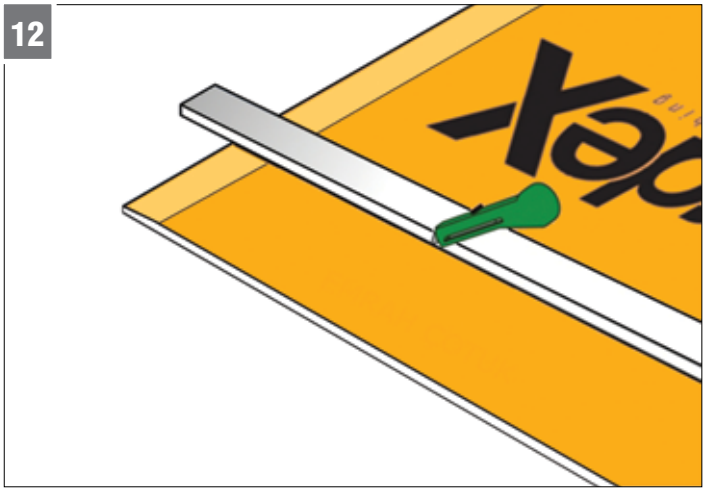
11



Cutting BoardeX

The **BoardeX** to be cut is marked on the surface with a pen.

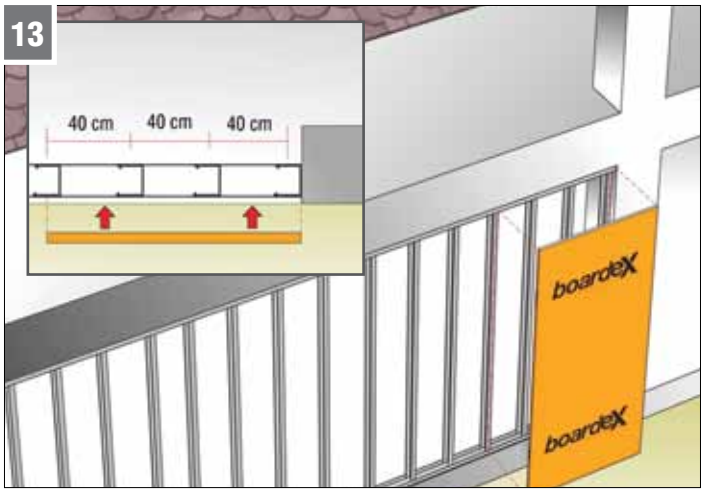
12



Cutting BoardeX

BoardeX is cut with the help of a gauge from the marked place using a knife. For **BoardeX** cutting, there is no need for spiral, jet stone, or any other dust emitting cutting tools.

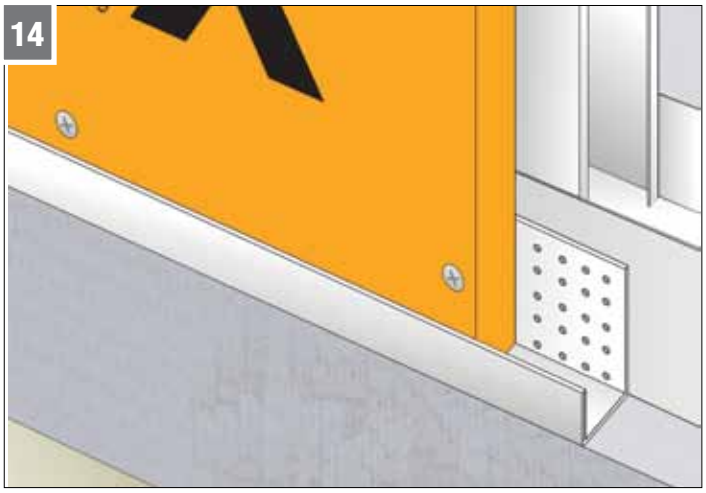
13



Screwing of BoardeX

BoardeX is fixed with a full board.

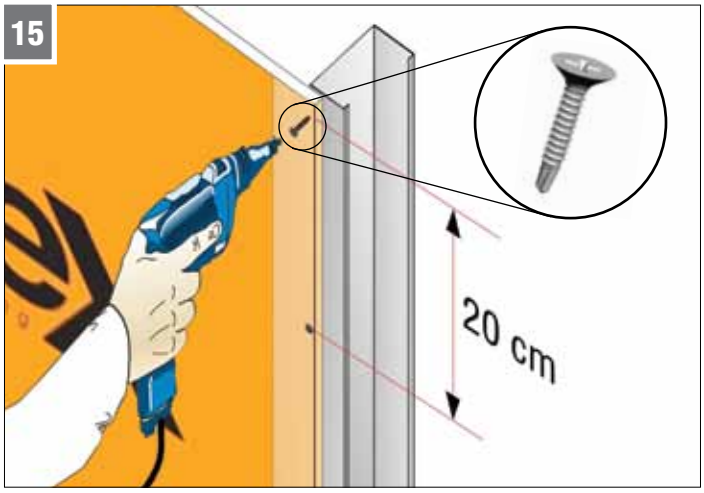
14



Screwing of BoardeX

BoardeX is passed through the PVC profile on the base and fixed onto the **DC** 100 profiles on the front surface.

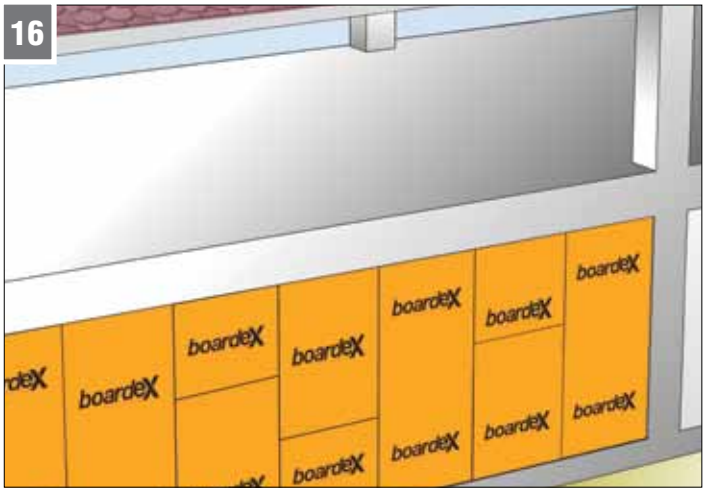
15



Screwing of BoardeX

BoardeX self-drilling screwshould be used for fixing. The BoardeX self-drilling screwis screwed with 20 cm and 40 cm vertically and horizontally, respectively.

16



Screwing of BoardeX

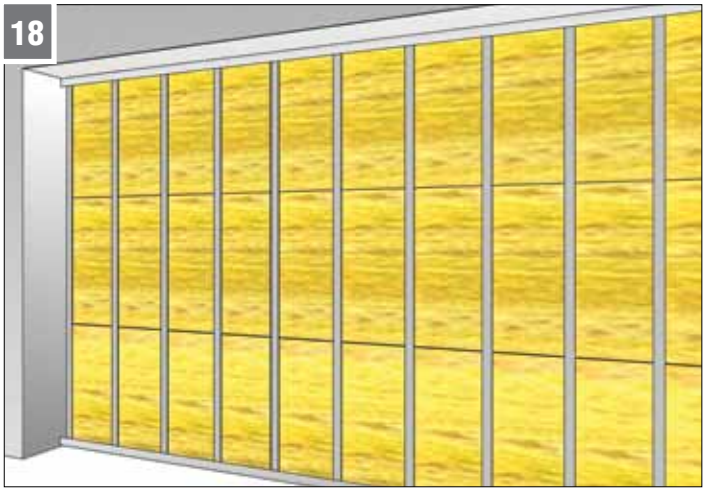
All profiles are fixed with **BoardeX** and the surface is closed. Where the height of the floor exceeds the length of **BoardeX**, the horizontal joint places are installed in an interlaid pattern.

17

Layout of mineral wool

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

18

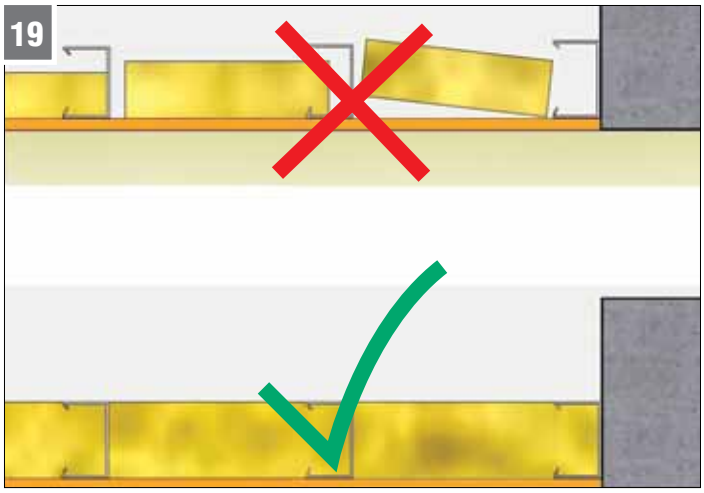


Layout of mineral wool

To ensure effective thermal insulation, mineral wool is placed in an ordered fashion throughout the cavities to fill all the gaps between the profiles.

Single Framed Exterior Wall System - Application

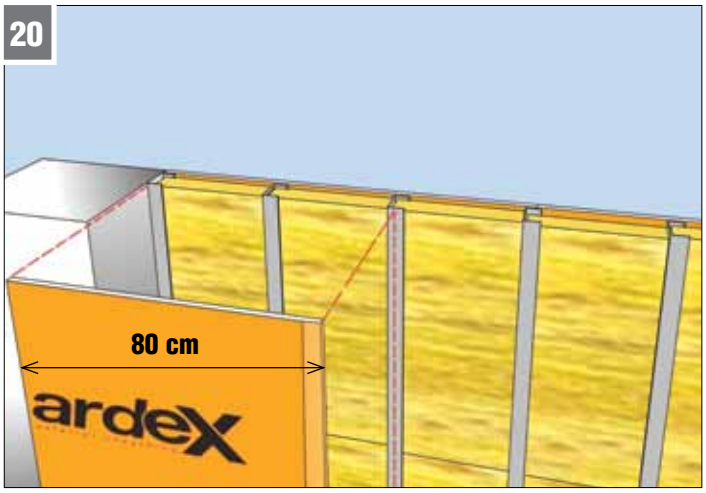
19



Warning!

To ensure a homogenous thermal insulation all throughout the wall, mineral wools are placed carefully to ensure continuity in thermal insulation, and with no gaps between the profiles and covering the entire wall surface.

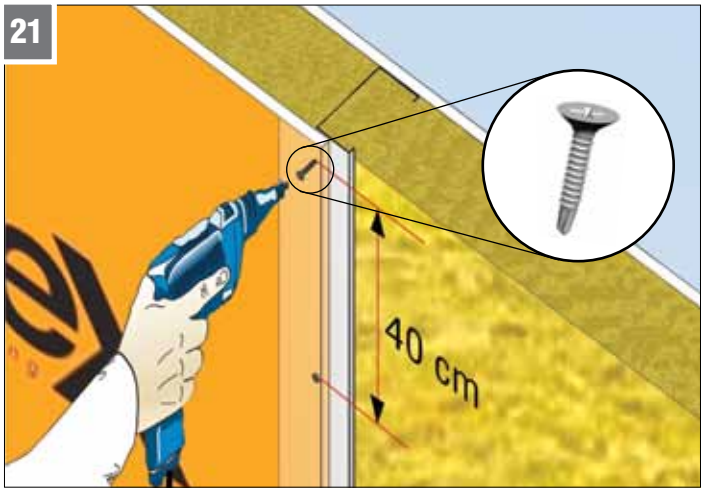
20



Screwing BoardeX

The **BoardeX** to be applied to the inner surface of the wall must be applied in an interlaid pattern so that it does not coincide with the **BoardeX** joints on the outer surface. For this reason, the width of the first **BoardeX** can be selected as 80 cm.

21



Screwing BoardeX

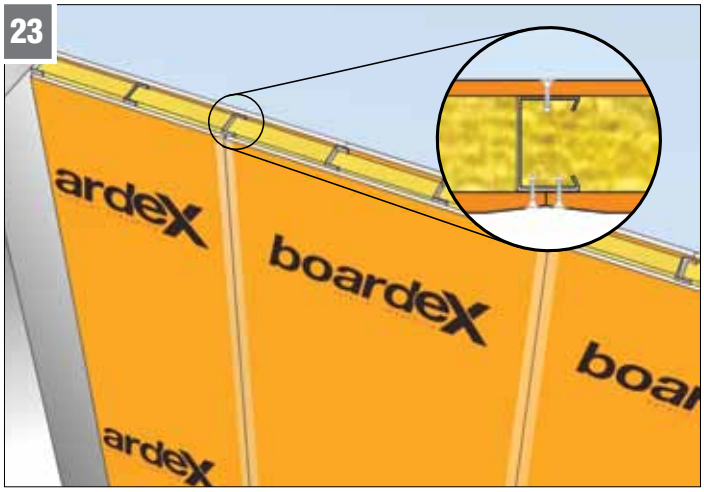
The **BoardeX** on the interior surface is fixed onto profiles by Drillex self-drilling screws at 40 cm intervals.

22

Screwing BoardeX

The application continues with a full-size **BoardeX** and the **BoardeX** is fixed onto the profiles.

23



Screwing BoardeX

The joint places of the **BoardeX** on the interior surface and the **BoardeX** on the exterior surface should be fixed together in an interlaid pattern and screwed.

24

Practice of wet applications

After fixing the **BoardeX** on the interior surface, wet applications such as screed and ceramic can be completed within the building.

25

COREX application

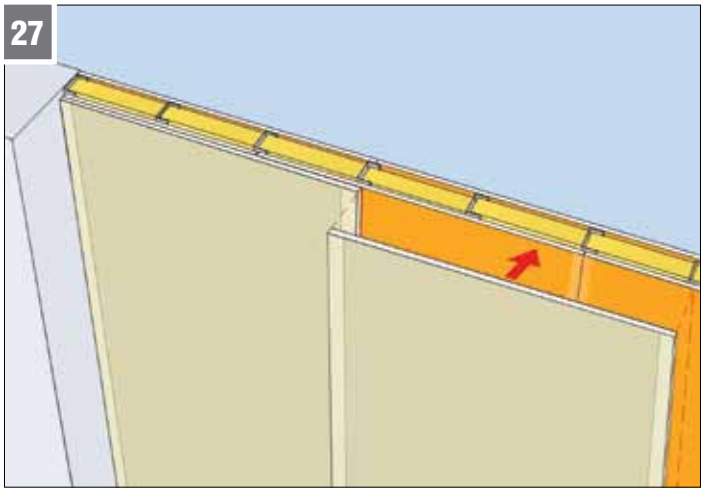
After completing the wet production on the interior, **COREX** application can be started. The **COREX** joints should be applied in such a way that they do not coincide with the joints on the first layer, that is, applying in an interlaid pattern.

26

Screwing COREX

COREX is fixed with a self-drilling screw 35 with 30 cm vertical and 40 cm horizontal intervals.

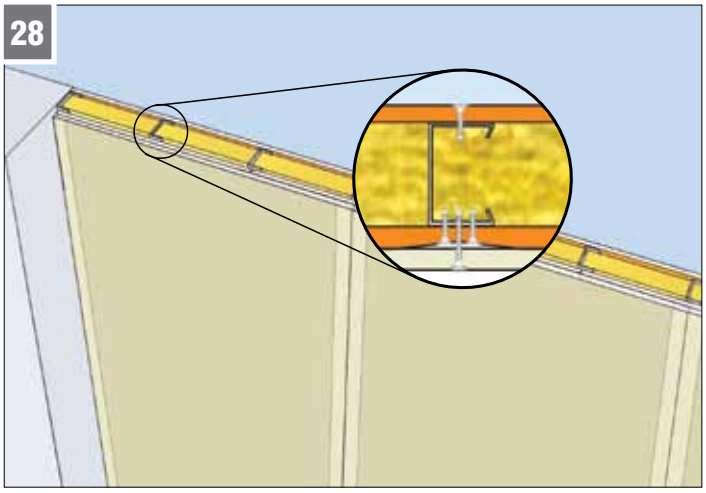
27



Screwing COREX

The application continues with a full-length **COREX** and it is fixed onto the profiles.

28



Screwing COREX

Attention must be given to screw the **COREX** onto the profiles by making sure the joint places of the first layer of **BoardeX** do not coincide with that of **COREX.**

Thermal Insulation Application on boardeX exterior sheathing Surface

29

Thermal insulation application

Before the application of Thermal insulation, PROBASE fix, a cement based adhesive mortar, is applied on the surface with the help of a notched trowel.

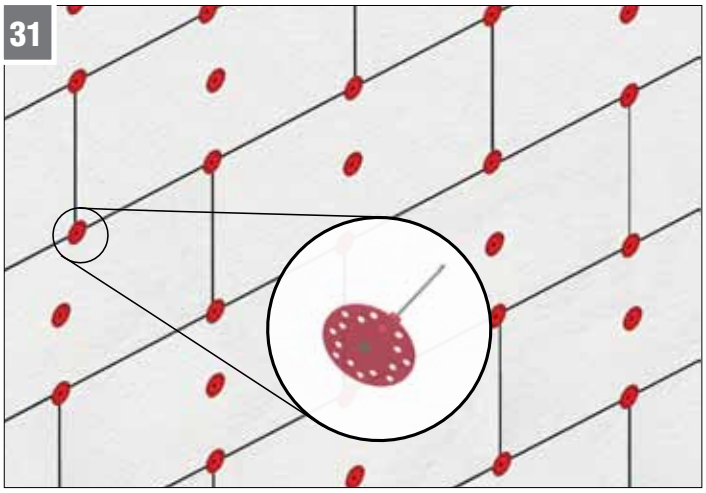
Single Framed Exterior Wall System - Application

30

Thermal insulation application

The insulation material (EPS, XPS or rock wool) selected as per the project is affixed on the **BoardeX** surface.

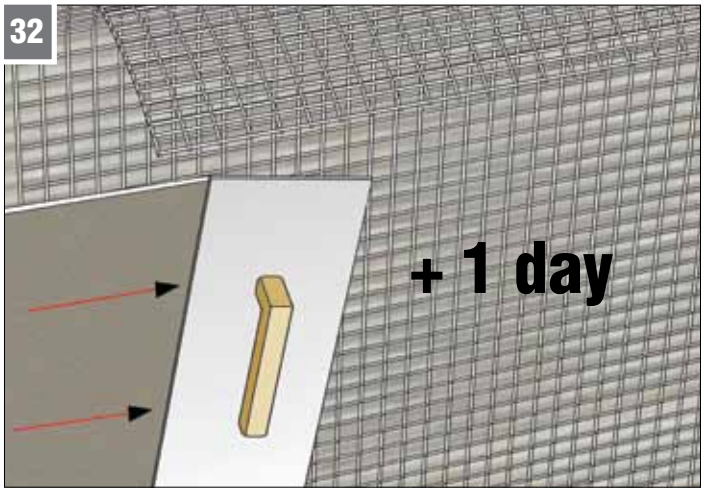
31



Fixing the insulation material

The insulation material is fixed onto the **DC** profiles over **BoardeX** with the self-drilling tipped, parachute head dowels at the locations corresponding to the profiles.

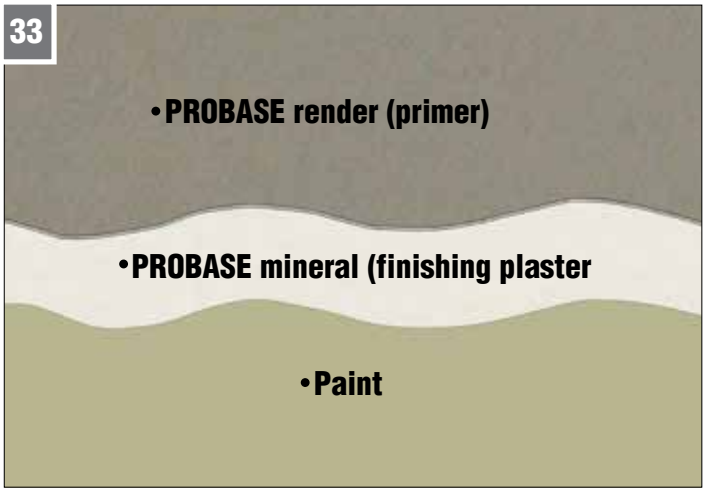
32



Thermal insulation application

After the base plaster is applied onto the entire surface, the alkali-resistant plaster mesh with a weight of 160gr / m^2 is slightly buried into the base plaster surface and the surface is made ready for finishing plaster to be carried out after 1 day.

33



Completion of surface

After the application of base plaster and mineral plaster (finishing plaster) on the surface of the insulating material used in the Thermal insulation, the surface is completed by painting.

Coating different types of materials on boardeX exterior sheathing surface

34

Joint filling

If the **BoardeX** surface is to be coated with another material, the joints are filled with an appropriate sealant resistant to water and moisture.

35

Metal cladding material

BoardeX can be finished with metal cladding materials. For this application, the load-bearing system of the cladding material must be fixed onto the system profiles over **BoardeX**

36

Wood cladding

The **BoardeX** surface can be completed by installing wood or cement based decorative cladding materials. For this application, the cladding material should be fixed onto the system profiles over **BoardeX.**

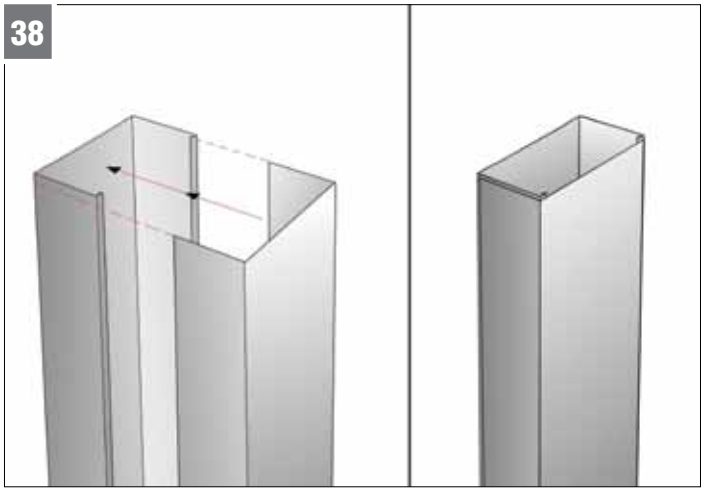
37

PVC Siding application

The **BoardeX** surface can be completed with the PVC Siding material. For this application, the PVC Siding material should be fixed onto the system profiles over **BoardeX**.

Details

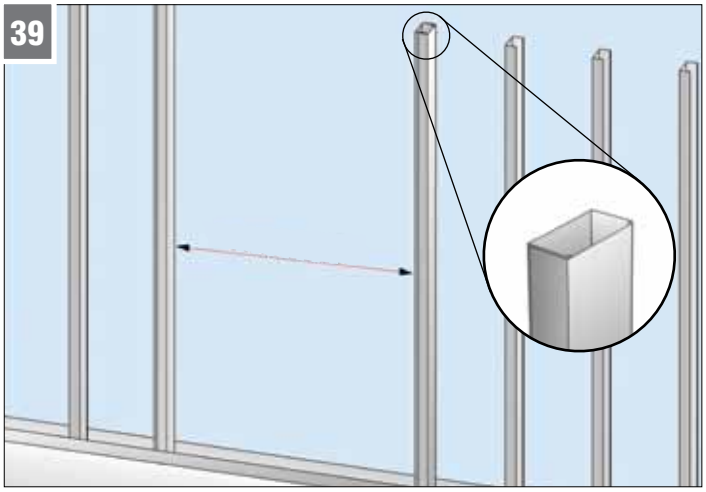
38



Window application details

On the vertical line that corresponds to the line on which window frame is going to be fixed **BoardeX DC100** and **DU100** profiles are inserted into each other.

39

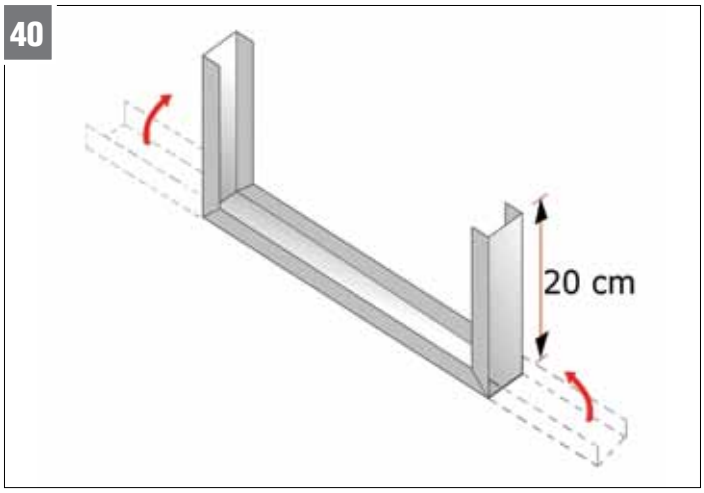


Window application details

These profiles are placed on both sides of the window to fit the window gap horizontally.

Single Framed Exterior Wall System - Application

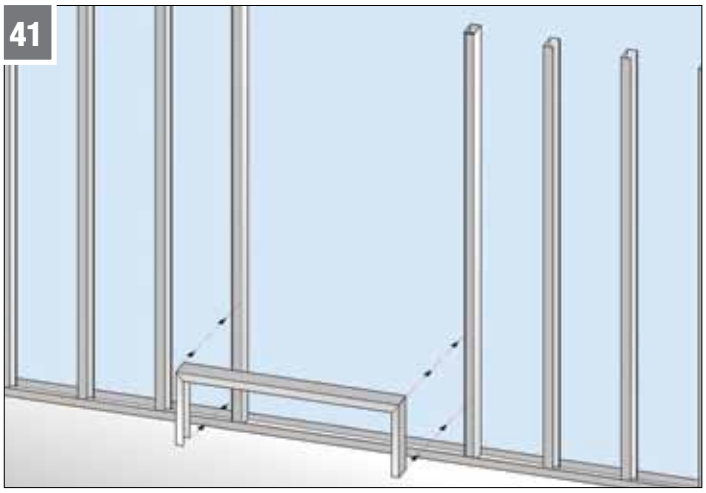
40



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

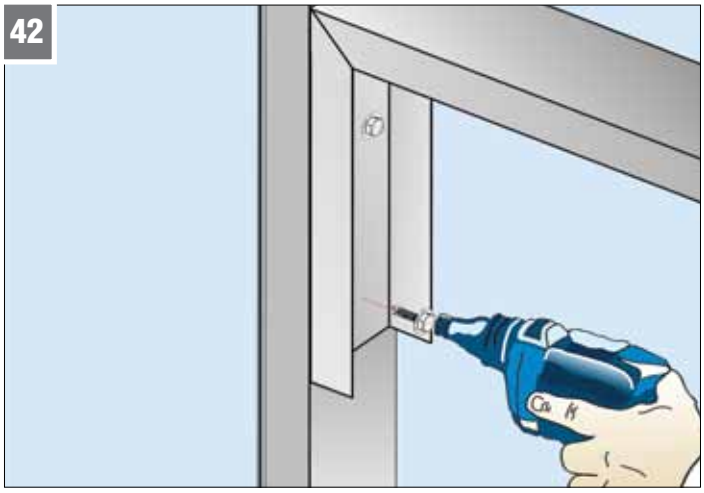
41



Placement of lower lintel profile

The lintel which is determined in accordance with the window size is placed on the underneath section.

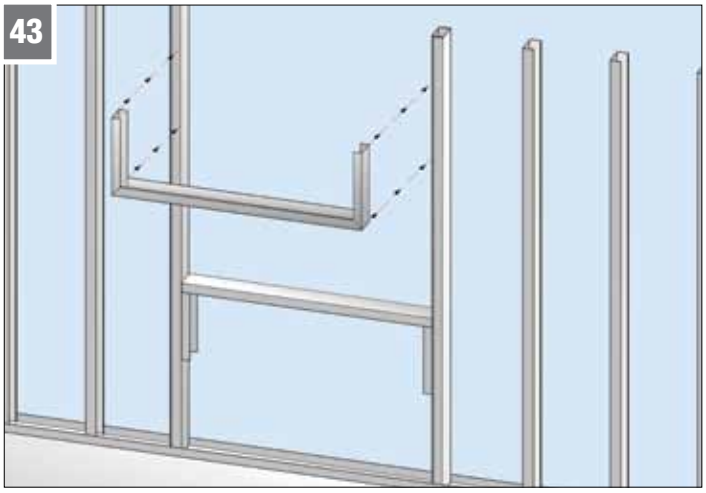
42



Fixing of lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hat screws from at least two points.

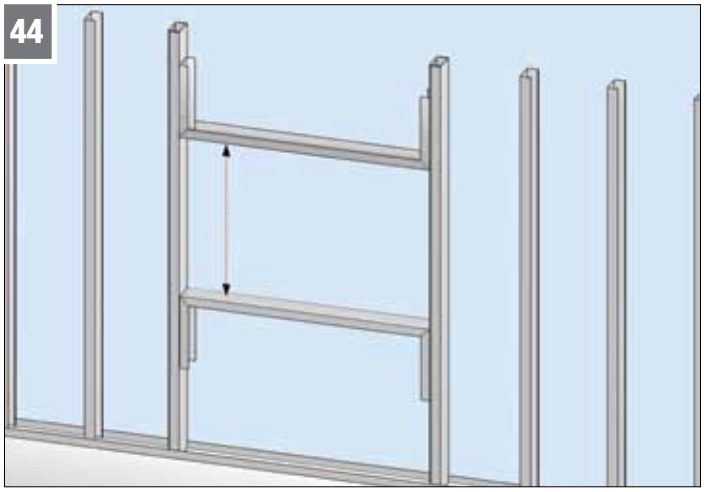
43



Placement of upper lintel profile

The determined upper lintel profile is placed in the upper section in accordance with the window size and is screwed onto the side profiles from both sides.

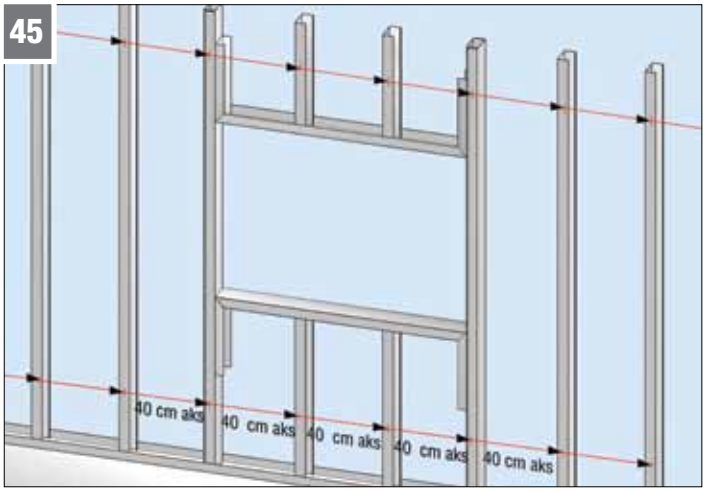
44



Window application details

In this way, the metal frame in the cavity where the window will be placed is completed.

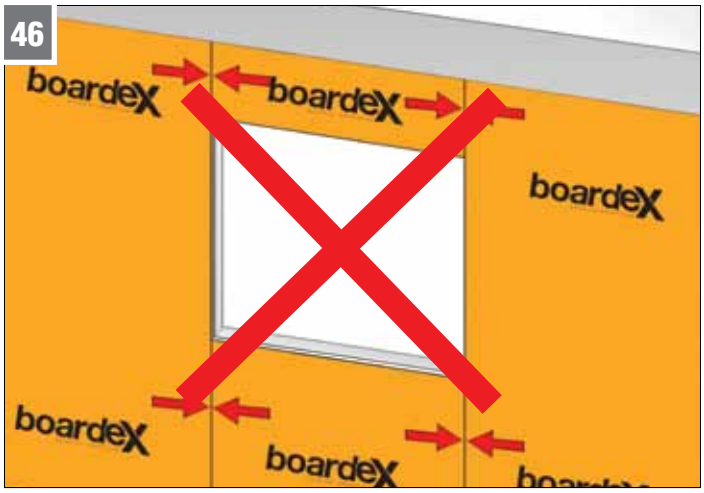
45



Window application details

Additional **DC** 100 profiles should be installed as needed to allow the profiles to continue at a 40 cm axle spacing.

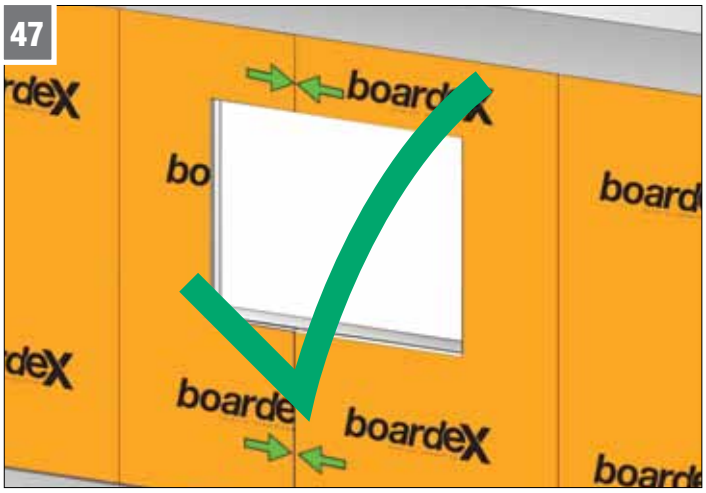
46



Wrong Application

BoardeX joints in the window cavities should not coincide with the window edge profiles.

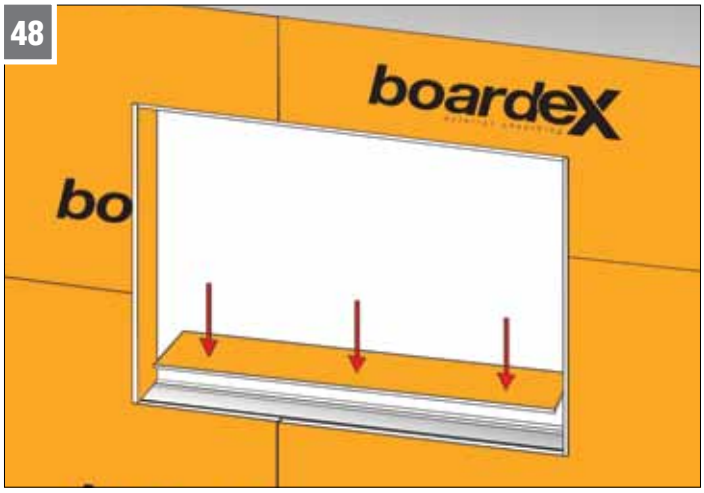
47



Right Application

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

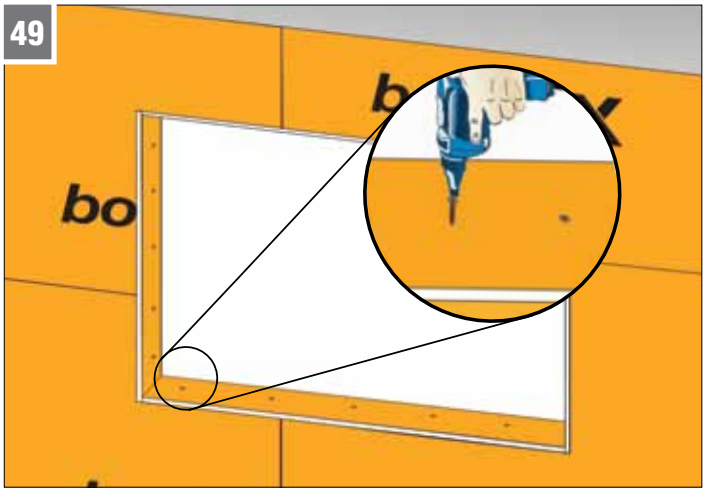
48



Window application details

Suitable sizes of **BoardeX** are cut and placed on the profiles in the window cavity and the edges of the windows are closed.

49

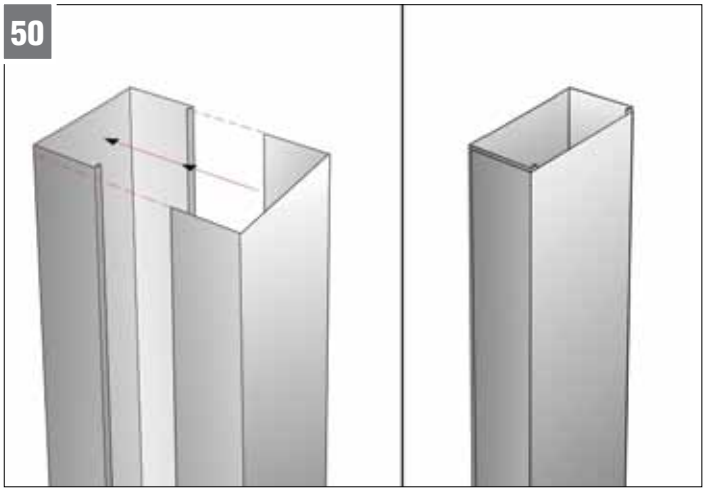


Window application details

Edge **BoardeX** parts are fixed with BoardeX self-drilling screwand made ready for window assembly.

Doorway detail

50

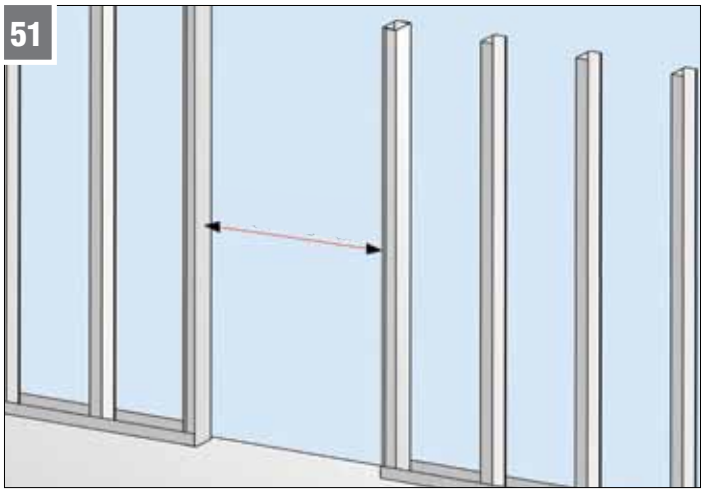


Doorway detail

On the vertical line where the door frame is going to be fixed, the **DC** 100 and **DU** 100 profiles are inserted into each other.

Single Framed Exterior Wall System - Application

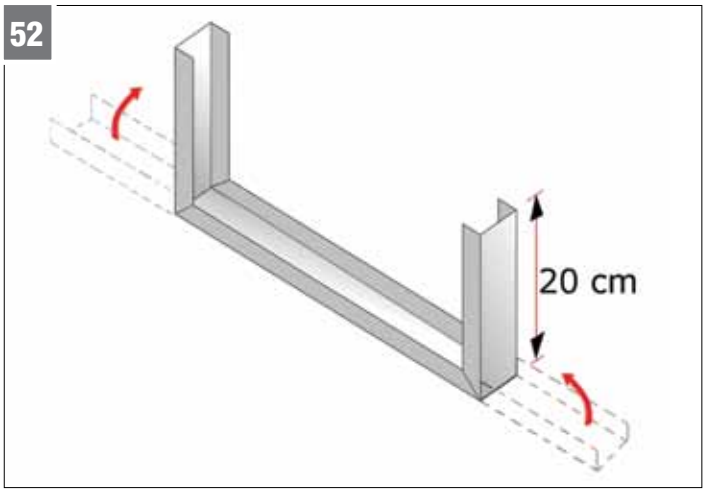
51



Doorway detail

These profiles are placed on both sides of the door to fit the door gap horizontally.

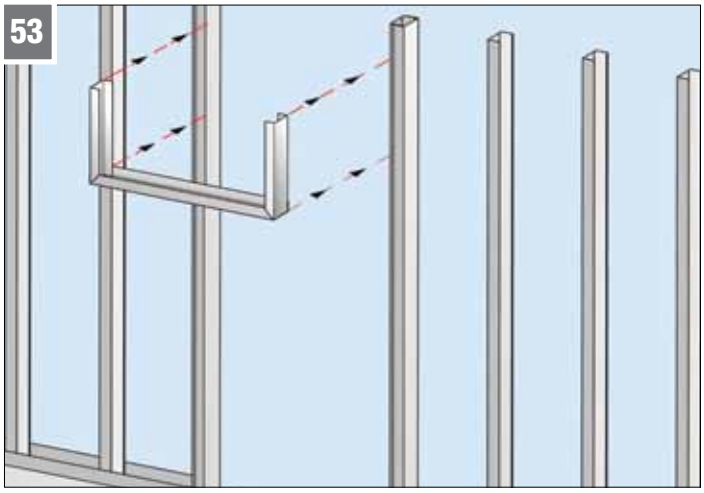
52



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the door width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

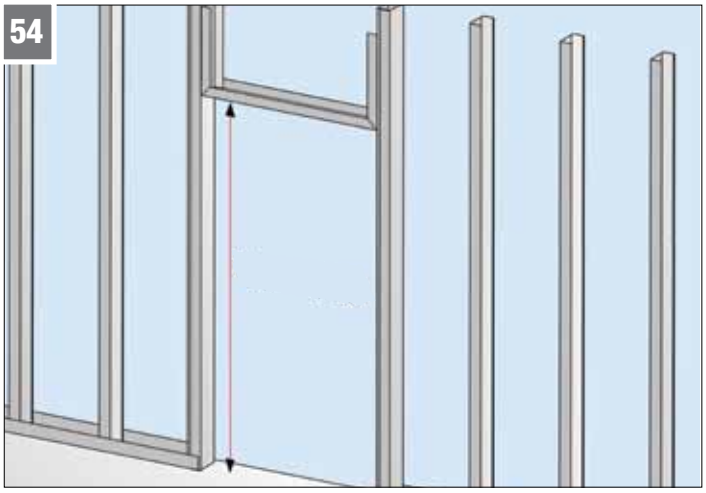
53



Placement of the lintel profile

The created lintel profile is placed in the door cavity corresponding to the upper section.

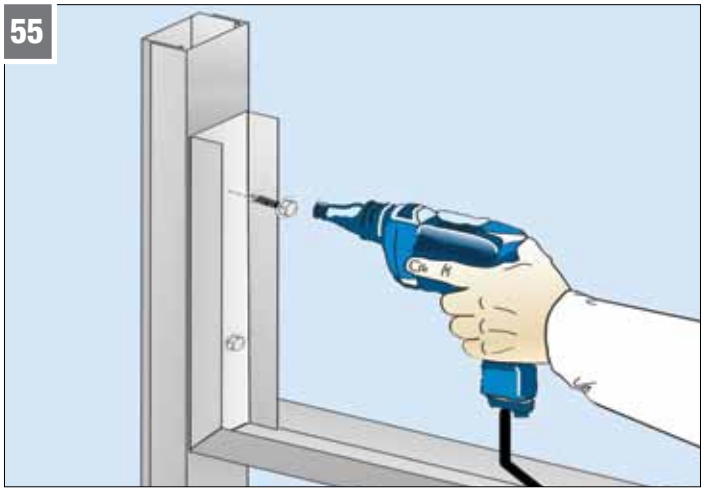
54



Placement of the lintel profile

The lintel profile is positioned according to the height of the door.

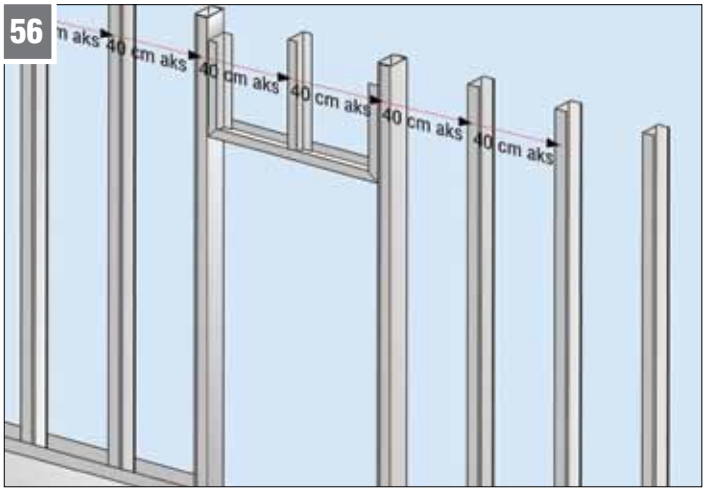
55



Fixing of lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hat screws from at least two points.

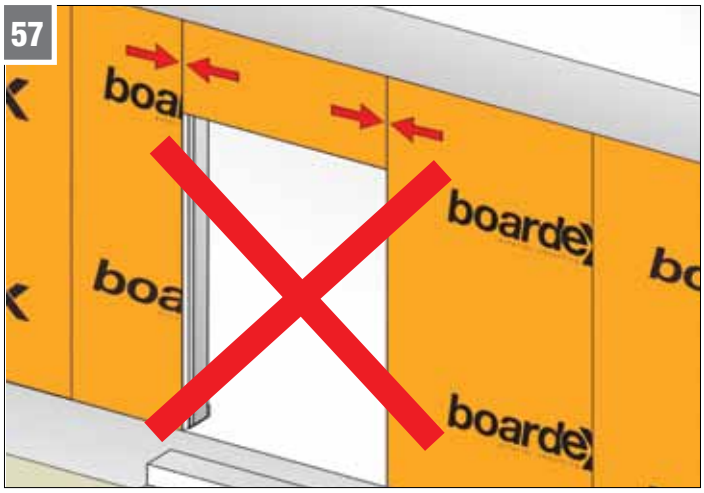
56



Doorway detail

Additional **DC** 100 profiles should be installed as needed to allow the profiles to continue at a 40 cm axle spacing.

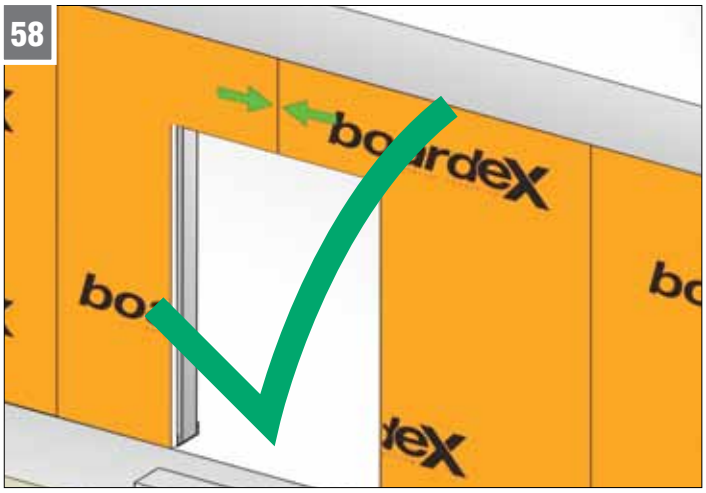
57



Wrong Application

The **BoardeX** joints in the door cavities should not coincide with the edge profiles.

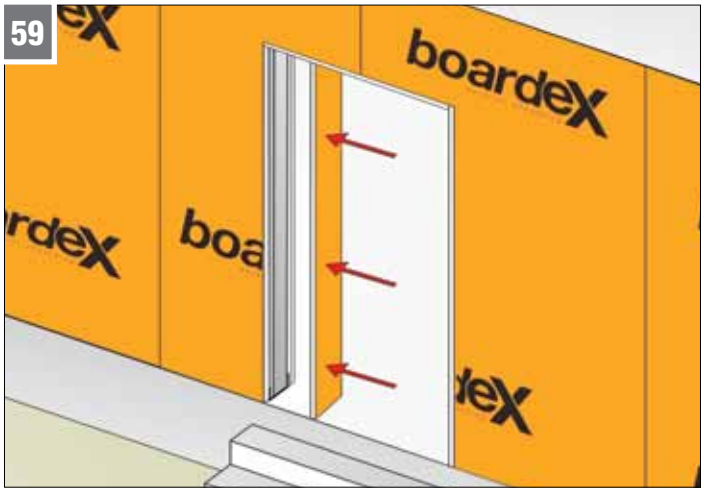
58



Right Application

The **BoardeX** joints in the door cavities should be fixed so that they would be on the lintel.

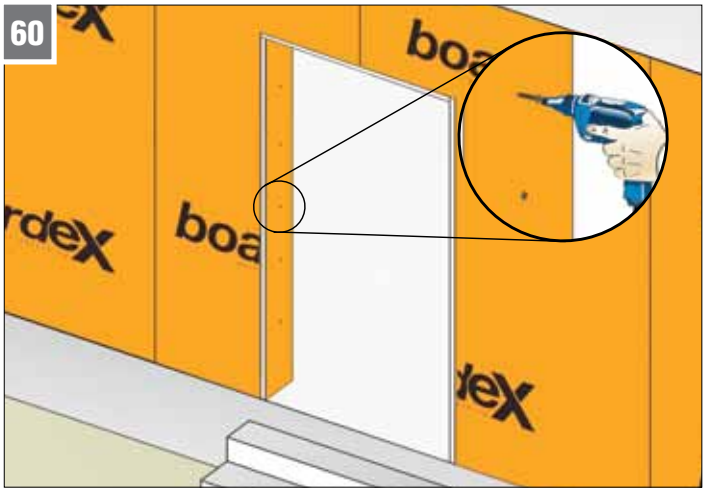
59



Doorway detail

Suitable sizes of **BoardeX** are cut and placed on the profiles in the door cavity and the edges of the doors are closed.

60



Doorway detail

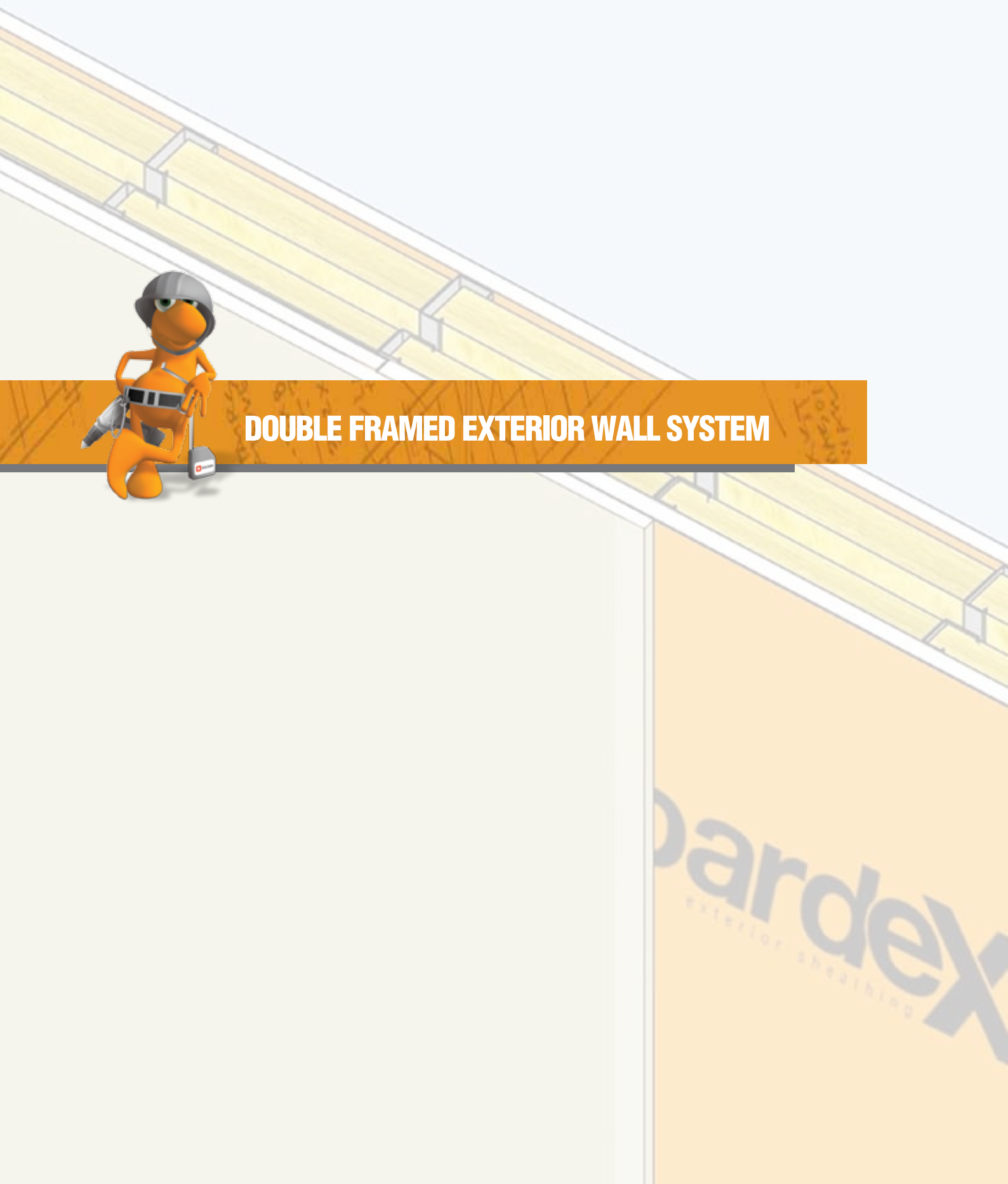
The Edge **BoardeX** parts are fixed with BoardeX self-drilling screws and made ready for door assembly.

Frequently Asked Questions on Single-Framed Exterior Wall System

QUESTION	ANSWER
What is the maximum height of a facade to apply a single framed external wall system?	Single framed exterior wall system is designed to withstand the wind load of 166 km/h at a building higher than 100 m if the DC 100 profile 0.9 mm thick is used at the axle spacing of 40 cm; and to withstand the wind load of 150 km/h if the axle spacing is 60 cm.
Can interior profiles be used in a single frame exterior wall system?	Exterior wall profiles 275g / m^2 must be galvanized. The wall thickness of these profiles used in the exterior wall is calculated as 0.9 mm.
Is it possible to use plasterboard screws for fixing in the single framed external wall system?	Plasterboard screws should not be used because they are not resistant to corrosion. Corrosion-resistant BoardeX self-drilling screws are used in exterior facades
Why do we need to use a starter track?	A PVC-based starter track is used to make sure the **BoardeX** does not contact the floor.
Why is BoardeX used on the interior facing side of a single framed exterior wall system?	**BoardeX** must be applied in the first layer to prevent mould formation on the inside due to the condensation that may occur in the wall space.
Is it possible to carry out wet applications such as the screed or ceramic application after BoardeX is screwed on the interior?	Yes, it can be done. **BoardeX** is not affected by this type of application.
y is plasterboard applied on the BoardeX surface facing interior?	In order to increase the fire, sound, mechanical and acoustic performance of the exterior wall, one layer of **COREX** is applied on **BoardeX** on the inner surface
Why is the screw spacing on the inside and outside of the wall different?	The screw spacings are determined by the calculations of the wind load on the outside wall and are the maximum range required to achieve the desired performance.

The usage space of the buildings for which the outside walls are manufactured by the Single framed exterior system increases.

More floor area is gained



DOUBLE FRAMED EXTERIOR WALL SYSTEM

- **Double Framed** exterior wall system offers a better heat and sound insulation performance compared to Single framed wall system in reinforced concrete and steel buildings.

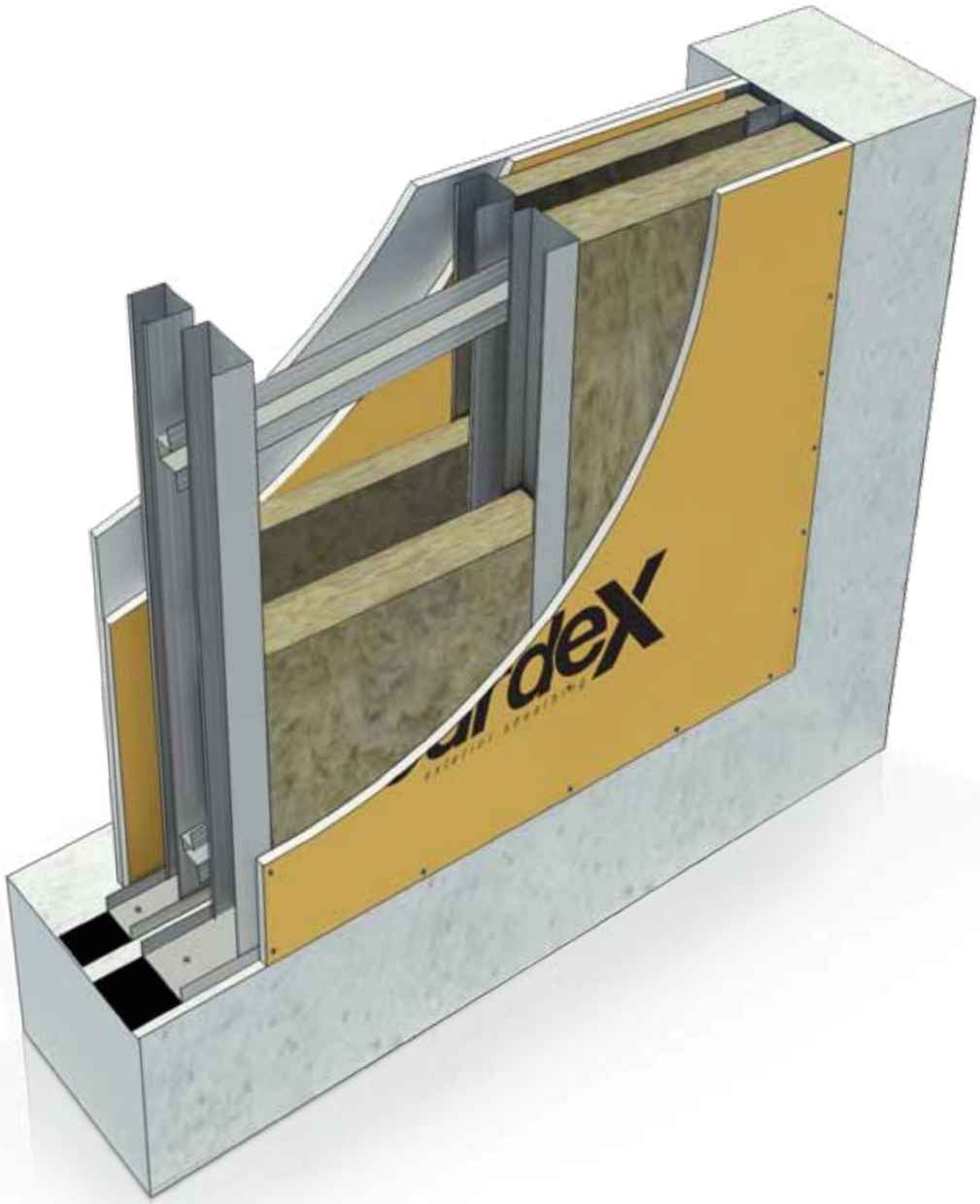
- Thermal insulation can be applied by introducing a required thickness of insulation material on the surface in order to improve the heat insulation performance and to maintain the sustainability of it. Thermal insulation should be carried out in accordance with the principles recommended by IZODER.

- The smooth surface obtained can be finished by fixing all kinds of coatings (metal coating, weather boarding, wood coating, decorative brick veneer, etc.).

- The usage area of buildings of which external walls are manufactured by **Double Framed** external wall system increases. **More floor area is gained.**

- As for the interior finishing, all wet applications such as screed and plaster can be completed before the final layer plasterboard is fixed as the last layer. At the end of these applications, the surface of the wall is finished by fixing the final layer of plasterboard onto the surface of **BoardeX.**

- **Double Framed** exterior wall system is designed to meet the wind load of 150 km/h at maximum 100 m high buildings according to the selected profile size and at 40 cm axle spacing.



Double Framed Exterior Wall System Auxiliary Materials

DU 50-75-100
profile
38x38 mm

Double frame exterior system is used to form the exterior drywall system by fixing to the floor and ceiling.

BoardeX
DCC 50-75-100
exterior profile
45x30 mm

BoardeX DCC is the profile with 0.9 mm wall thickness and 45x30 mm flange height to be used in the construction of the double framed exterior facade system.

BoardeX
DC 50-75-100
profile 53x42 mm

The BoardeX DC profile is a galvanised profile with 0.6 mm thickness, 53x42 mm flange height and 100 gr/m^2 and the base width of 50-75-100 mm to be used in dry exterior wall systems. It is located in the carcass part in the **Double Framed** exterior wall systems.

BoardeX
Omega
profile
26x25x26 mm

This is the galvanised profile with a thickness of 0.5 mm and a weight of 100 gr/m^2, which enables the system to work in an integrated form by securing two **DC** profiles to each other.

Resilient tape
50-75-100

It adheres under the galvanized steel sheet profiles in the construction of the exterior wall. 50, 75 and 100 mm wide, self-adhesive resilient tape and contribute to sound and heat performance.

Starter Track

It is a PVC based profile to isolate **BoardeX** from the floor

Mineral Wool
Glass wool or rock wool

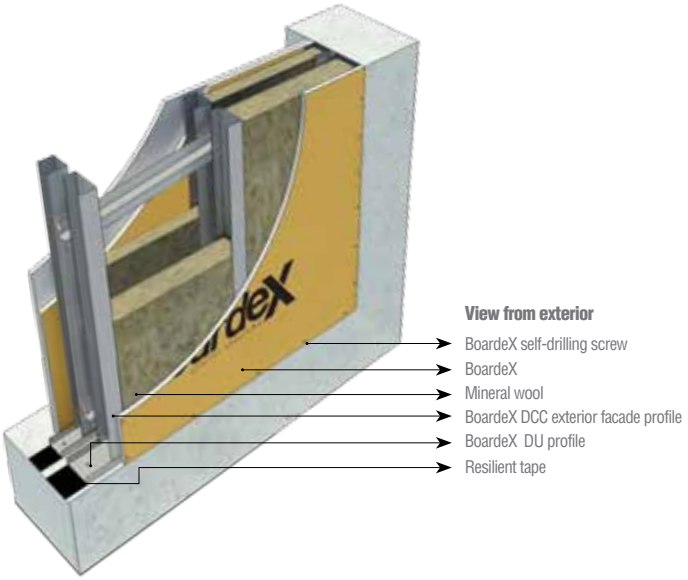
It is used to fix the L brackets onto reinforced concrete surfaces.

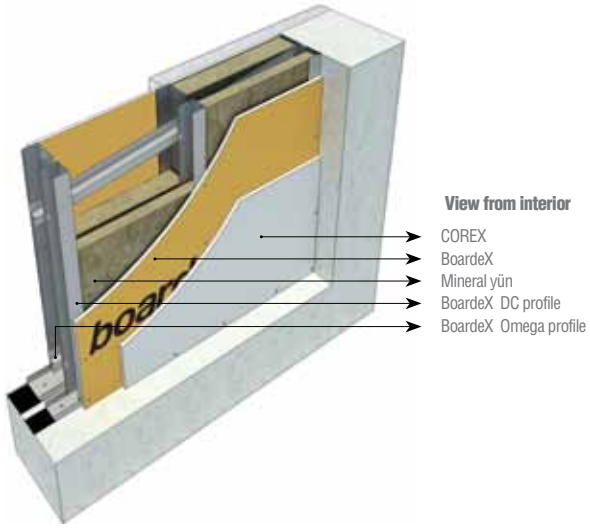
BoardeX
self-tapping screw

A specially designed corrosion-resistant screw used for fixing exterior wall boards to profiles with a wall thickness of up to 0.7 mm.

BoardeX **self-drilling screw**		The specially designed corrosion-resistant screw used for fixing exterior wall boards to profiles with a wall thickness of up to 2 mm.
Drillex **hex head screw**		A special screw to fix CT facade profiles onto brackets and to fix two pieces of metal to each other.
Dowel-screw		Plastic dowels and washer-head screw set used for fixing the galvanized profiles on the floor in the construction of the exterior wall. It consists of 8 mm plastic dowel and 45 mm washer-head screw.
Self-tapping screw		It is the screw used to fix the plasterboards on the interior side onto the profiles up to 0.7 mm wall thickness through **BoardeX.**

Material Analysis





Material Analysis

Name of the Material	Consumption
	✕=40 cm
BoardeX	2,10 m²
COREX	1,05 m²
BoardeX DC 50/75 profile (53x42; 0.6 mm; Z100)	2,90 mt
BoardeX DCC 75/100 stud (45x30; 0.9 mm; Z275)	2,90 mt
DU 50/75 profile (38x38; 0.6 mm; Z100)	0,84 mt
DU 75/100 profile (38x38; 0,6 mm; Z100)	0,84 mt
BoardeX omega profile (27x25; 0,5 mm; Z100) (at every 70 cm)	1,60 mt
BoardeX self-drilling screw(with 20 cm intervals)	24 pcs
BoardeX self-tapping screw (with 40 cm intervals)	14 pcs
Drillex hex head screw	12,5 pcs
Self-tapping screw 38 (with 30 cm intervals)	16 pcs
Dowel-screw	5,90 pcs
Resilient tape	2,9 mt
Joint tape or paper tape	1,80 mt
Mineral wool interior (low density)	1,05 m²
Mineral wool exterior (low density)	1,05 m²
DERZTEK joint grouting plaster	0,40 kg
Starter Track	Varies according to the base perimeter

✕=40, states that the DC and DCC profile axle spacings are 40 cm.

!!! The area of the wall for which the material analysis has been calculated to be 4 m x 2.5 m = 10 m², and 5% tolerance has been included in the calculations.

Note: For more information, please refer to “BoardeX system book” or www.boardeX.com.tr website.

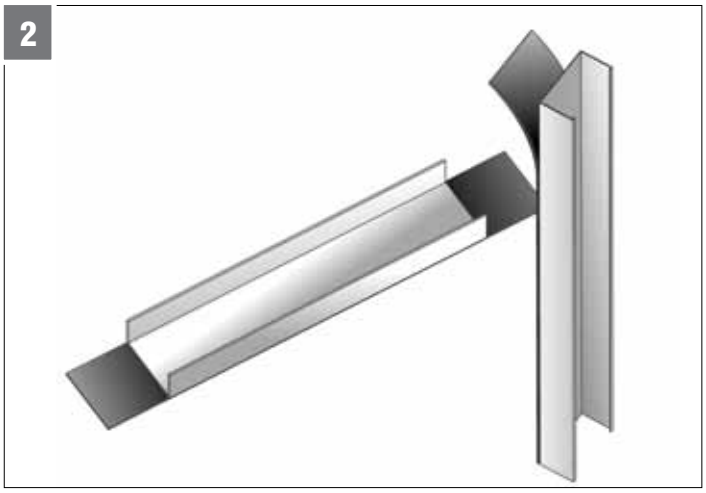
Double Framed Exterior Wall System - Application

1

Double Frame application area

The double framed exterior wall system provides high performance, practical solutions for multi-story buildings.

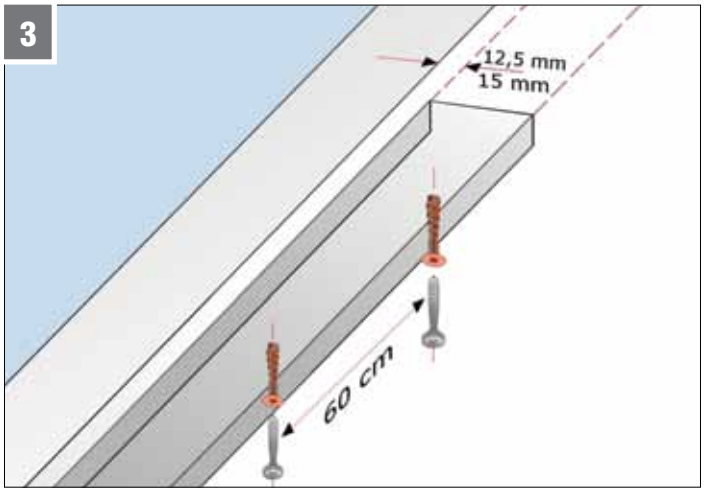
2



Preparation of resilient tape

A resilient tape with an appropriate width is affixed to the bottom of the Wall C and Wall U Profiles.

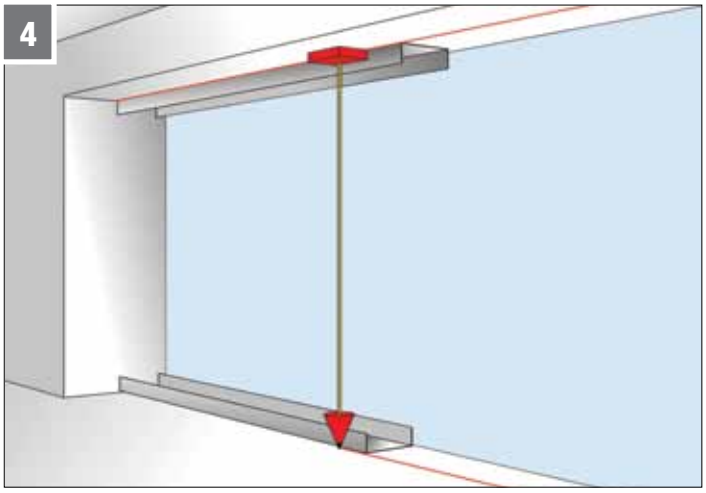
3



Screwing the first row of profiles

The **DU** 100 profile, depending on the thickness of the **BoardeX** to be selected, is fixed to the ceiling using dowel screws with 60 cm intervals so that it is 12.5 or 15 mm inward from the carcass limit with respect to its thickness.

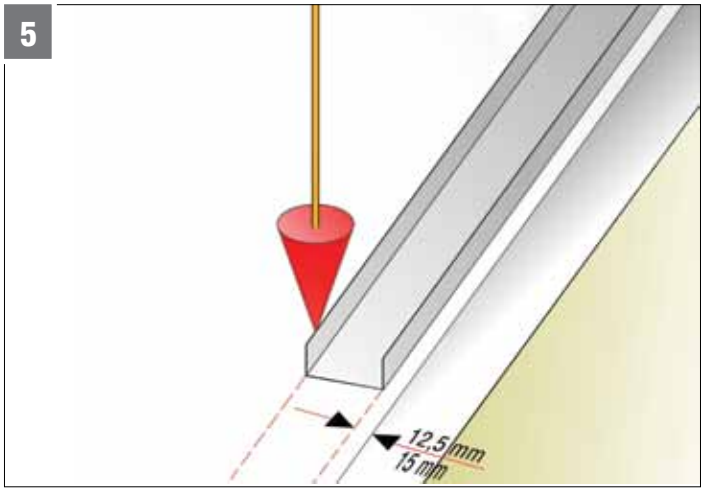
4



Screwing the first row of profiles

The first row of **DU** profile line on the ceiling is transferred to the floor with plumbing.

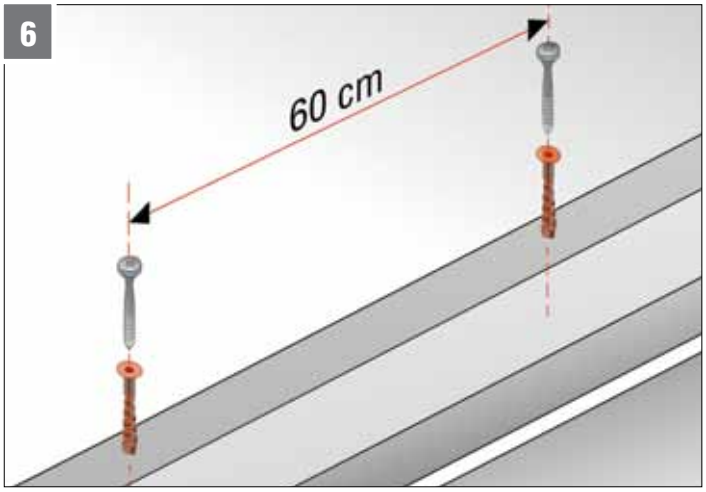
5



Screwing the first row of profiles

The first row of **DU** profile, depending on the thickness of the **BoardeX** to be selected, is fixed to the floor so that it is 12.5 or 15 mm inward from the carcass limit.

6

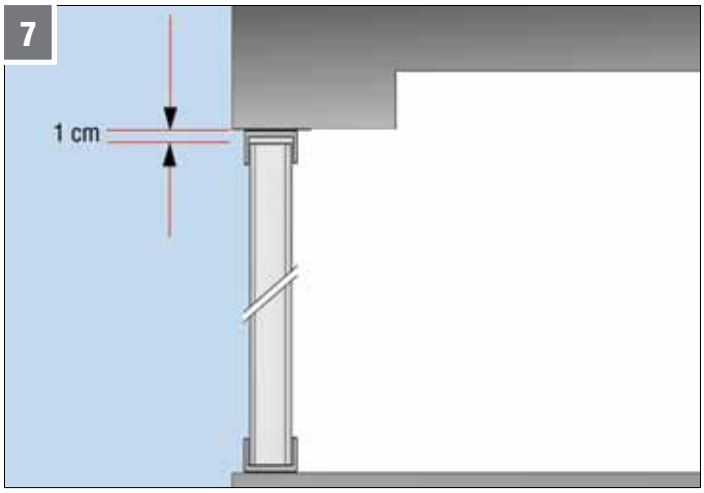


Screwing the first row of profiles

The **DU** profiles are fixed to the floor using dowel screws with 60 cm axle spacing.

Double Framed Exterior Wall System - Application

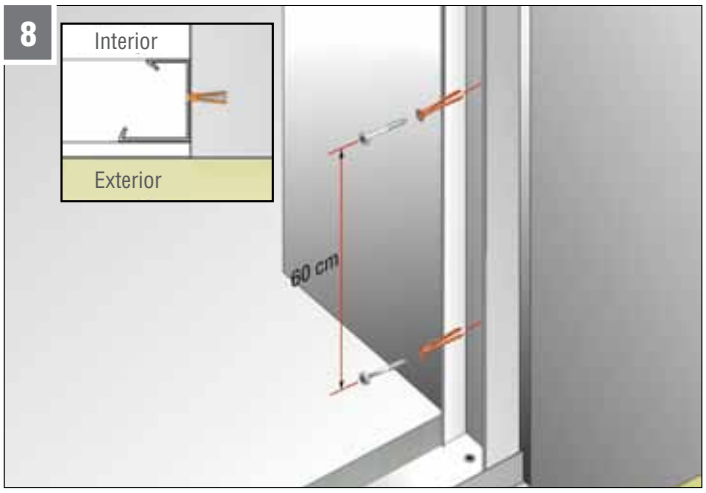
7



Preparing Profiles

First row of **DCC** profiles should be cut at least 1 cm shorter than the floor height.

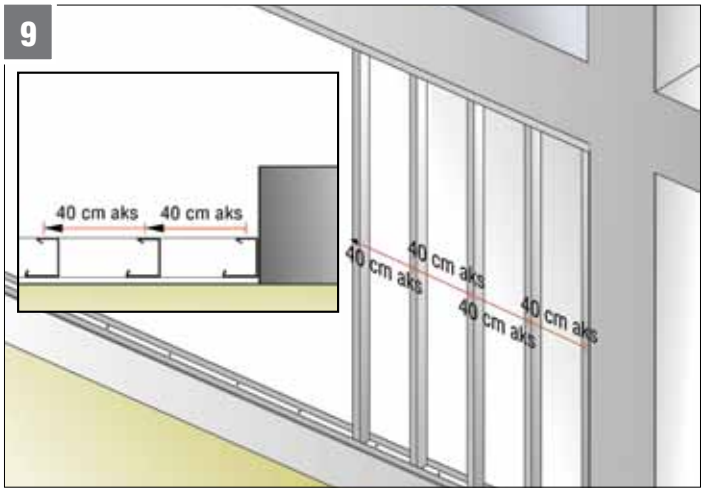
8



Screwing Profiles

The **DCC** profiles whose bottoms are affixed with resilient tape is fixed to the existing column using an anchor bolt with a maximum of 60 cm spacing, with the long flange staying outward.

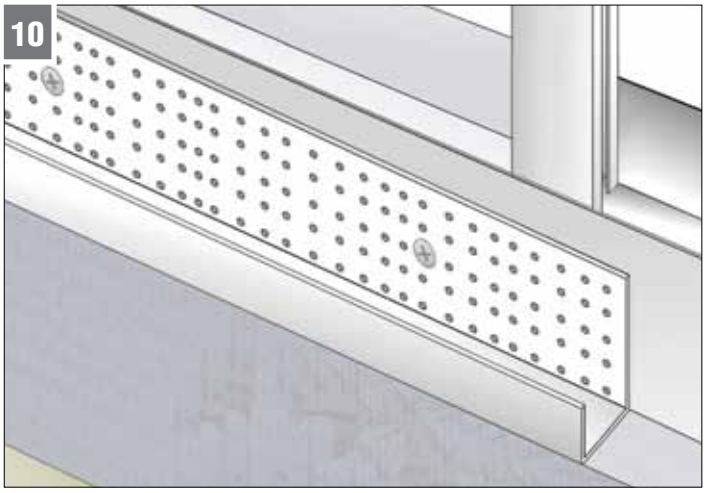
9



Placement of DCC profiles

The **DCC** profiles are placed in the **DU** profiles with long flange staying outward and with 40 cm axle spacing.

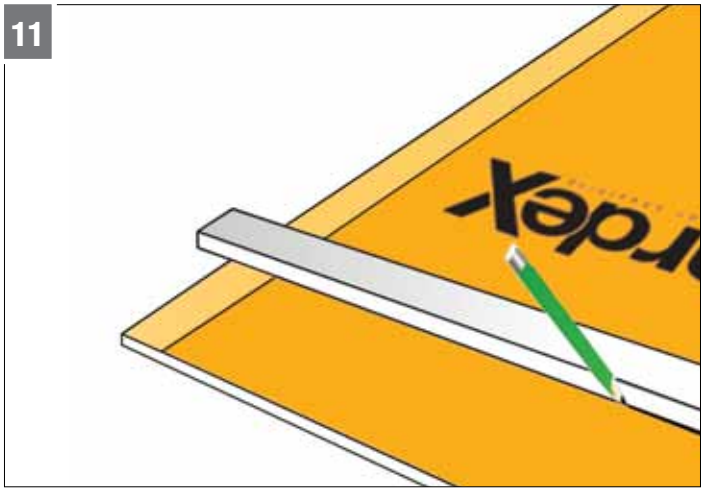
10



Placement of the starter track

Before **BoardeX** is fixed onto the profiles, the PVC based starter track is fixed onto the **DU** profile by placing on the floor.

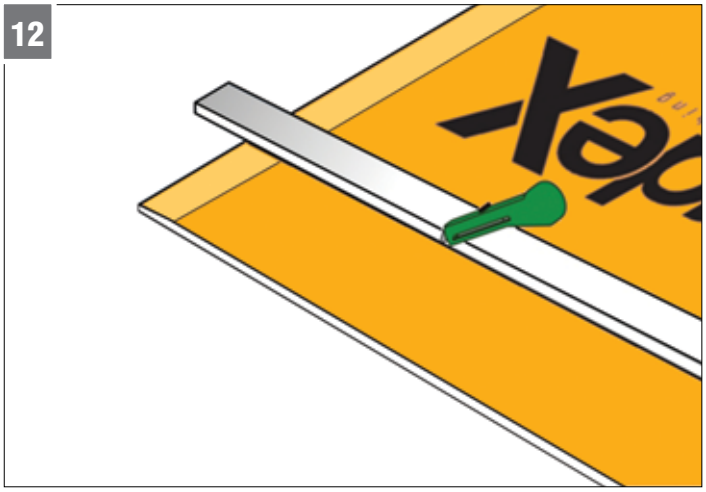
11



Cutting BoardeX

The **BoardeX** to be cut is marked on the surface with a pen.

12



Cutting BoardeX

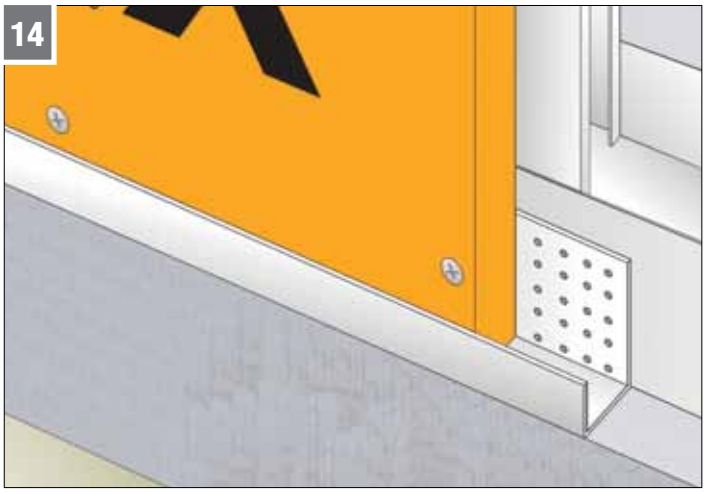
BoardeX is cut with the help of a gauge from the marked place using a knife. For **BoardeX** cutting, there is no need for spiral, jet stone, or any other dust emitting cutting tools.

13

Fixing BoardeX

BoardeX is fixed with a full board.

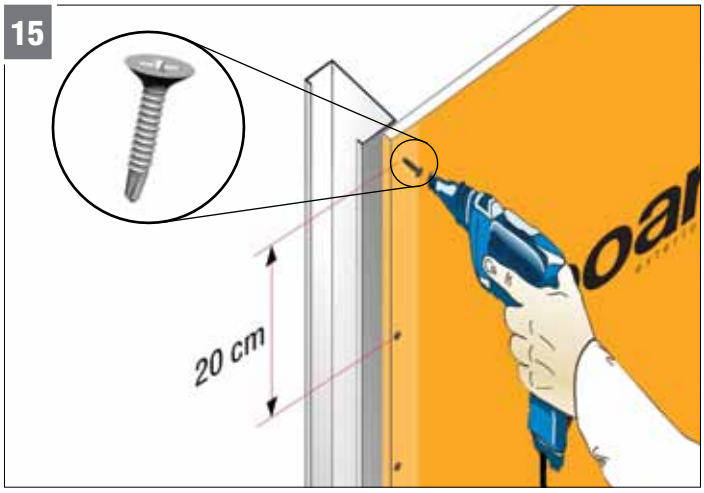
14



Fixing BoardeX

BoardeX is fixed onto the front surface of **DCC** profiles by passing through the PVC profile in the base.

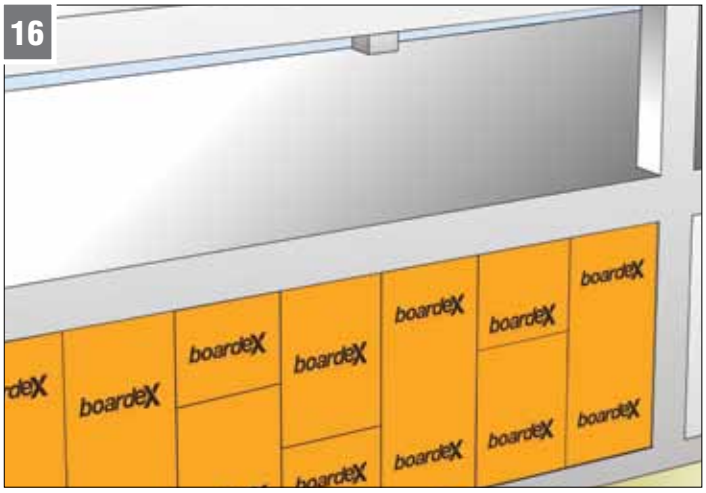
15



Fixing BoardeX

BoardeX self-drilling screwshould be used for fixing. The BoardeX self-drilling screwis fixed with 20 cm and 40 cm vertically and horizontally, respectively.

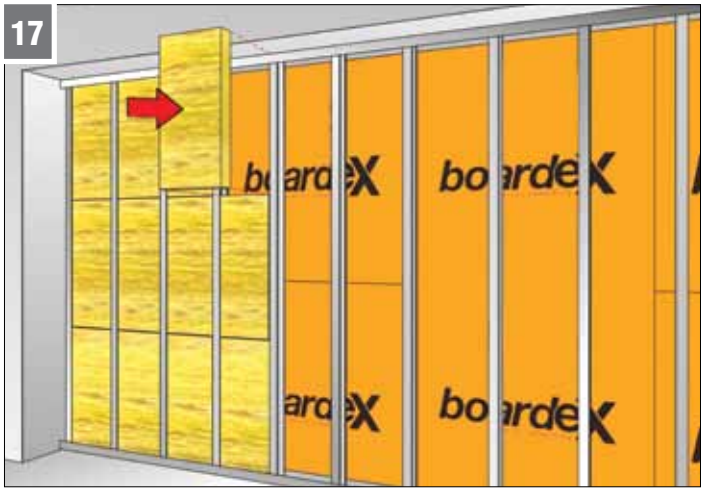
16



Fixing BoardeX

All profiles are fixed onto **BoardeX** and the surface is closed. Where the height of the floor exceeds the length of **BoardeX**, the horizontal joint places are installed in an interlaid pattern.

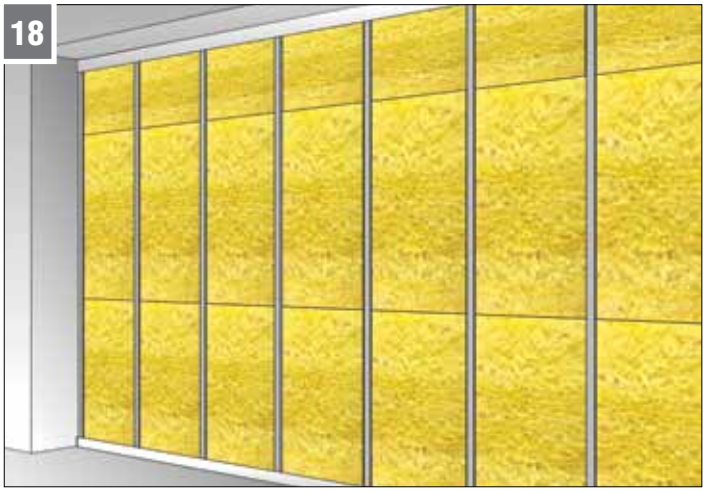
17



Mineral yünlerin yerleşimi

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

18

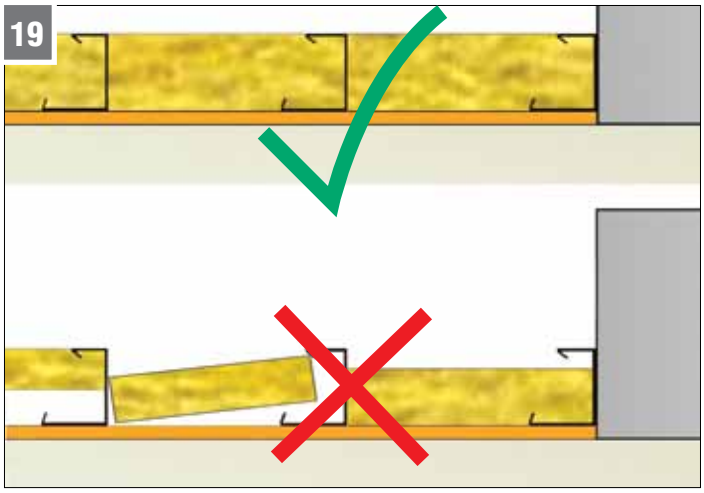


Mineral yünlerin yerleşimi

To ensure effective thermal insulation, mineral wool is placed in an ordered fashion throughout the cavities to fill all the gaps between the profiles.

Double Framed Exterior Wall System - Application

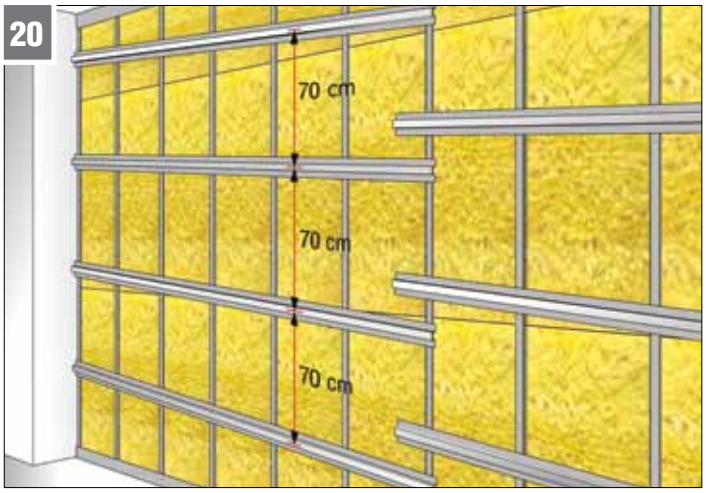
19



Warning!

To ensure a homogeneous thermal insulation all throughout the wall, mineral wool is placed carefully to ensure continuity in thermal insulation, and with no gaps between the profiles and covering the entire wall surface.

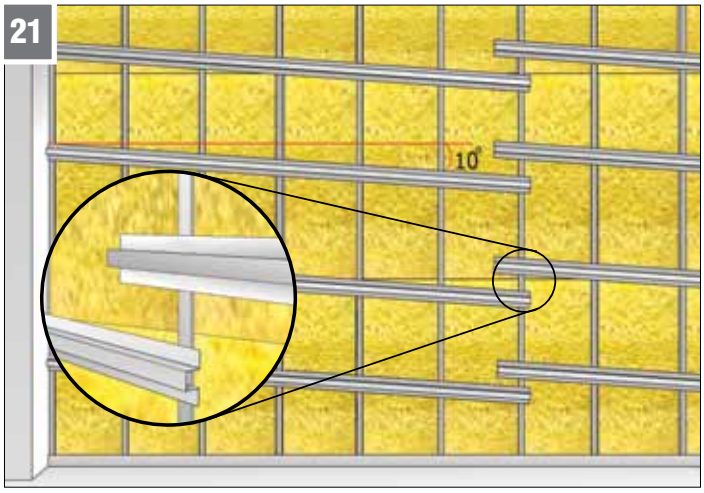
20



Omega profile placement

The omega profiles are placed in the flange of the Wall C profile at intervals of 70 cm to secure the first row of **DCC** profiles to the second row of Wall C profiles.

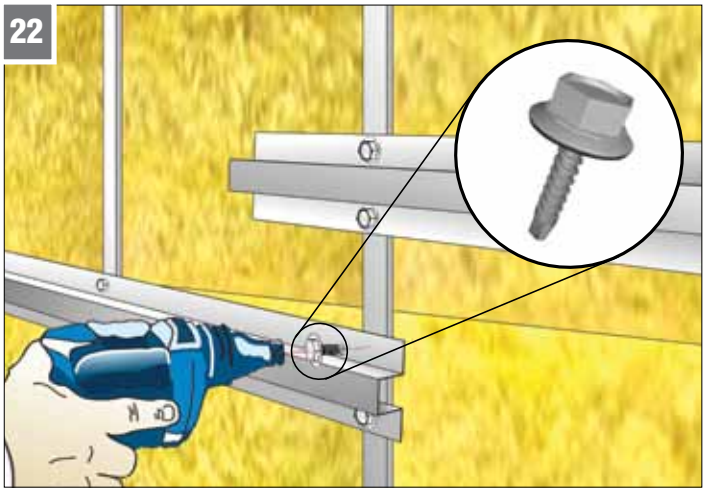
21



Omega profile placement

Omega profiles should be placed at a 10-degree angle. Horizontal successive omega profiles should be fixed onto the same **DCC** profile.

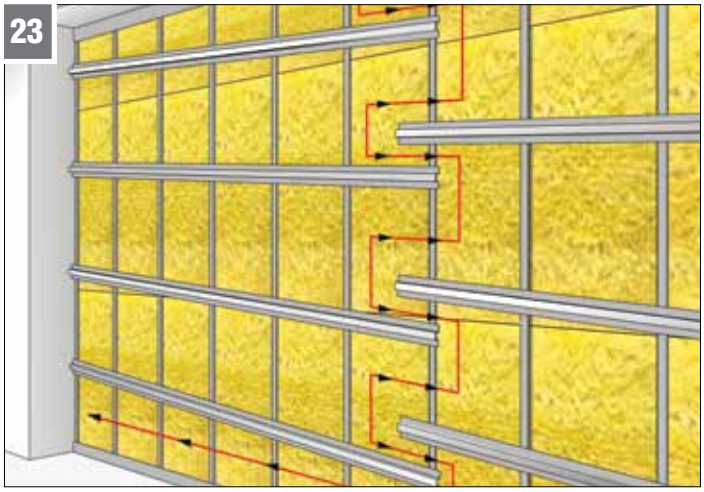
22



Fixing of omega profile

The **Omega** profile should be secured from the flange to the **DCC** profiles with the Drillex hex head screw at two points.

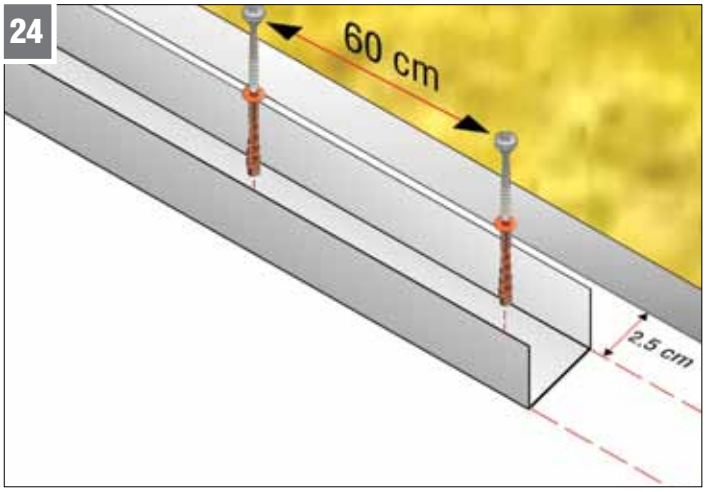
23



Omega profile placement

The space left between the omega profiles will also provide the air flow in the omega space.

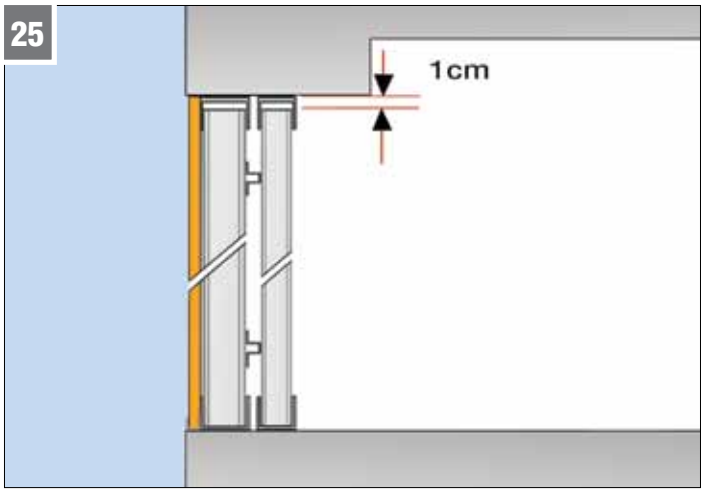
24



Placement of second row DU profiles

A gap of 2.5 cm is left between the second row of Wall U profiles under which resilient tape has been adhered to and the first row of Wall U profile. The Wall U profiles should be fixed onto the ceiling and floor by using dowel screws at 60 cm intervals.

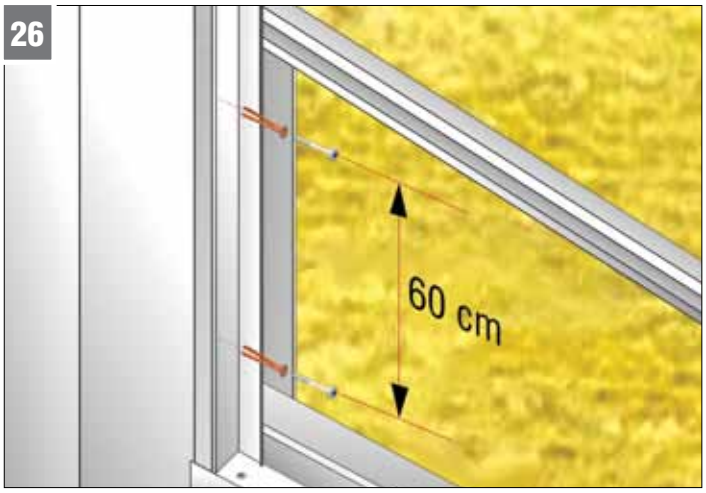
25



Preparing Profiles

Second row of **DC** profiles should be cut at least 1 cm shorter than the floor height.

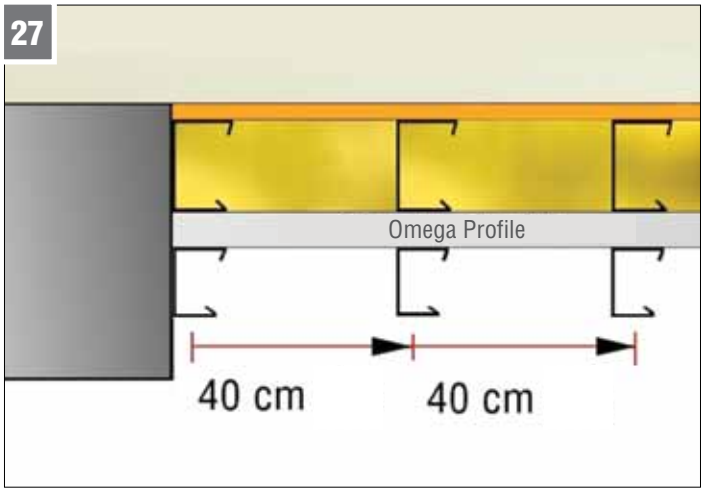
26



Screwing Profiles

The second **DC** profile, for which a resilient tape was attached to the bottom previously, is fixed to the existing column by using dowel screws with a maximum of 60 cm intervals.

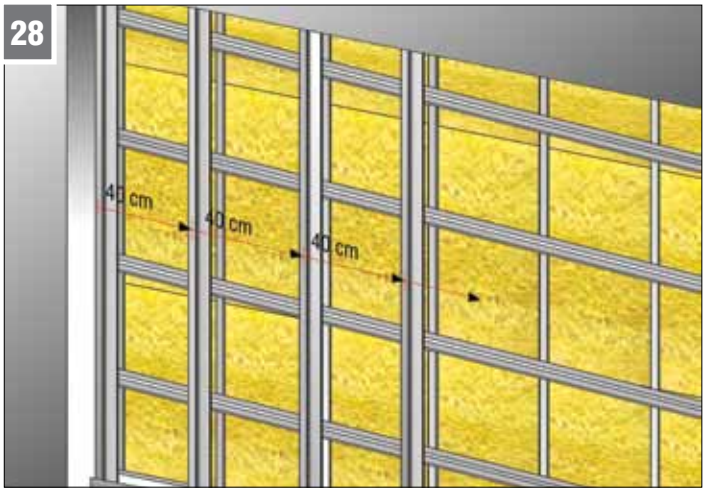
27



Placement of profiles

Care must be taken to place the profiles so that the short flange looks towards inside.

28



Placement of profiles

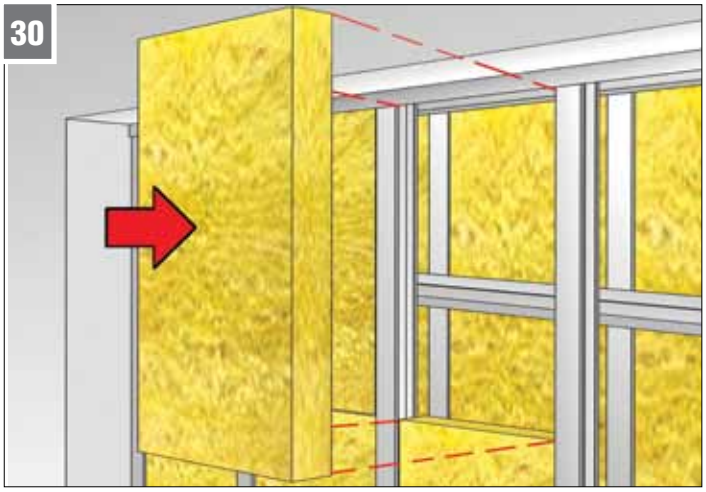
The second row of **BoardeX DC** profiles should be placed at 40 cm axle spacing.

29

Fixing DC profiles

Wall C profiles are secured to the omega profiles from the inside of the long flange with the Drillex hex head screw.

30

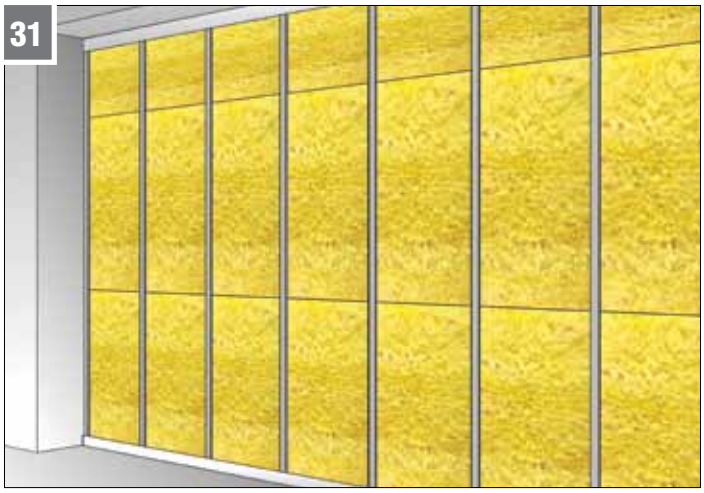


Placement of mineral wool

Low-density mineral wool is placed between the second row of profiles to increase the thermal insulation.

Double Framed Exterior Wall System - Application

31



Closure of the interior facade surface

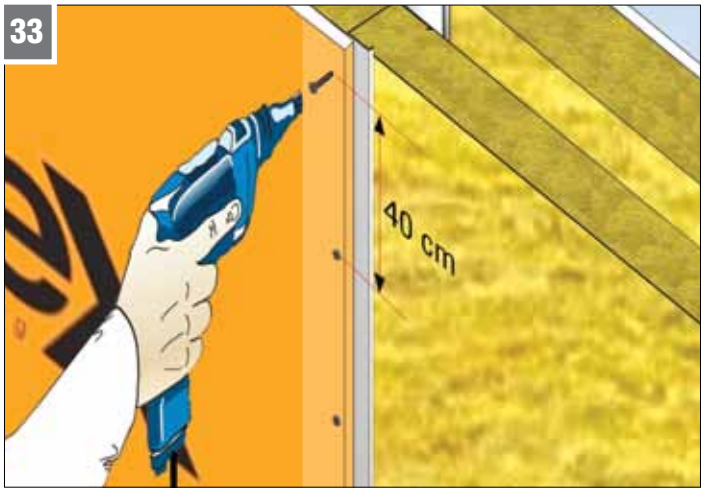
To ensure a homogeneous thermal insulation all throughout the wall, the second-row mineral wool is placed carefully to ensure continuity in thermal insulation, and with no gaps between the profiles.

32

Screwing BoardeX

The **BoardeX** to be applied to the inner surface of the wall must be applied in an interlaid pattern so that it does not coincide with the **BoardeX** joints on the outer surface.

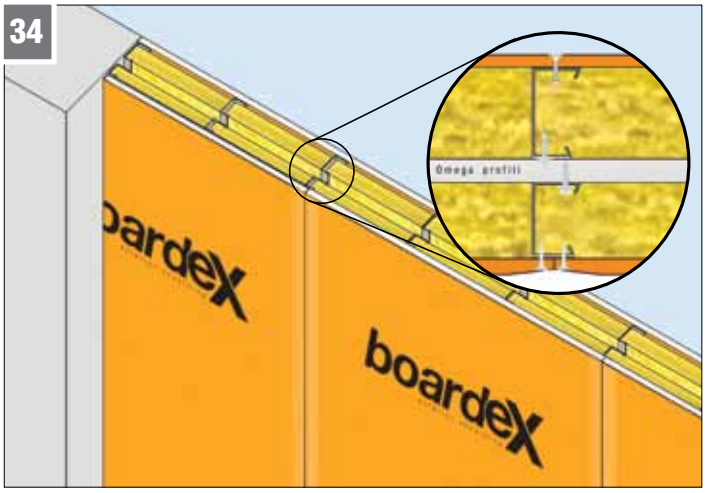
33



Screwing BoardeX

The **BoardeX** on the inside surface is fixed onto the profiles by BoardeX self-tapping screws with 40 cm intervals.

34



Screwing BoardeX

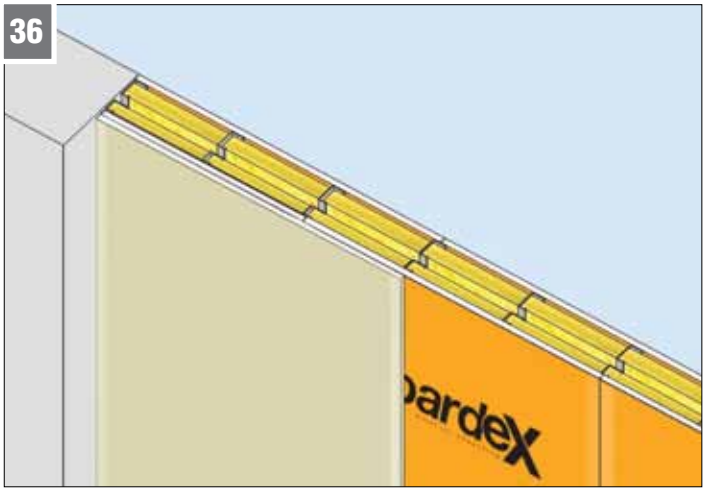
The application continues with a full-length **BoardeX** and the **BoardeX** is fixed onto the profiles. Thus, the **BoardeX** joints on the entire wall are installed in an interlaid pattern.

35

Practice of wet applications

After the **BoardeX** is fixed on the interior surface, all the wet applications such as screed and ceramic applications can be completed within the building.

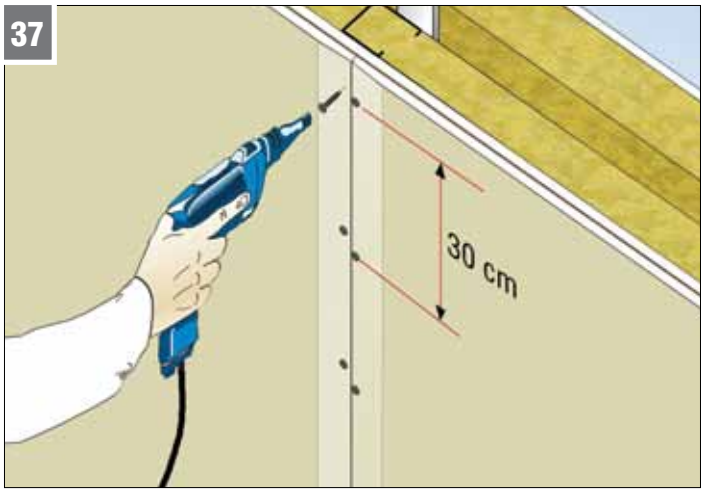
36



COREX application

After completing the wet applications on the interior, **COREX** application can be started. The **COREX** joints should be applied in such a way that they do not coincide with the joints of the underneath **BoardeX** layer, that is, applying in an interlaid pattern.

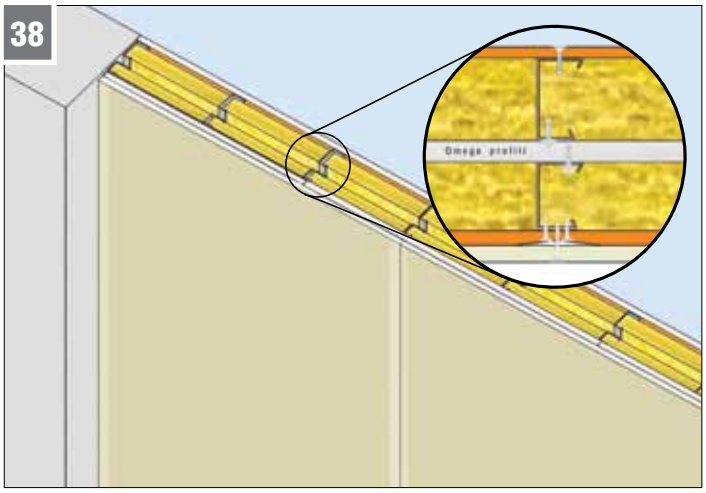
37



COREX screflange

COREX is fixed with self-tapping screws 38 with 30 cm vertical and 40 cm horizontal intervals.

38



COREX application

COREX on the inner surface is fixed on the entire wall surface, using an interlaid pattern with the **BoardeX** joints on the first layer and fixed onto the profiles.

Thermal Insulation Application on boardeX exterior sheathing Surface

39

Thermal insulation application

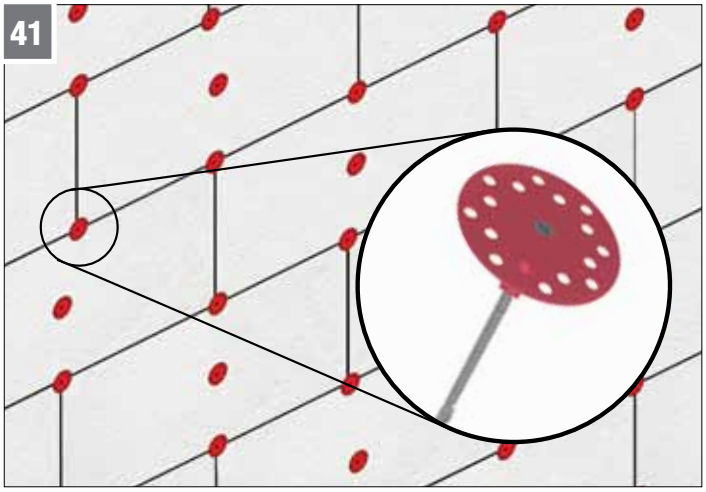
Before the application of Thermal insulation, PROBASE fix, a cement based adhesive mortar, is applied on the surface with the help of a notched trowel.

40

Thermal insulation application

The insulation material (EPS, XPS or rock wool) selected as per the project is affixed on the **BoardeX** surface.

41

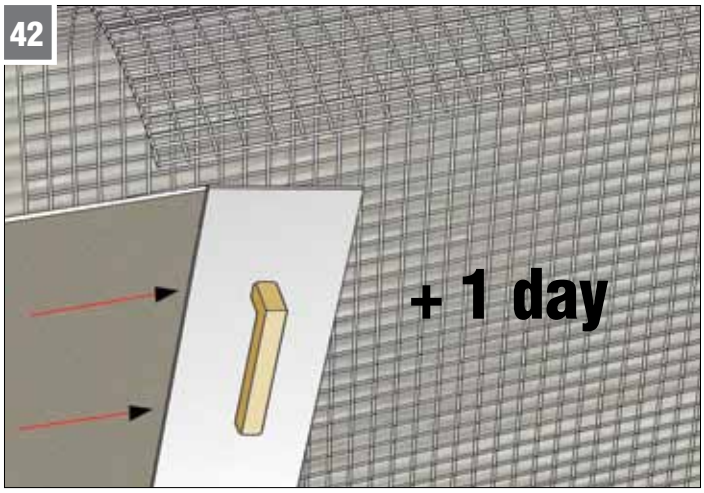


Fixing the insulation material

The insulation material is fixed onto the profiles with the self-drilling tipped, parachute head dowels at the locations corresponding to the profiles.

Double Framed Exterior Wall System - Application

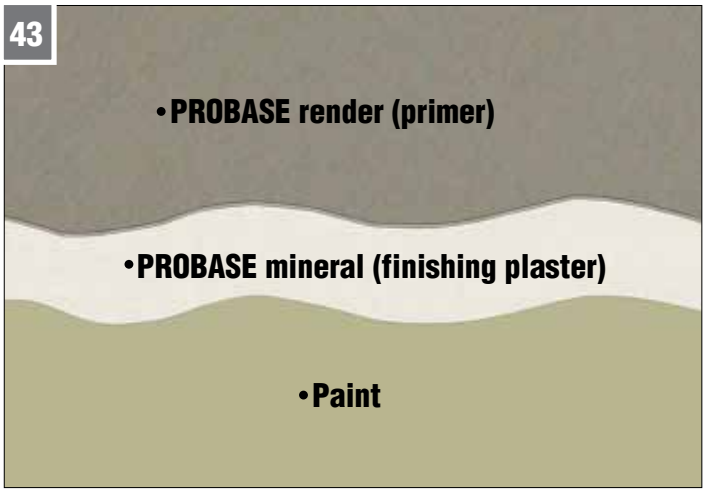
42



Thermal insulation application

After the base plaster is applied onto the entire surface, the alkali-resistant plaster mesh with a weight of 160gr / m^2 is slightly buried into the base plaster surface and the surface is made ready for finishing plaster to be carried out after 1 day.

43



Completion of surface

After the application of base plaster and mineral plaster (finishing plaster) on the surface of the insulating material used in the Thermal insulation, the surface is completed by painting.

Coating different types of materials on boardeX exterior sheathing surface

44

Joint filling

If the **BoardeX** surface is to be coated with another material, the joints are filled with an appropriate sealant resistant to water and moisture.

45

Metal cladding material

BoardeX can be finished with metal cladding materials. For this application, the load-bearing system of the cladding material must be fixed onto the system profiles over **BoardeX**.

46

Wood cladding

The **BoardeX** surface can be completed by installing wood or cement based decorative cladding materials. For this application, the cladding material should be fixed onto the system profiles over **BoardeX**.

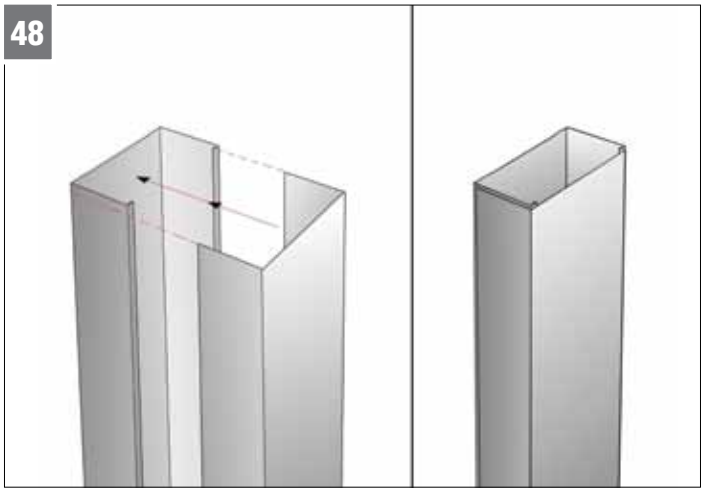
47

PVC Siding application

The **BoardeX** surface can be completed with the PVC Siding material. For this application, the PVC Siding material should be fixed onto the system profiles over **BoardeX**.

Details

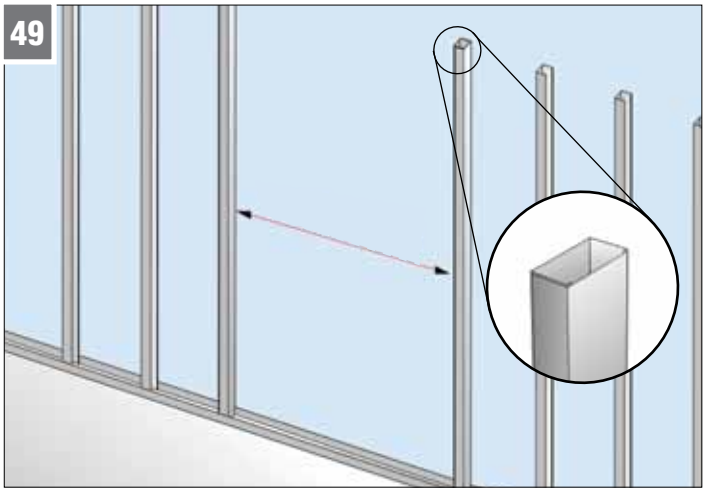
48



Window application details

On the vertical line where the window frame is going to be fixed, the **DCC** and **DU** profiles are inserted into each other.

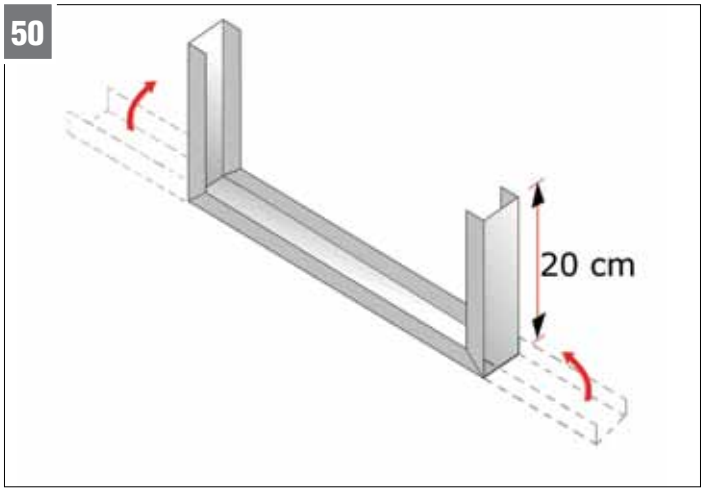
49



Window application details

These profiles are placed on both sides of the window to fit the window gap horizontally.

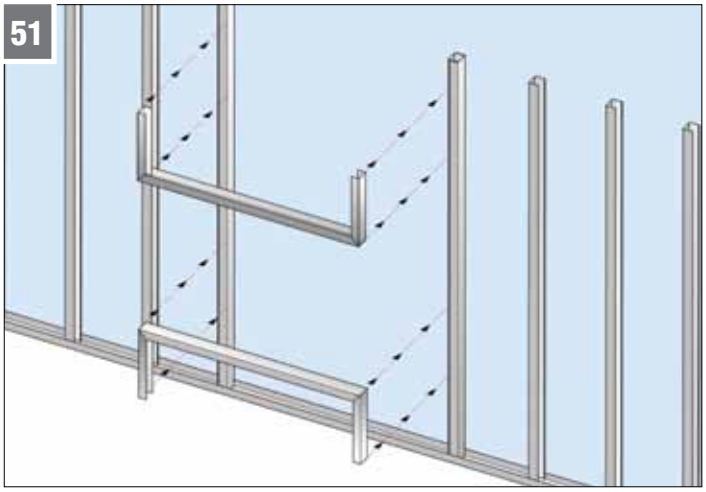
50



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

51

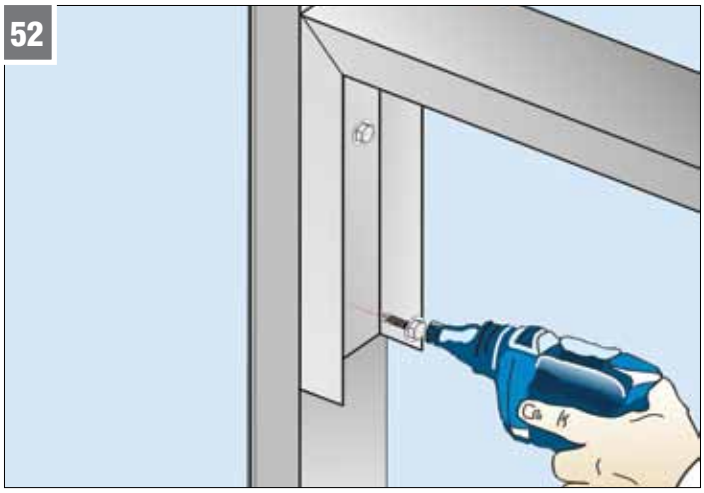


Placement of the lintel profile

The lintel which is determined in accordance with the window size is placed on the above and underneath sections.

Double Framed Exterior Wall System - Application

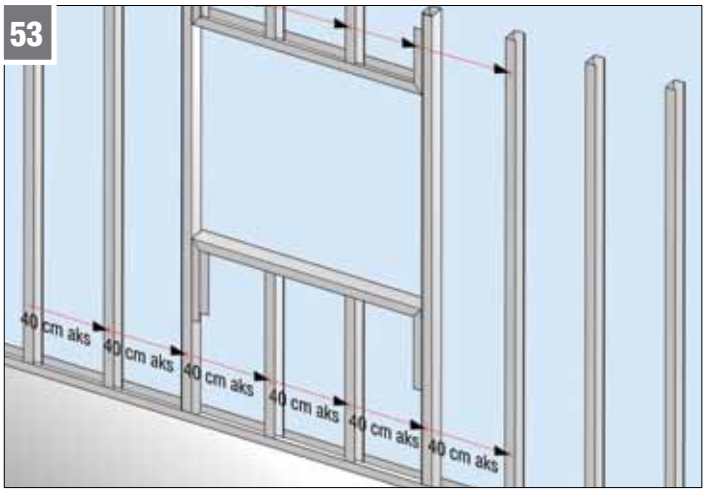
52



Fixing of lintel profile

The created lintel is screwed onto the side profiles from inside with Drillex hex head screws from at least two points.

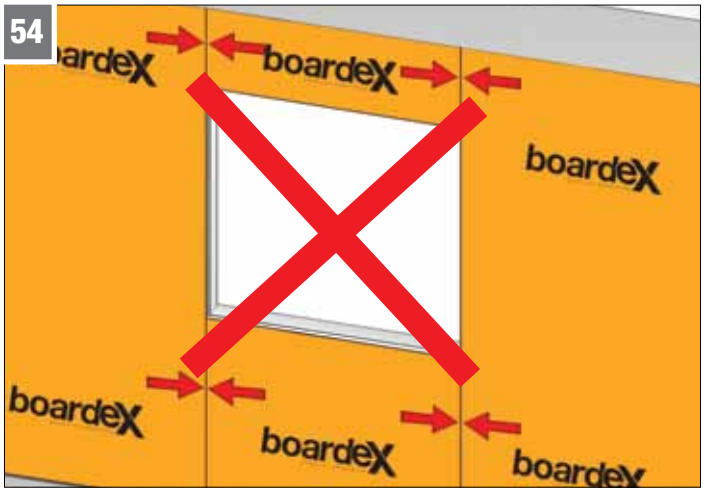
53



Window application details

Additional **DCC** profiles should be installed as required to allow the profiles to continue at a 40 cm axle spacing.

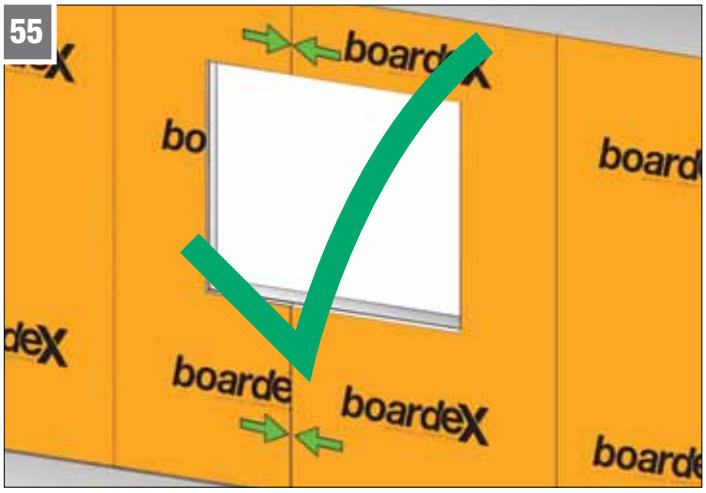
54



Wrong Application

BoardeX joints in the window cavities should not coincide with the window edge profiles.

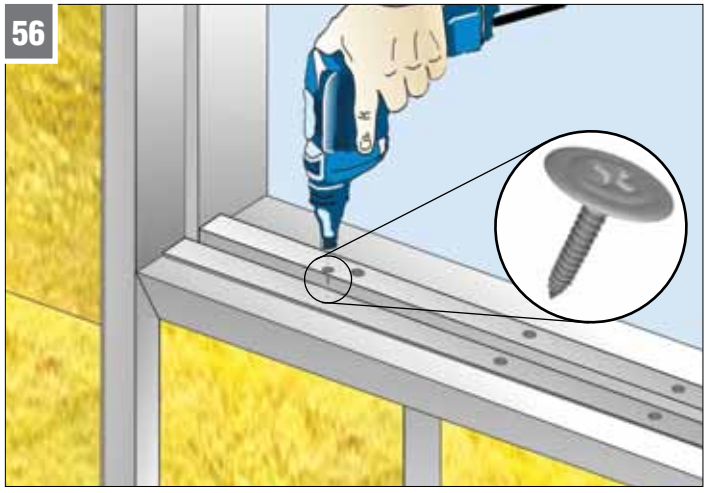
55



Right Application

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

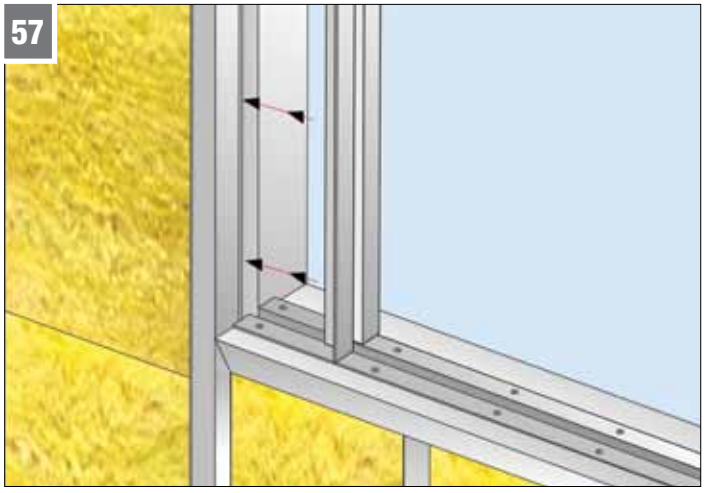
56



Window application details

The omega profile formed between the two rows of profiles is fixed by hook screws and in this way, the window cavity is strengthened.

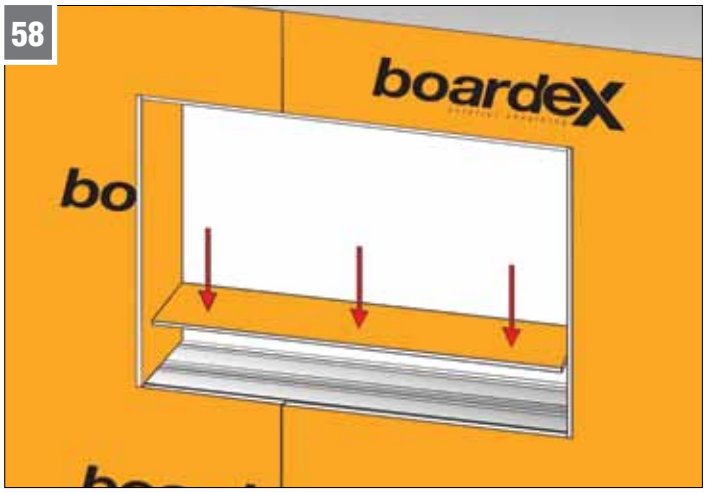
57



Window application details

Omega profiles should be placed and screwed on all the gaps formed between the two profiles in the window detail.

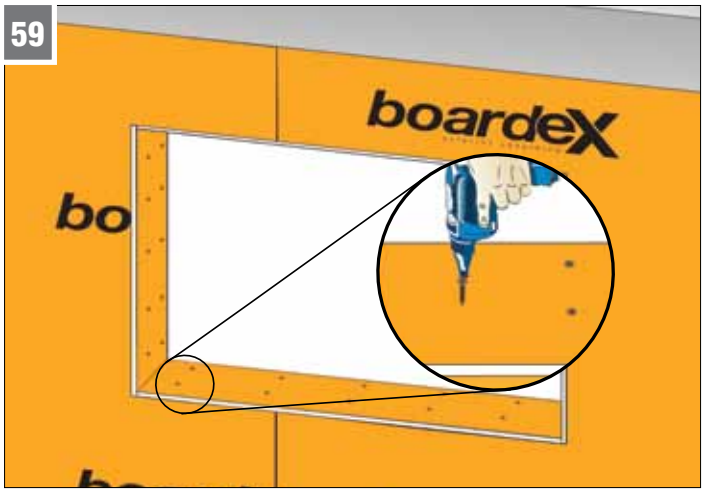
58



Window application details

The **BoardeX** pieces are cut in appropriate sizes and placed on the window edges on the profiles in the window cavity and the window edges are closed.

59

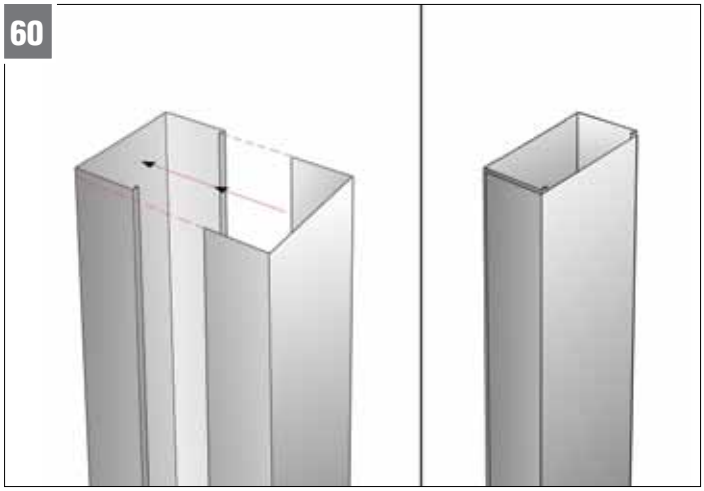


Window application details

The **BoardeX** pieces are fixed with Drillex screws and the window is made ready to fit the window assembly.

Doorway detail

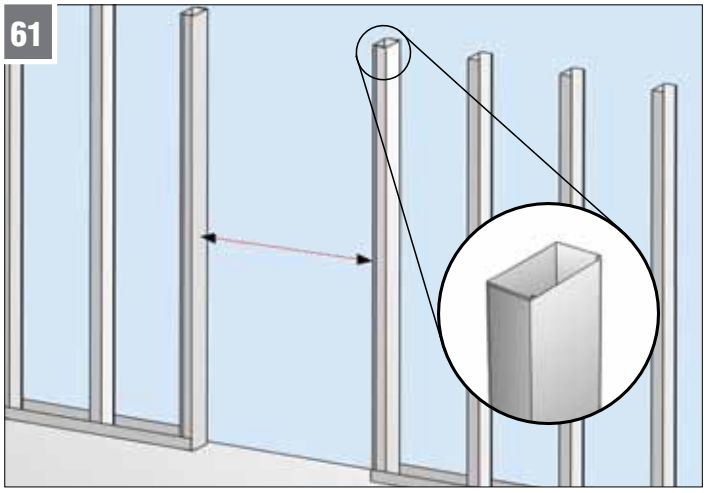
60



Doorway detail

In the first row of vertical profiles, to which the door frame is to be fixed, the **DCC** and **DU** profiles are passed through each other.

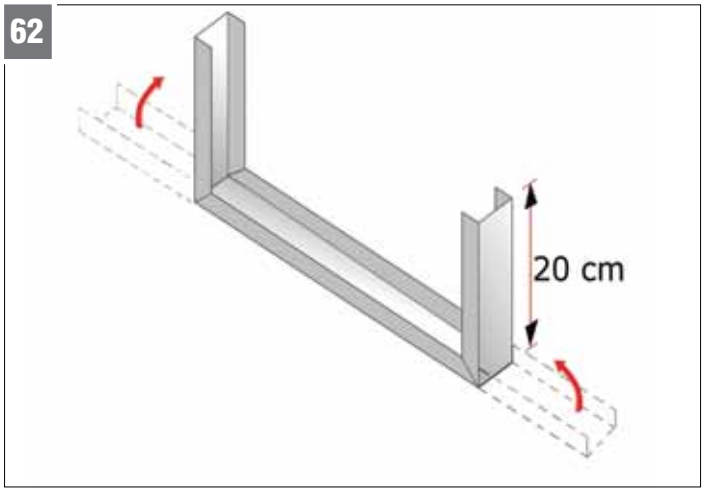
61



Doorway detail

These profiles are placed on both sides of the door to fit the door cavity horizontally.

62

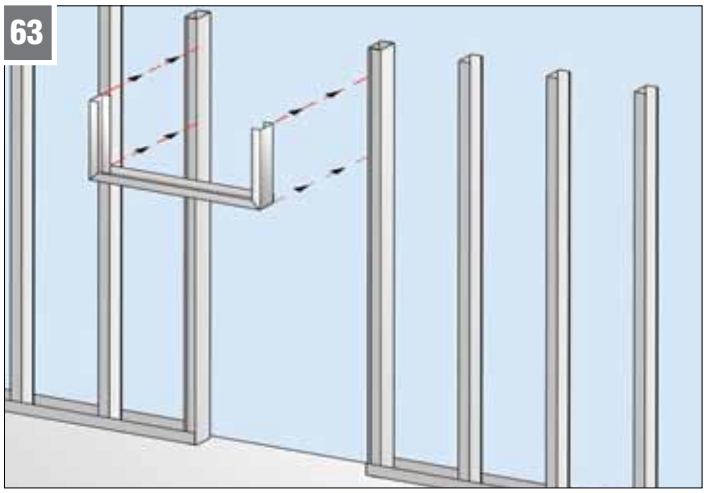


Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the door width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

Double Framed Exterior Wall System - Application

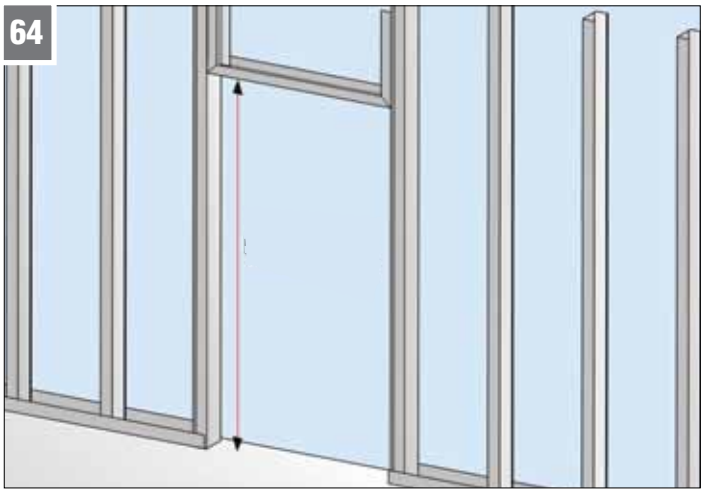
63



Placement of the lintel profile

The created lintel profile is placed in the door cavity corresponding to the upper section.

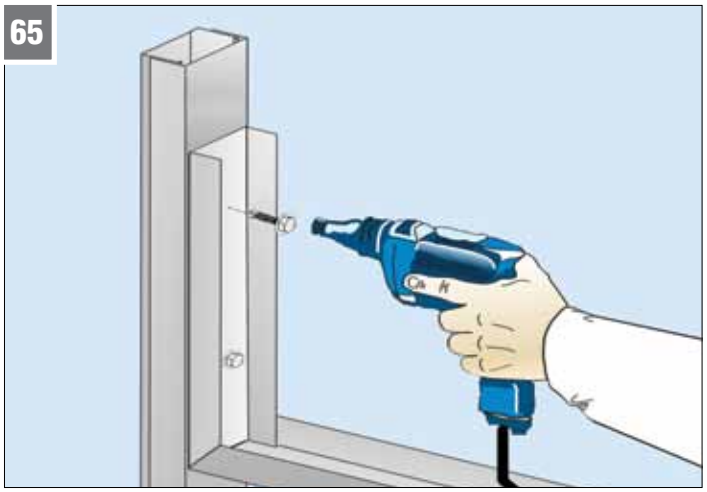
64



Placement of the lintel profile

The lintel profile is positioned according to the height of the door.

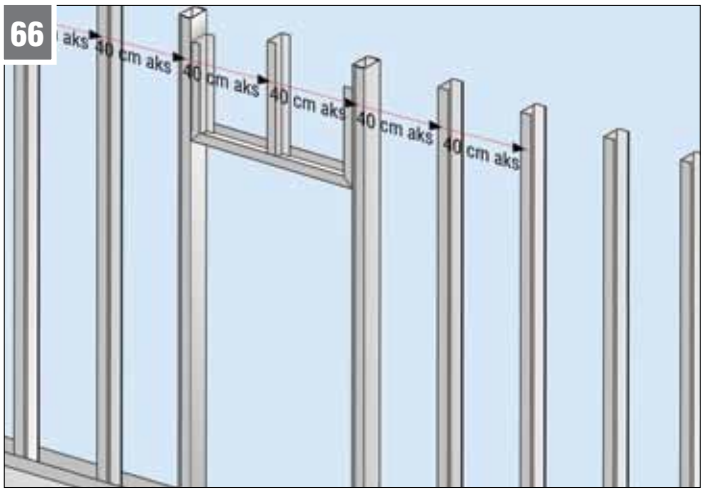
65



Fixing lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hex head screws from at least two points.

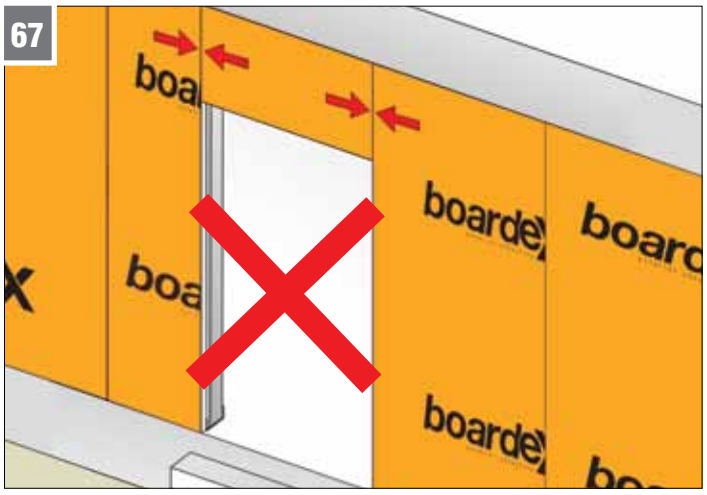
66



Doorway detail

Additional **DCC** profiles should be installed inside the lintel as required to allow the profiles to continue at a 40 cm axle spacing.

67



Wrong Application

The **BoardeX** joints in the door cavities should not coincide with the edge profiles.

68

Right Application

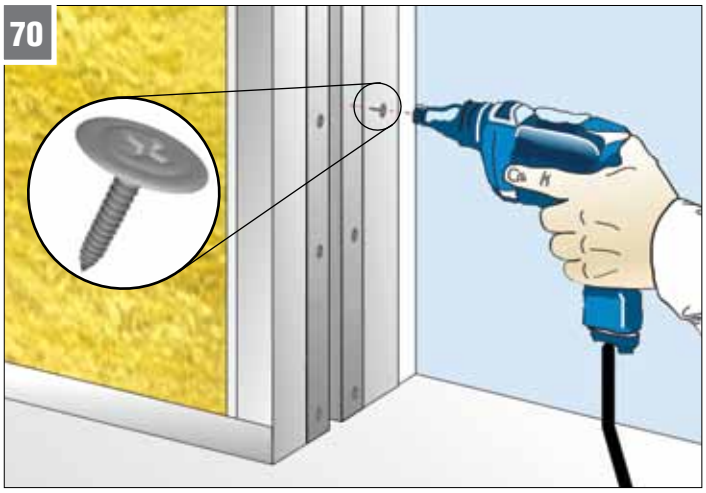
BoardeX joints in the door cavities should be fixed onto the profiles so that they would be on the lintel.

69

Doorway detail

Omega pieces of appropriate length are prepared to fit the cavity between two rows of profiles.

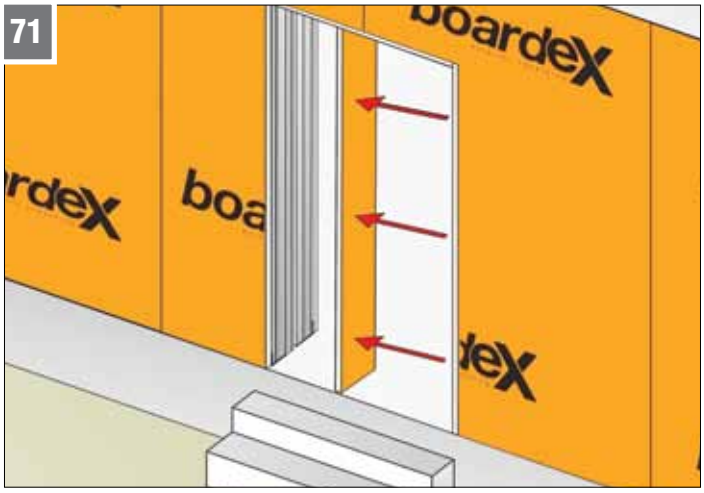
70



Doorway detail

The omega profile formed between the two rows of profiles is fixed by hook screws and in this way, the window cavity is strengthened.

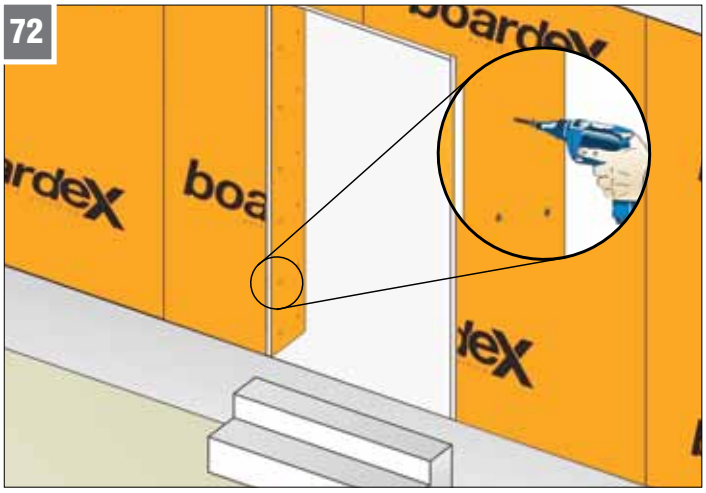
71



Doorway detail

Suitable sizes of **BoardeX** are cut and placed on the profiles in the door cavity and the edges of the doors are closed.

72



Doorway detail

The **BoardeX** pieces are fixed with Drillex screws and the door is made ready to fit the door assembly.

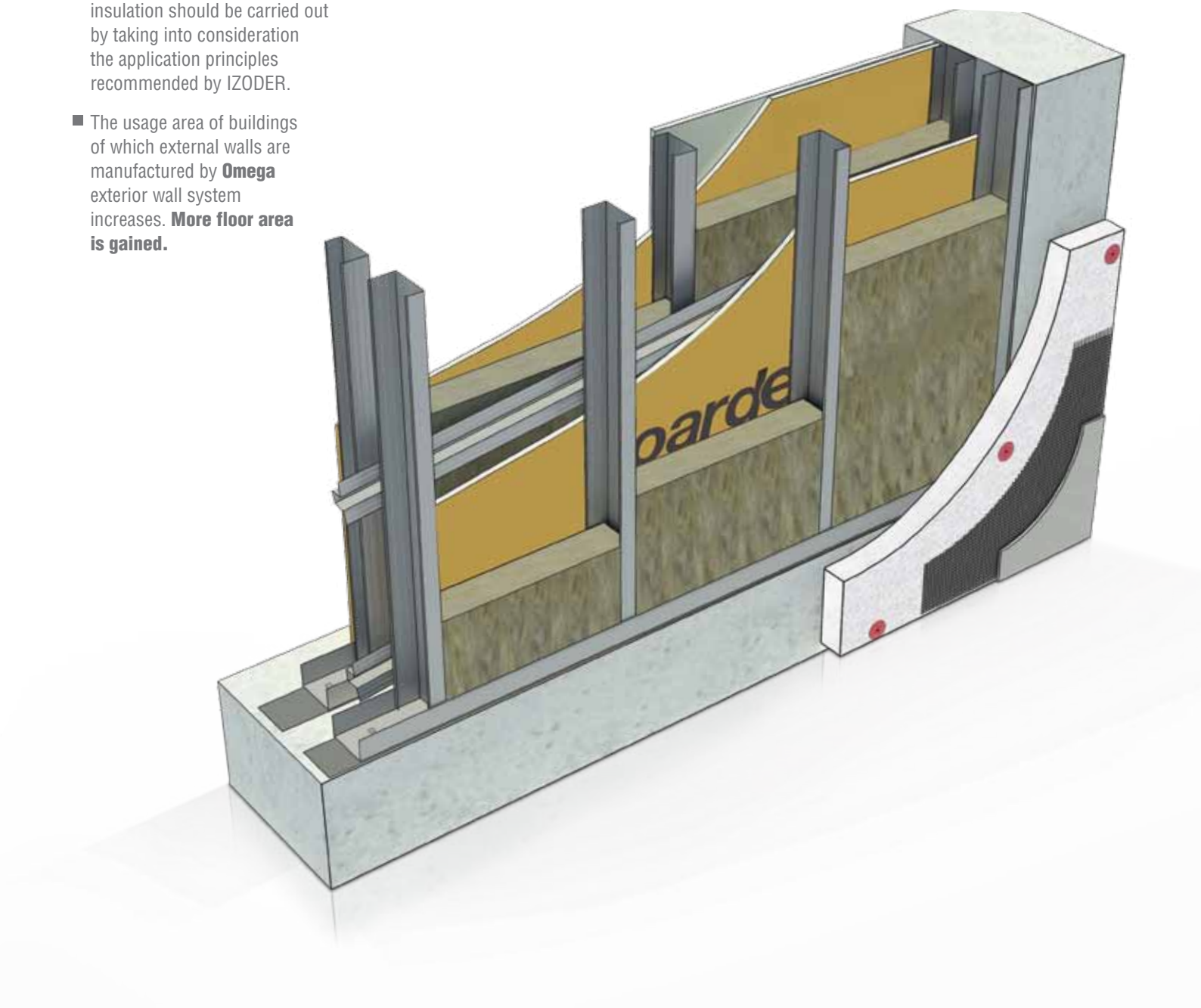
Frequently Asked Questions on Double Framed Exterior Wall System

QUESTION	ANSWER
What is the maximum height of a facade to apply a double framed exterior wall system?	In the calculations conducted in accordance with the TS 498 standard, it is applied with a load-bearing system with 40 cm axle distance for 150 km/h wind speed at a maximum 100 m height facade.
What's the difference between a DCC profile and a DC profile?	**DCC** profiles are galvanized and used in the outward facing profile line with a flange width of 45x30 mm and a wall thickness of 0.9 mm, and at the weight of 275 gr / m^2 . This is a 100 gr / m^2 galvanized profile type with a flange width of 53x42 mm and a wall thickness of 0.6 mm, which is used in the second row of **DC** profile line.
Why are the flanges of the DCC and DC profiles different?	While the omega profiles of the two profile lines are fixed onto each other, the flange heights of the profiles are different so that the screws can be tightened easily.
Is there a need for omega profile in the double framed exterior wall system?	In order to compensate the loads on the surface, the first row of profile line should be connected to the second row of profile line with omega profiles.
Why do we need to use a starter track?	A PVC-based starter track is used to make sure the **BoardeX** does not contact the floor.
Is there a need for a second row of mineral wool in the double framed exterior wall system?	Mineral wool should be placed in the second row of profile line to achieve the desired value in heat and sound insulation.
Why is BoardeX used on the interior facing side of a double framed exterior wall system?	**BoardeX** must be applied in the first layer facing inside to prevent mould formation inside due to the condensation that may occur in the wall space.
Is it possible to carry out wet applications such as the screed or ceramic application after BoardeX is screwed on the interior?	Yes, it can be done. **BoardeX** is not affected by this type of application.
Why is plasterboard applied on the BoardeX surface facing interior?	In order to increase the fire, sound, mechanical and acoustic performance of the exterior wall, one layer of **COREX** is applied on **BoardeX** on the inner surface.
Why is the screw spacing on the inside and outside of the wall different?	The screw spacings are determined by the calculations of the wind load on the outside wall and are the maximum range required to achieve the desired performance.

Thanks to the advanced core of **BoardeX**, mould cannot form on its surface.

OMEGA EXTERIOR WALL SYSTEM

- It allows the start of the building of exterior wall from inside **without installing a scaffolding** while the construction of concrete on the upper floors is still going on. The scaffolding is only built when the application of the insulation on the exterior wall is about to start.
- Low density mineral wool is placed inside the profile gap in the outer part of the wall. Thermal insulation can be applied with an insulation material at the required thickness in order to create an increase in heat insulation and to maintain sustainability of it. The installation of Thermal insulation should be carried out by taking into consideration the application principles recommended by IZODER.
- The usage area of buildings of which external walls are manufactured by **Omega** exterior wall system increases. **More floor area is gained.**
- As for the interior finishing, all wet applications such as screed and plaster can be completed before the plasterboard is fixed as the last layer. At the end of these applications, the surface of the wall is finished by fixing the last layer of plasterboard on the surface of **BoardeX**. Thus, while the materials on site and floors are protected from outside weather conditions, a comfortable working environment is provided.
- **Omega** exterior wall system is designed to meet the wind load of 130 km/h at higher than 20 m according to the selected profile type.



Omega Exterior Wall System Auxiliary Materials

DU 50-75-100
profile
38x38 mm

It is used in the **Omega exterior wall system** to form the exterior drywall system by fixing it onto the floor and ceiling.

BoardeX
DCC 50-75-100
exterior profile
45x30 mm

BoardeX DCC is the profile with 0.9 mm wall thickness and 45x30 mm flange height to be used in the construction of the double framed exterior facade system.

BoardeX
DC 50-75-100
profile 53x42 mm

BoardeX DC is a 275 gr/m² galvanized profile with 0.6 mm wall thickness and 53x42 mm flange height to be used in the construction of the **Omega** exterior wall system.

BoardeX
Omega
profile
26x25x26 mm

This is the galvanised profile with a thickness of 0.5 mm and a weight of 100 gr/m², which enables the system to work in an integrated form by securing two **DC** profiles to each other.

Resilient tape
50-75-100

It adheres under the galvanized steel sheet profiles in the construction of the exterior wall. 50, 75 and 100 mm wide, self-adhesive resilient tape and contribute to sound and heat performance.

Drillex
hex head screw

A special screw to fix CT facade profiles onto brackets and to fix two pieces of metal to each other.

BoardeX
self-tapping screw

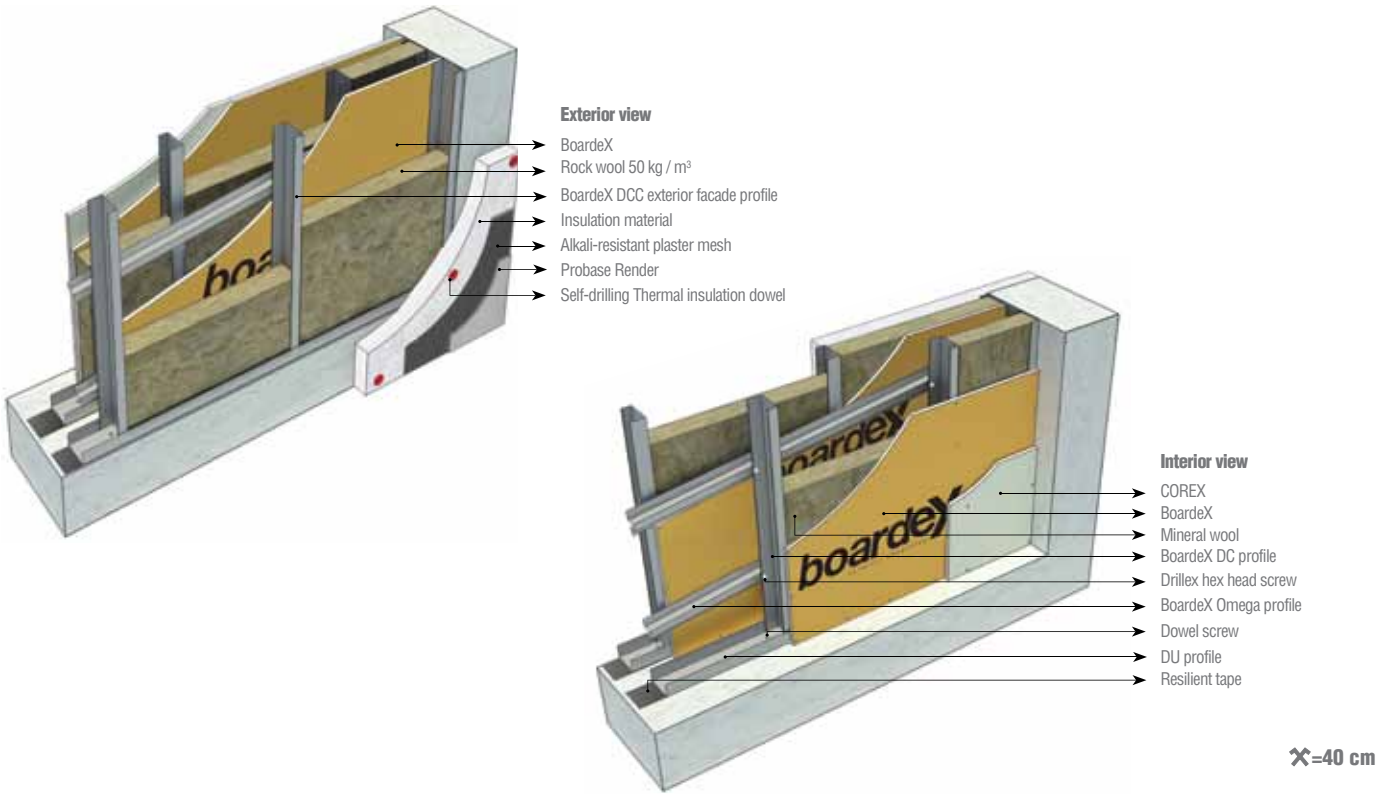
A specially designed corrosion-resistant screw used for fixing exterior wall boards to profiles with a wall thickness of up to 0.7 mm.

BoardeX
self-drilling screw

The specially designed corrosion-resistant screw used for fixing exterior wall boards to profiles with a wall thickness of up to 2 mm.

Self-tapping screw		It is the screw used to fix the plasterboards on the interior side onto the profiles up to 0.7 mm wall thickness through **BoardeX.**
Dowel-screw		Plastic dowels and washer-head screw set used for fixing the galvanized profiles on the floor in the construction of the exterior wall. It consists of 8 mm plastic dowel and 45 mm washer-head screw.
Mineral Wool **Glass wool or rock wool**		It is used to fix the L brackets onto reinforced concrete surfaces.

Material Analysis



Material Analysis

Name of the Material	Consumption For DCC profile = 60 cm; for DC profile =40 cm
BoardeX	2,10 m²
COREX	1,05 m²
BoardeX DCC 50/75/100 exterior wall profile (45x30; 0.9 mm; Z275)	2,90 mt
BoardeX DC 50/75 profile (53x42; 0.6 mm; Z100)	1,90 mt
DU 50/75/100 profile (38x38; 0.6 mm; Z100)	0,84 mt
DU 50/75 profile (38x38; 0.6 mm; Z100)	0,84 mt
BoardeX omega profile (27x25; 0.5mm; Z100) (at every 70 cm)	1,60 mt
BoardeX self-drilling screw(with 20 cm intervals)	26 pcs
BoardeX self-tapping screw (with 40 cm intervals)	11 pcs
Drillex hex head screw	3,5 pcs
Self-tapping screw 38 (with 30 cm intervals)	13 pcs
Dowel-screw	5,90 pcs
Sound-insulating tape	2,90 mt
Joint tape or paper tape	1,80 mt
DERZTEK joint grouting plaster	0,40 kg
Mineral wool interior (low density)	1,05 m²
Mineral wool exterior (low density)	1,05 m²

=60, states that the DCC profile axle spacings are 60 cm, =40 DC states that the profile axle spacings are 40 cm.

!!! The area of the wall for which the material analysis is conducted has been calculated to be 4mx2,5m = 10m², and 5% tolerance has been included in the calculations.

Note: For more information, please refer to "BoardeX system book" or www.boardeX.com.tr website.

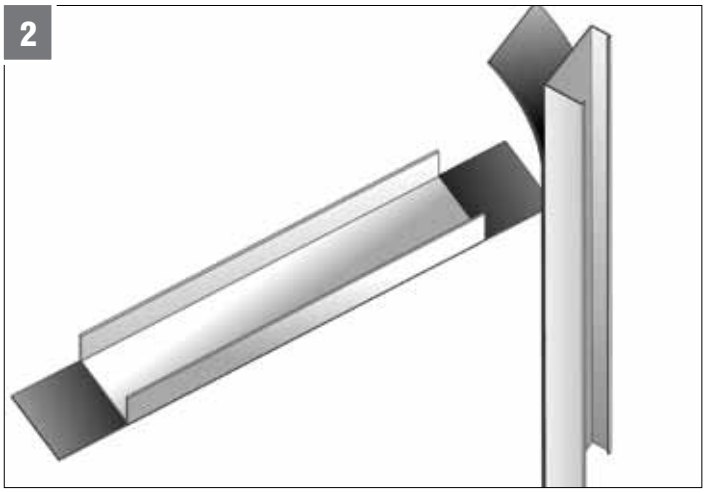
Omega Exterior Wall System - Application

1

Omega Exterior Wall System application area

Omega exterior wall system allows for the application of high-performance drywalls in buildings without using any SCAFFOLDING. It allows the start of the building of exterior wall from inside while the construction of concrete on the upper floors is still going on.

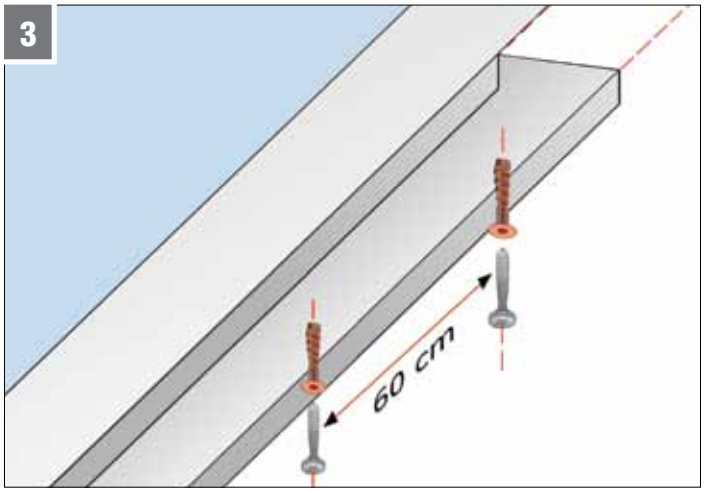
2



Preparation of resilient tape

A self-adhesive resilient tape adhered to the bottom of the **DU**, and the **DCC** and **DC** profiles at the corners.

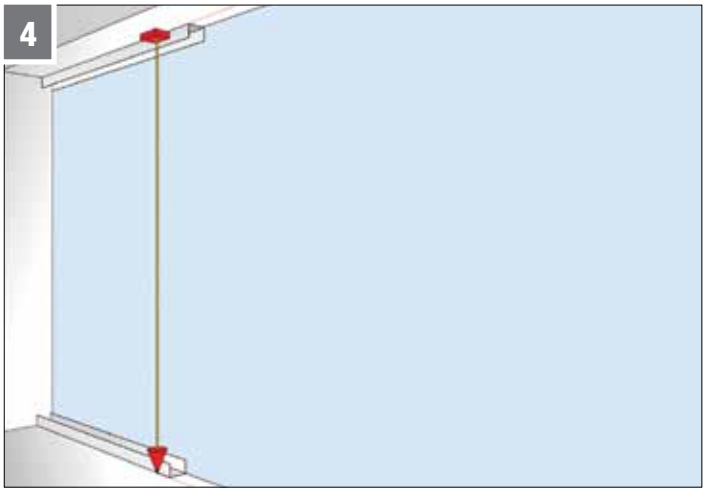
3



Screwing the first row of profiles

The first row of **DU** profiles is fixed onto the ceiling using dowel screws with maximum 60 cm intervals from the carcass limit.

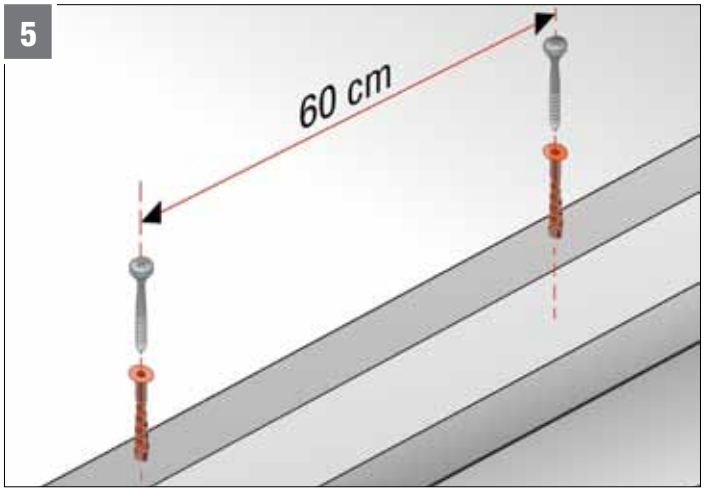
4



Screwing the first row of profiles

The **DU** profile line on the ceiling is carried onto the floor at the same plumbness.

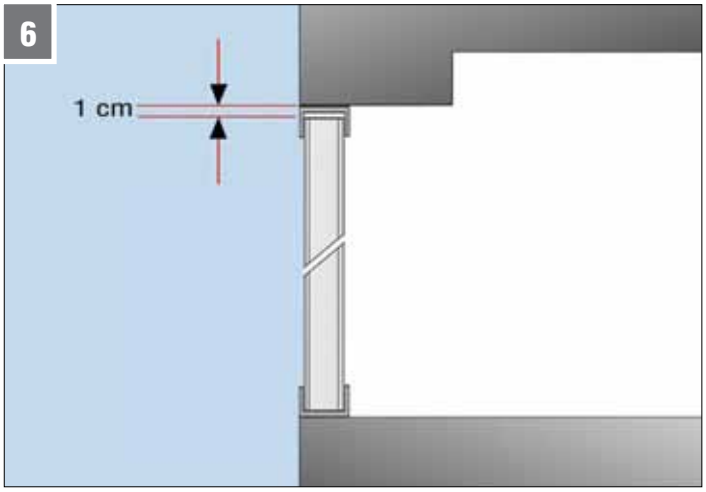
5



Screwing the first row of profiles

The first row of **DU** profiles is fixed onto the floor using dowel screws with maximum 60 cm intervals from the carcass limit.

6

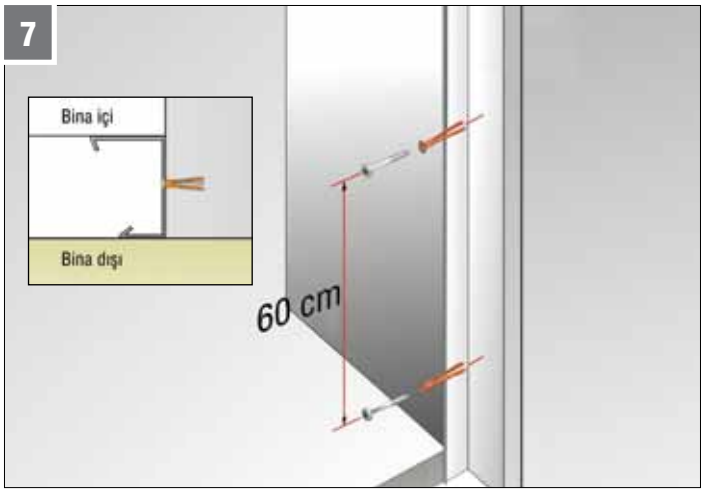


Screwing the first row of profiles

First row of **DCC** profiles should be cut at least 1 cm shorter than the floor height.

Omega Exterior Wall System - Application

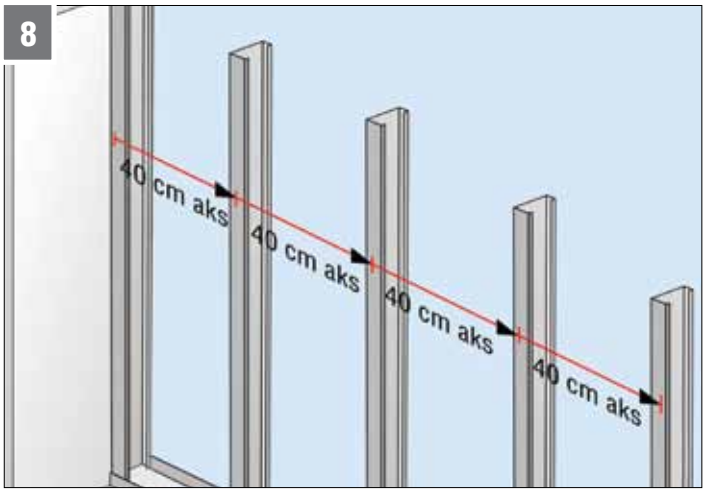
7



Screwing Profiles

The first **DCC** profiles whose bottom was affixed with resilient tape is fixed to the existing column using a dowel-screw with a maximum of 60 cm spacing, with the long flange facing outward.

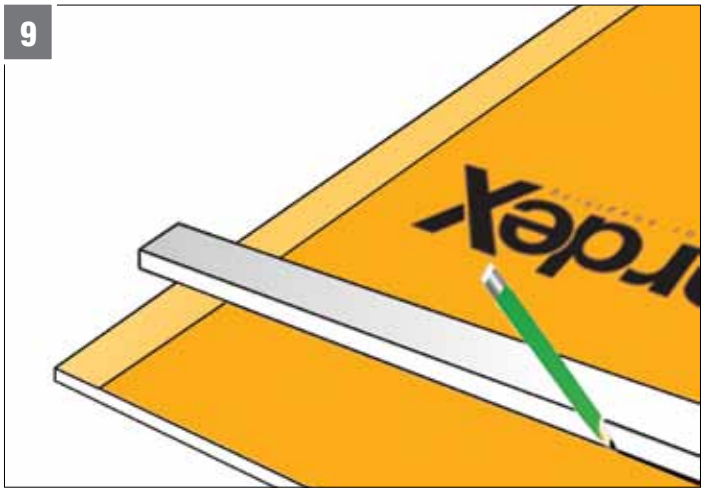
8



Placement of first row of DCC profiles

The first row of **DCC** profiles is placed inside the **DU** profiles with short flanges facing outward and with 40 cm axle spacings.

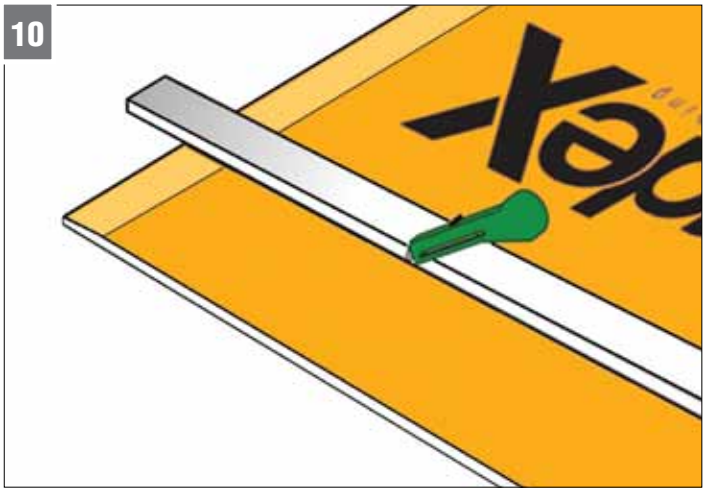
9



Cutting BoardeX

The **BoardeX** to be cut is marked on the surface with a pen.

10



Cutting BoardeX

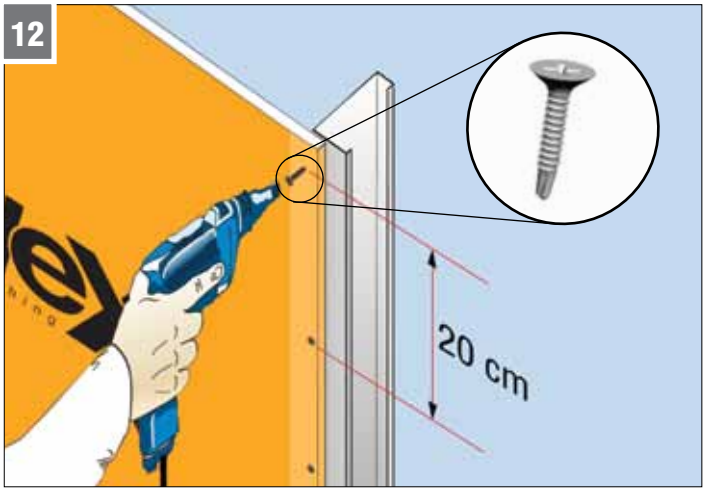
BoardeX is cut with the help of a gauge from the marked place using a knife. For **BoardeX** cutting, there is no need for spiral, jet stone, or any other dust emitting cutting tools.

11

Fixing BoardeX

BoardeX is fixed from inside with full board.

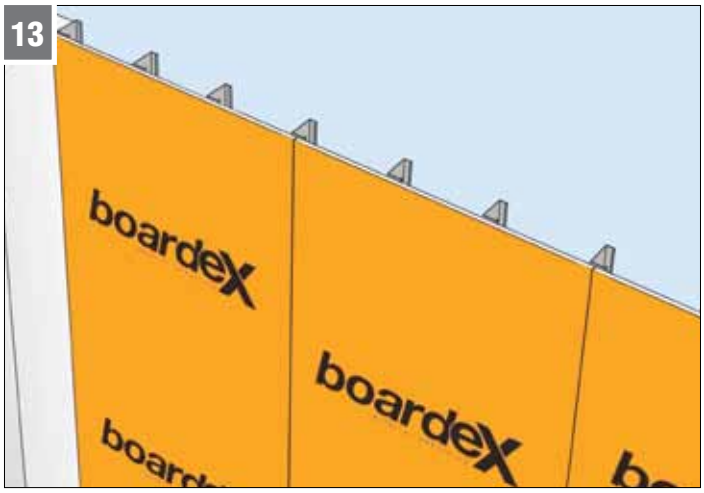
12



Fixing BoardeX

BoardeX self-drilling screwshould be used for fixing. The BoardeX self-drilling screwis screwed with 20 cm and 40 cm intervals vertically and horizontally, respectively.

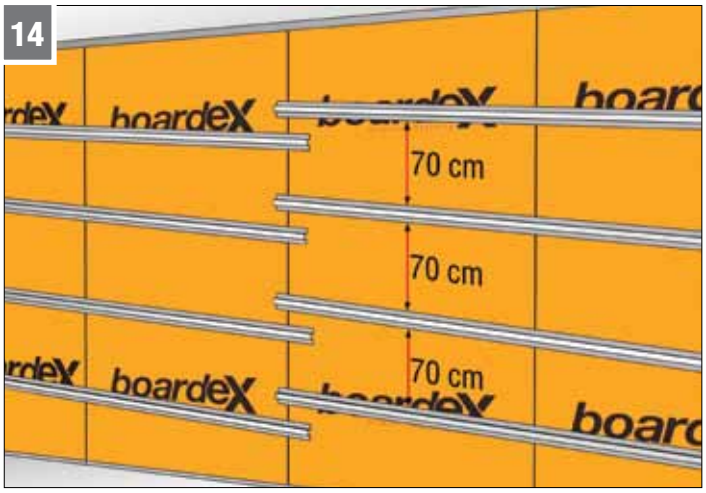
13



Screwing BoardeX

All profiles are fixed onto **BoardeX** and the surface is closed.

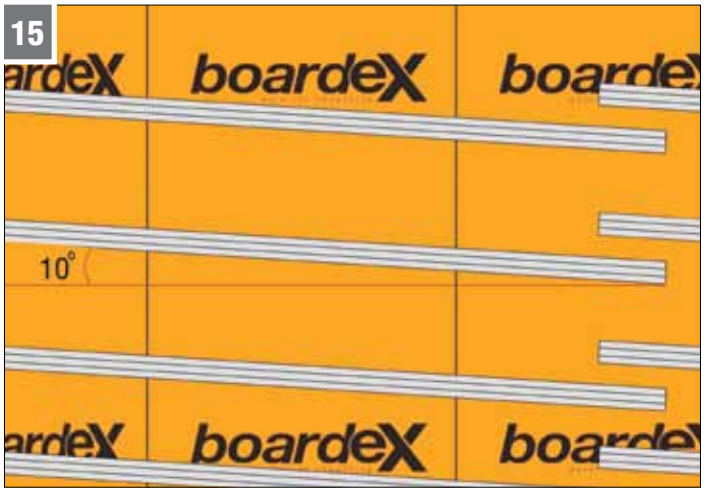
14



Omega profile placement

The omega profiles are fixed at a maximum spacing of 70 cm vertically.

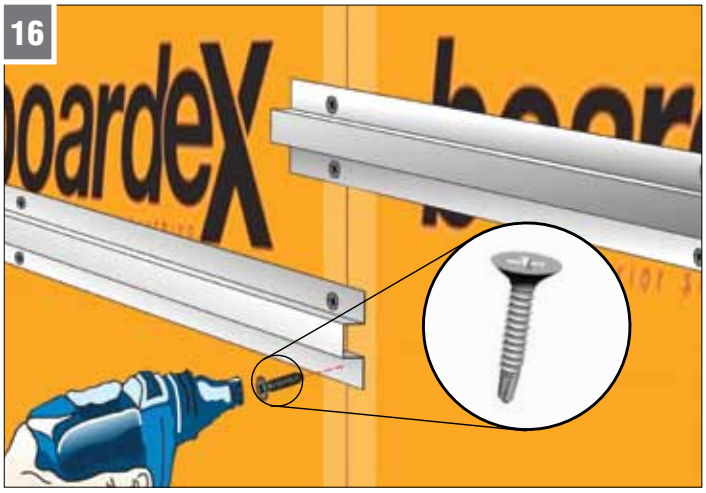
15



Omega profile placement

Omega Profiles are placed onto **BoardeX** surface with a 10-degree angle to the surface.

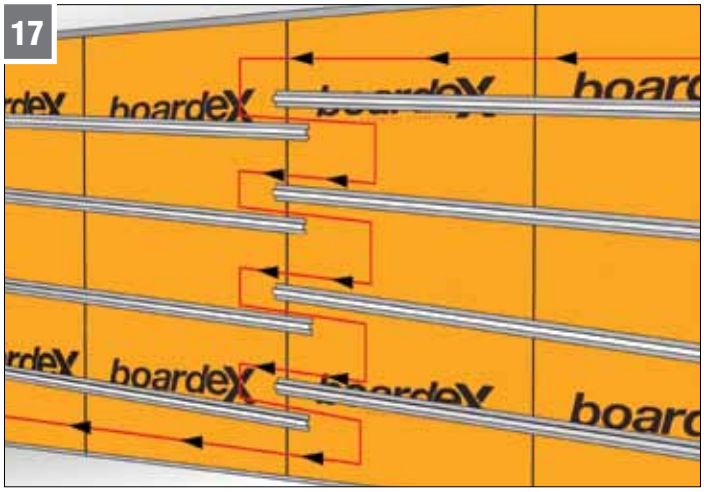
16



Fixing omega profile

BoardeX Omega profile blades are fixed onto **DCC** profiles by using BoardeX self-drilling through **BoardeX**.

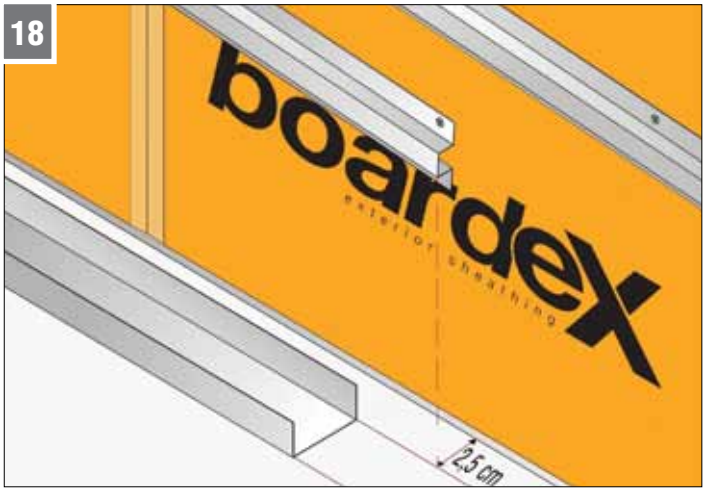
17



Omega Profile Placement

The space left between the omega profiles will also provide the air flow through the omega space.

18

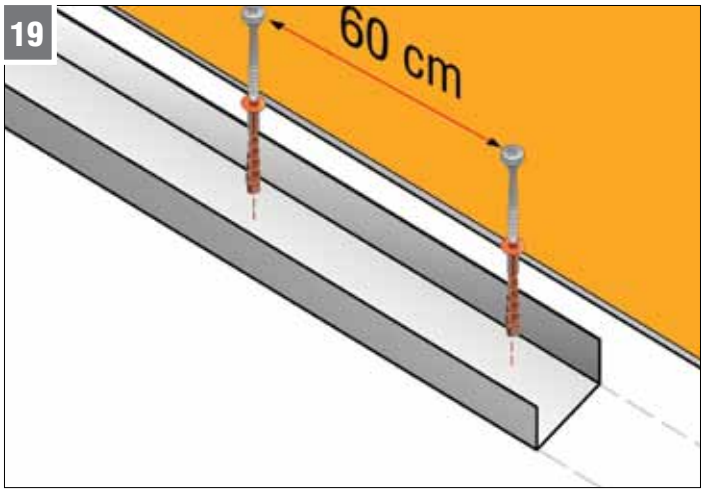


Placement of second row DU profiles

A gap of 2.5 cm is left between the second row of wall U profiles under which resilient tape has been adhered to and **BoardeX**.

Omega Exterior Wall System - Application

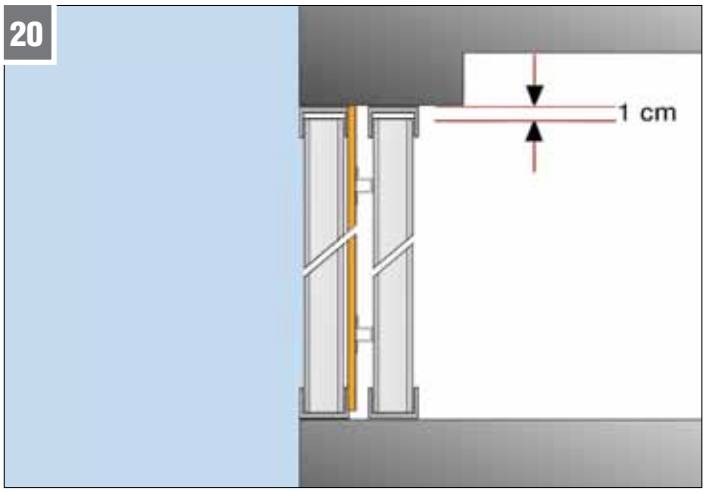
19



Placement of second row DU profiles

The Wall U profiles should be fixed onto the ceiling and floor by using dowel screws at 60 cm intervals.

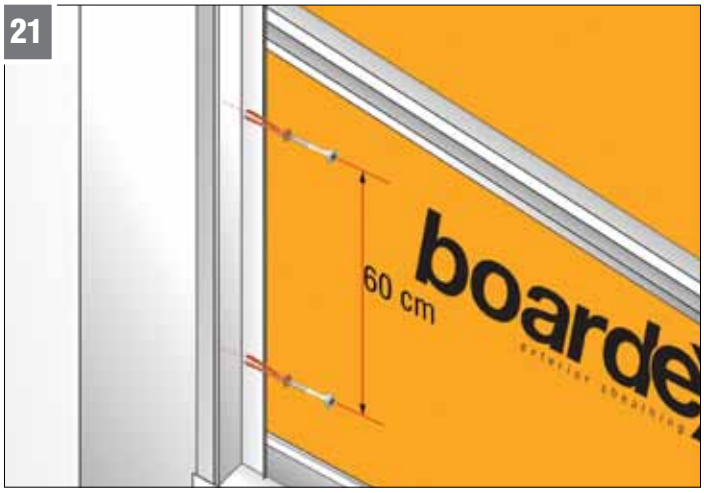
20



Preparing Profiles

Second row of **DC** profiles should be cut at least 1 cm shorter than the floor height.

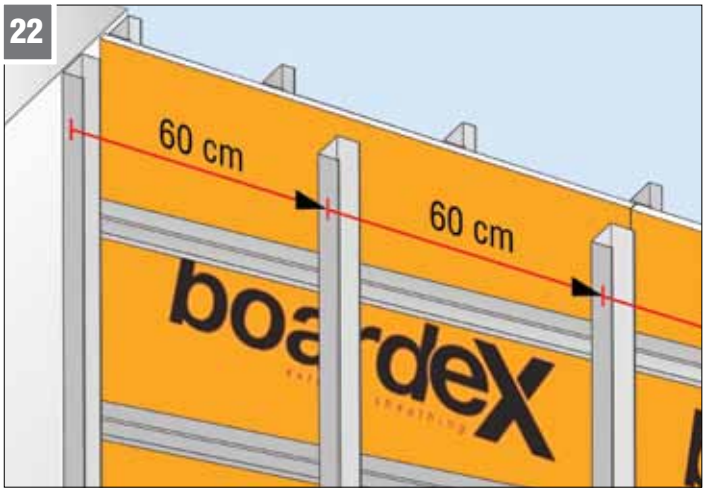
21



Screwing Profiles

The first **Boardex DCC** profiles whose bottoms have been affixed with resilient tape are fixed onto the existing column using dowel-screws with a maximum of 60 cm spacing, with the long flange lying on the omega profile.

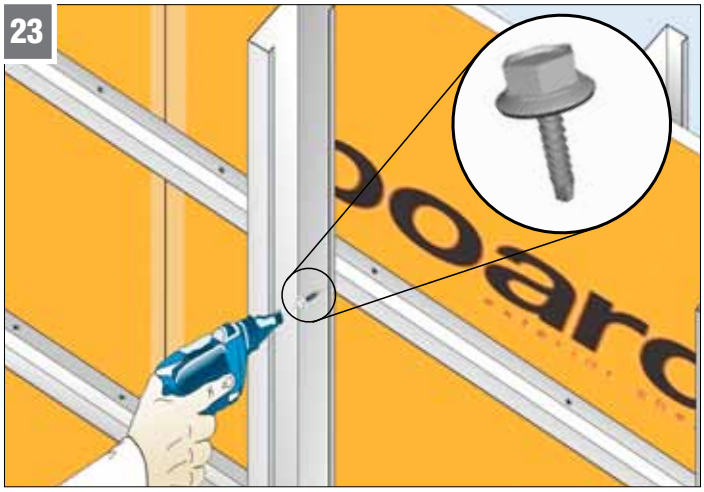
22



Placement of profiles

The second row of **BoardeX DC** profiles should be placed with 60 cm axle spacing. Thus, two lines of **DC** profile lines will be installed in an interlaid pattern.

23



Fixing DC profiles

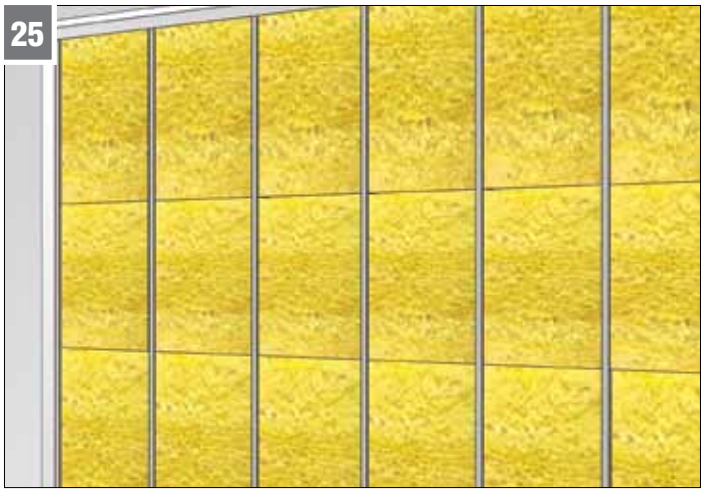
Wall C profiles are secured to the omega profiles from the inside of their long flanges by using Drillex hex head screws.

24

Placement of mineral wool

Low-density mineral wool is placed between the second row of profiles to increase the thermal insulation.

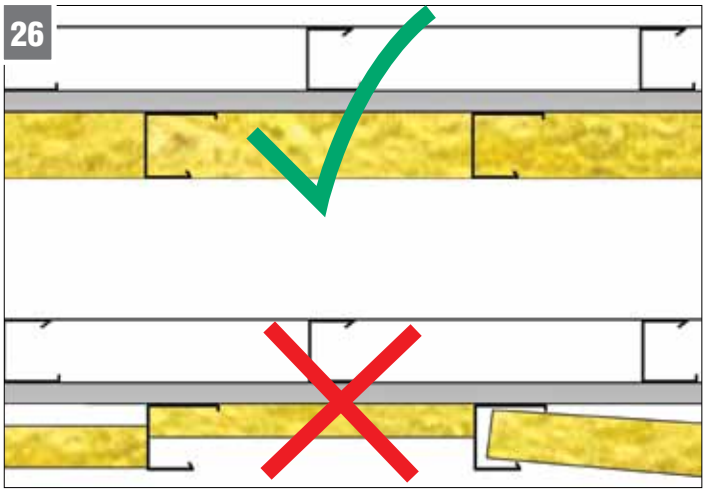
25



Placement of mineral wool

To ensure a homogeneous thermal insulation all throughout the wall, mineral wools are placed carefully to ensure continuity in thermal insulation, and with no gaps between the profiles and covering the entire wall surface.

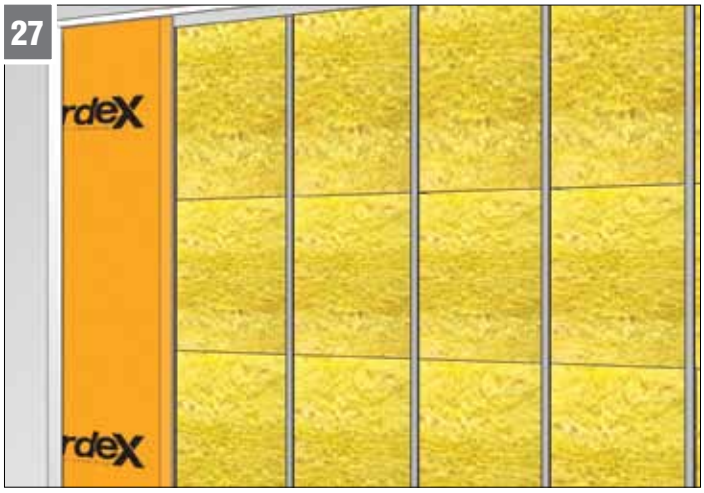
26



Warning!

Care must be taken to ensure that mineral wool is placed between the profiles without leaving any gaps. It should not be forgotten that the desired heat, sound and fire performance cannot be achieved when mineral wool is not properly installed.

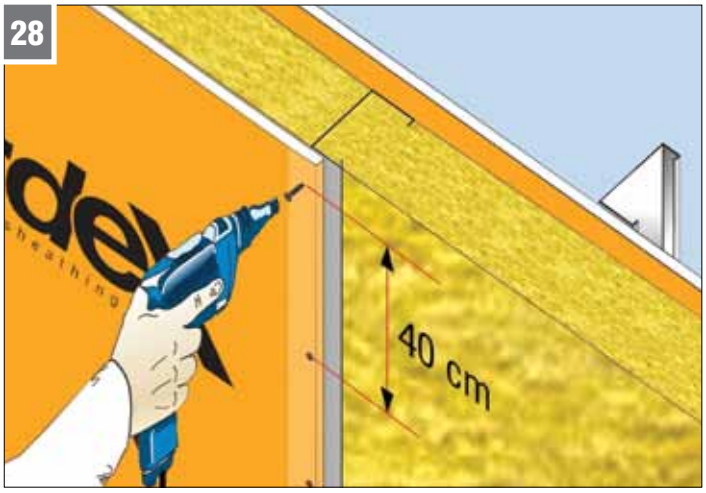
27



Closure of the interior facade surface

The **BoardeX** to be applied to the inner surface of the wall must be applied in an interlaid pattern so that it does not coincide with the **BoardeX** joints on the outer surface.

28



Screwing BoardeX

The **BoardeX** on the inside surface is fixed onto the profiles by BoardeX self-tapping screws with maximum 40 cm intervals.

29

Closure of the interior facade surface

The application continues with a full-length **BoardeX** and the **BoardeX** is fixed onto the profiles. Thus, the **BoardeX** joints on the entire wall are in an interlaid pattern.

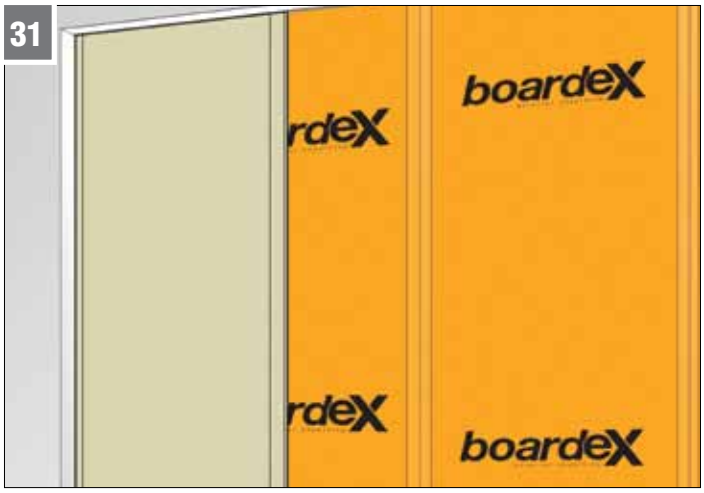
30

Practice of wet applications

Folloflange the fixing of the **BoardeX** on the inner surface, all wet applications such as screed application, ceramic tiling inside the building can be completed.

Omega Exterior Wall System - Application

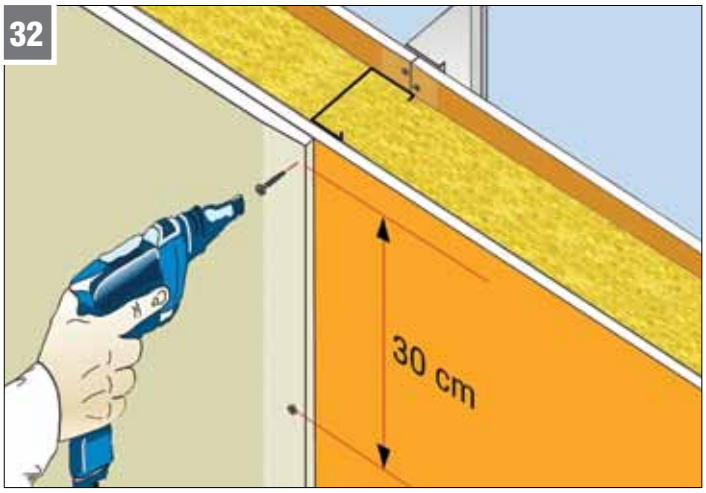
31



COREX application

After completing the wet applications on the interior, **COREX** application can be started. The **COREX** joints should be applied in such a way that they do not coincide with the joints on the first layer, that is, applying in an interlaid pattern.

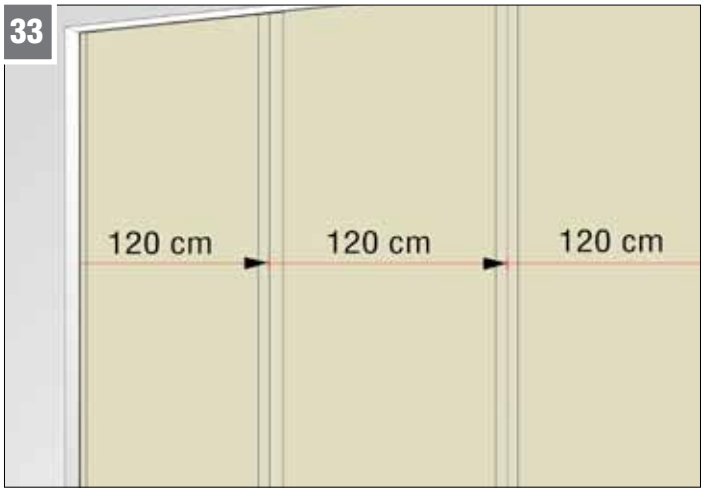
32



COREX screflange

COREX is fixed with self-tapping screws 38 with 30 cm vertical and 60 cm horizontal intervals.

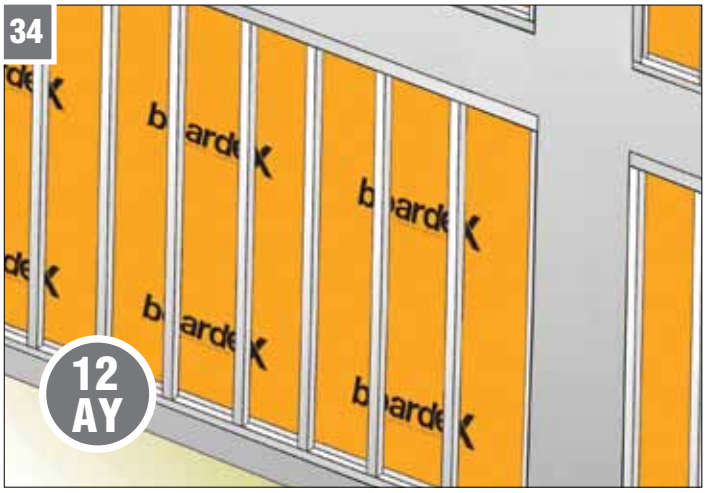
33



COREX screflange

The application continues with a full-length plasterboard and these plasterboards are fixed onto the profiles. Thus, the joints on the entire wall surface are in an interlaid pattern.

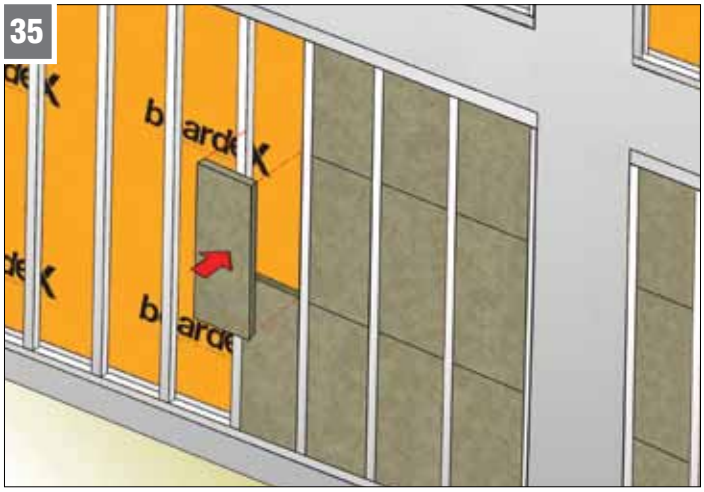
34



Information!!!

Thus, exterior wall is finished without SCAFFOLDING practice. The **BoardeX** surface can be exposed for up to 12 months in outdoor weather conditions without the need to apply any coating on it.

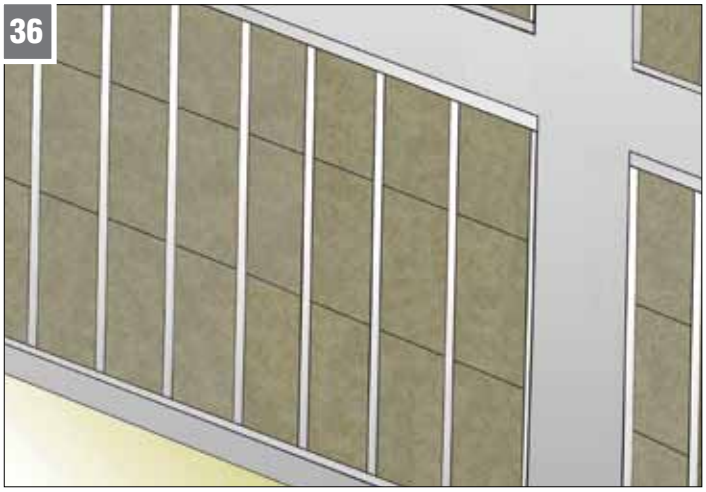
35



Placement of rock wool

İç kısımlardaki imalatlar tamamlanıp dışarıya iskele kurulduktan sonra **DCC** profilleri arasına düşük yoğunluklu taş yünleri yerleştirilir.

36

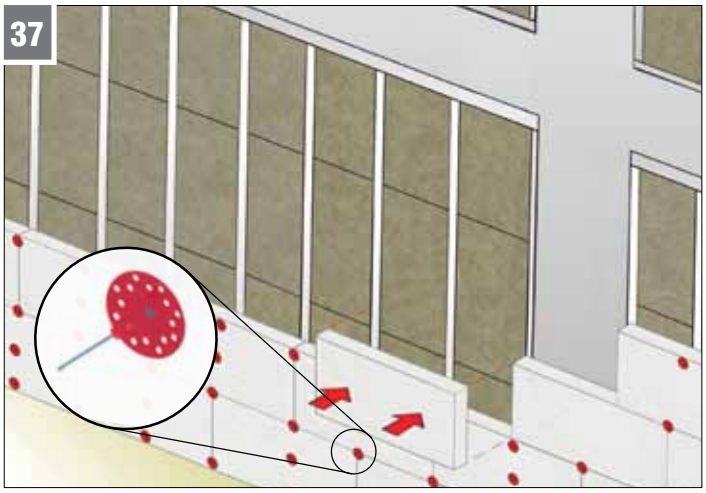


Placement of rock wool

Care must be taken to ensure that rock wool is placed between the profiles without leaving any gaps. Thus, the system is made ready for the Thermal insulation to be applied on it.

Thermal insulation application in Omega system

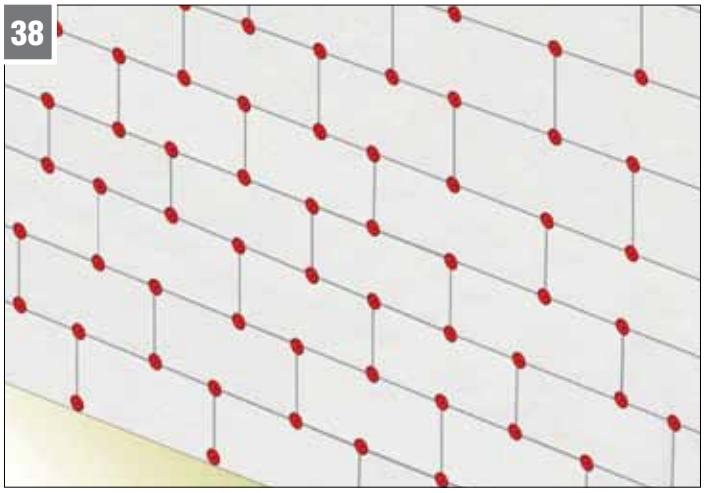
37



Thermal insulation application

Depending on the project, the insulation material (EPS, XPS) of the selected thickness is fixed by using self-drilling screws and parachute head dowels at the points corresponding to the profiles.

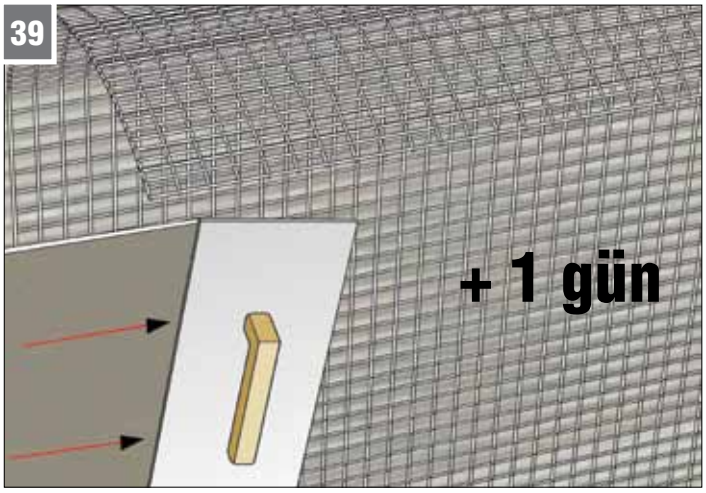
38



Fixing the insulation material

In this way, the entire surface is covered with insulation material.

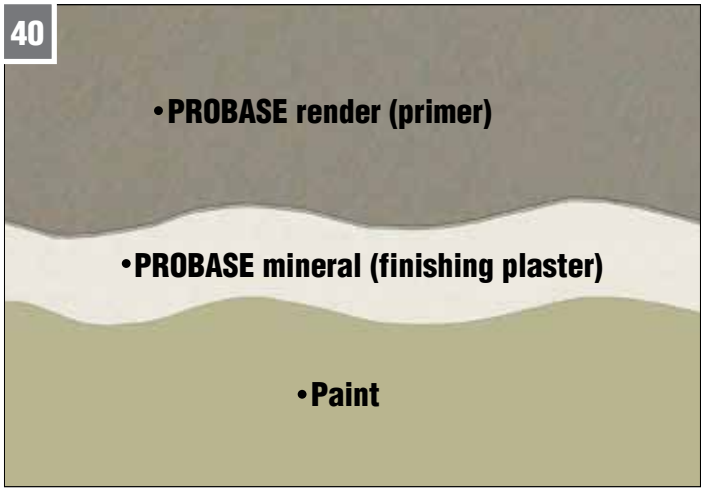
39



Thermal insulation application

After the base plaster is applied onto the entire surface, the alkali-resistant plaster mesh with a weight of 160gr / m^2 is slightly buried into the base plaster surface and the surface is made ready for finishing plaster to be carried out after 1 day.

40



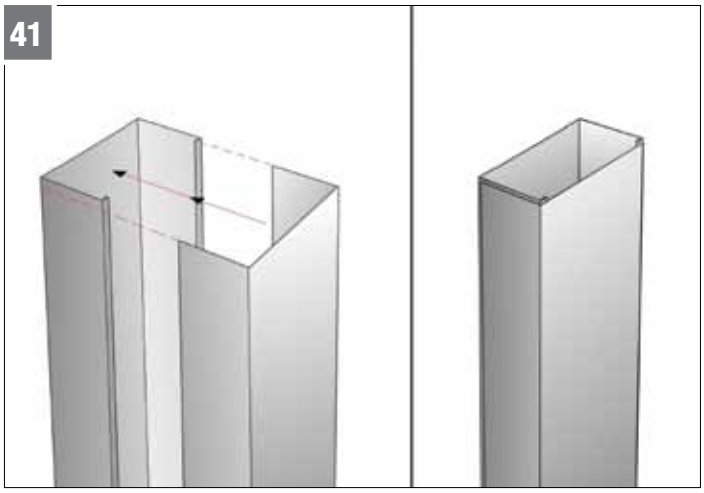
Completion of surface

After the application of base plaster and mineral plaster (finishing plaster) on the surface of the insulating material used in the Thermal insulation, the surface is completed by painting.

Window application details

Omega Exterior Wall System - Application

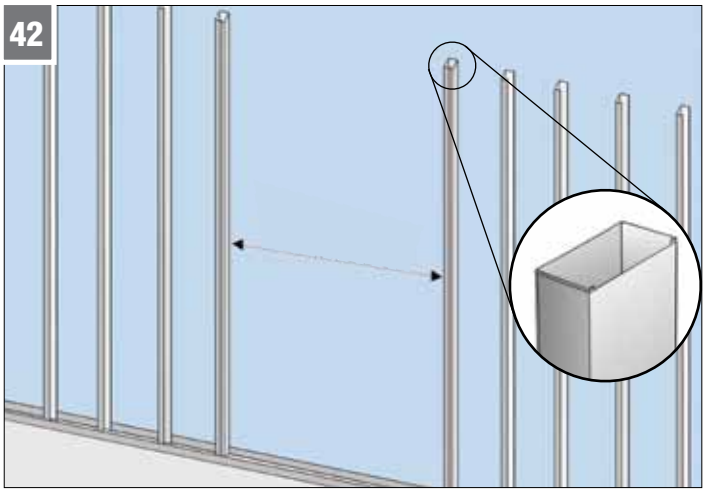
41



Window application details

On the vertical line where the window frame is going to be fixed, the **DCC** and **DU** profiles are inserted into each other.

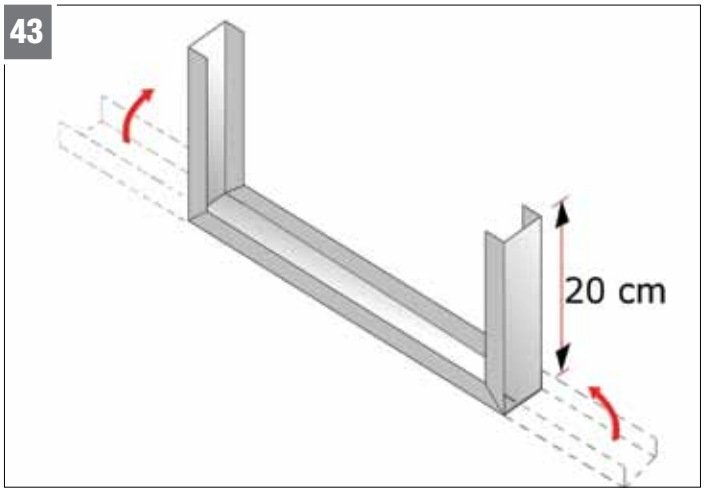
42



Window application details

These profiles are placed on both sides of the window to fit the window gap horizontally.

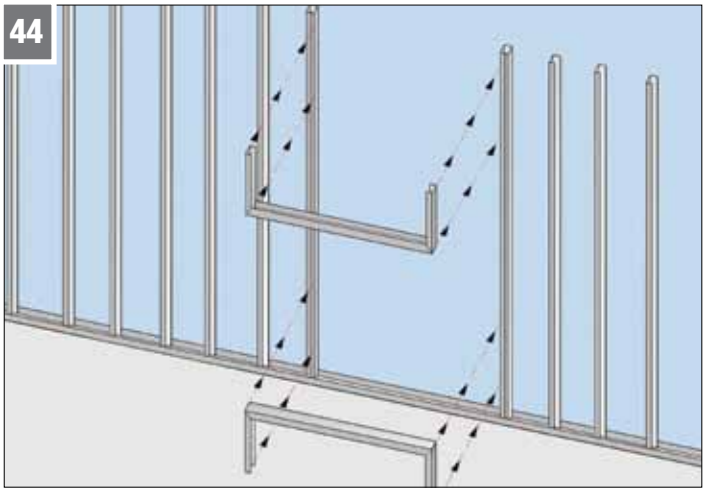
43



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the door width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

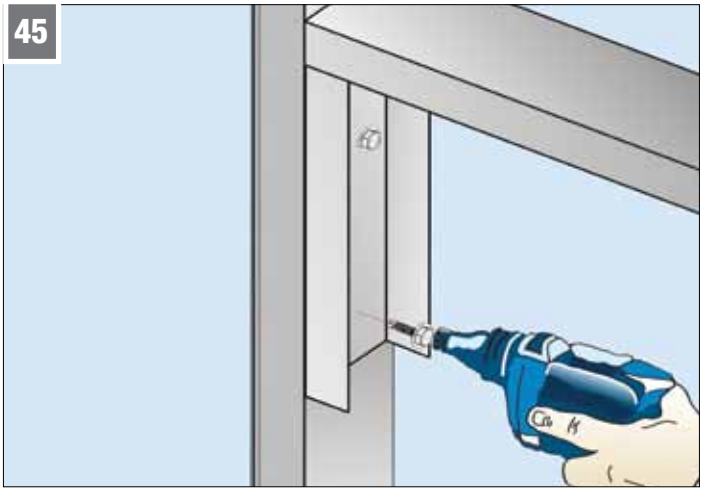
44



Placement of the lintel profile

The lintel which is determined in accordance with the window size is placed on the above and underneath sections.

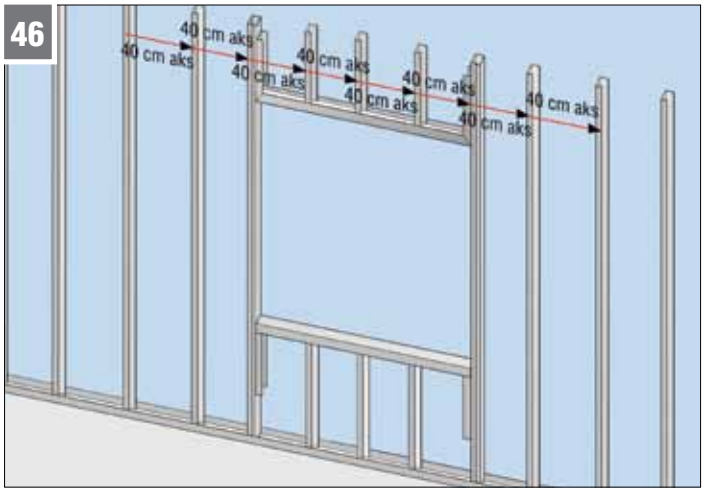
45



Fixing lintel profile

The created lintel is screwed onto the side profiles from inside with Drillex hex head screws from at least two points.

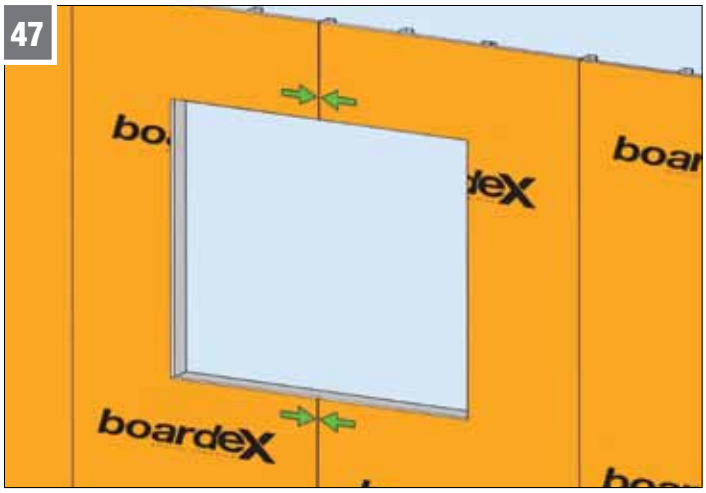
46



Window application details

Profillerin 40 cm aks aralığında devam edebilmesi için gerektiğinde lento iç kısımlarına ek **DCC** profilleri yerleştirilmelidir.

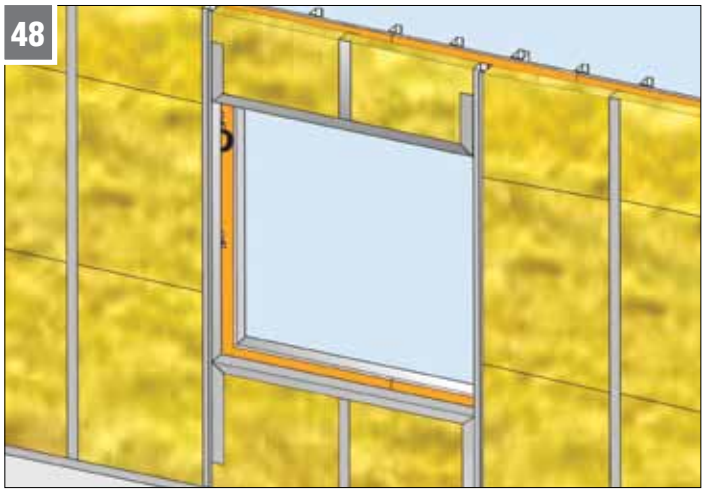
47



Fixing BoardeX

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

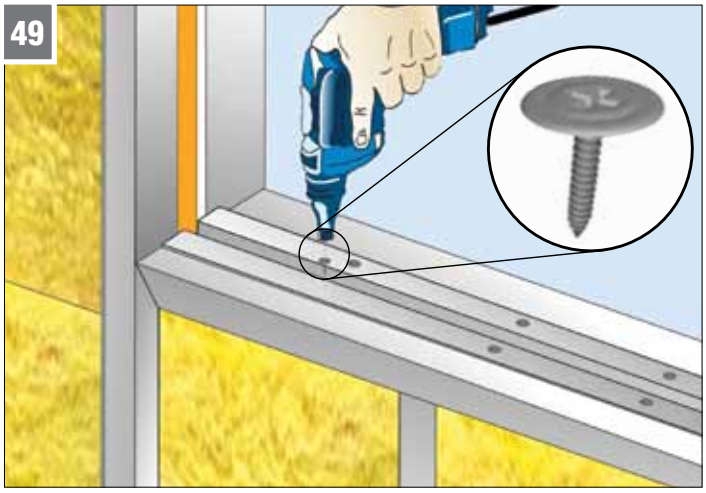
48



Completion of second row profile line

As described in the previous steps, the second-row profile line is completed and mineral wool is placed.

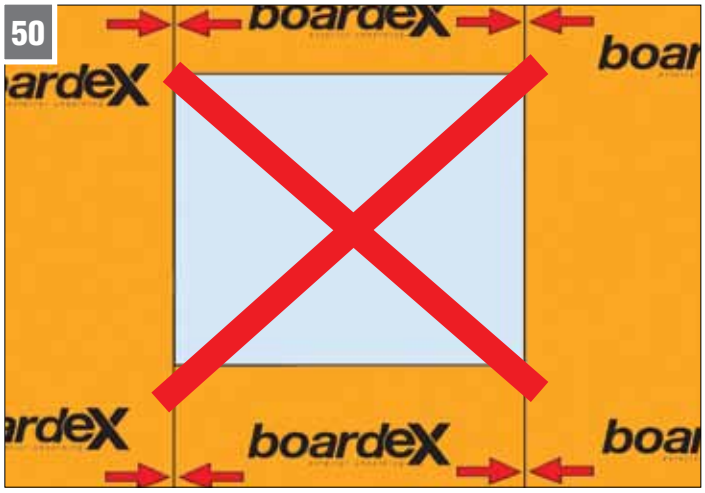
49



Window application details

The omega profile placed in the gap between the two rows of profiles is fixed by hook screws and in this way, the window cavity is strengthened.

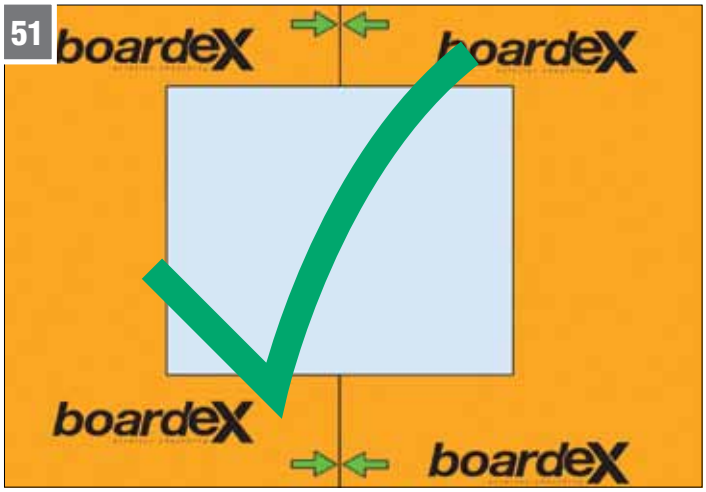
50



Wrong Application

BoardeX joints in the window cavities should not coincide with the window edge profiles.

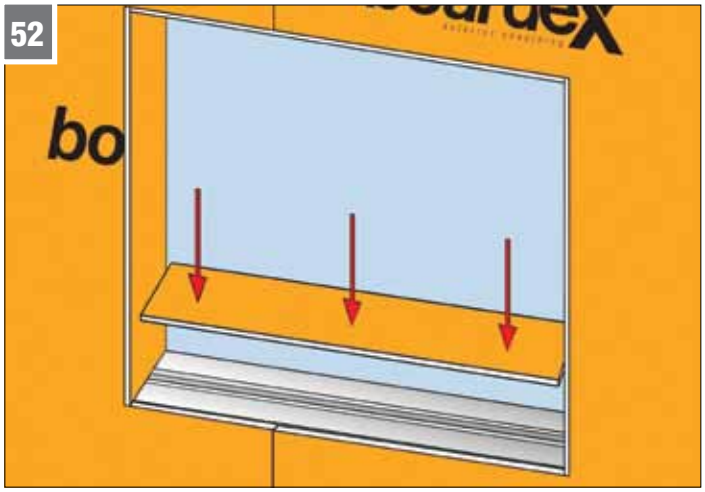
51



Right Application

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

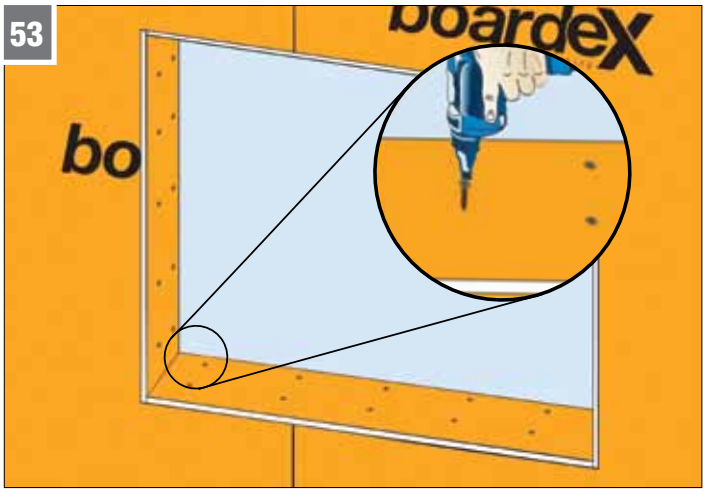
52



Window application details

The **BoardeX** pieces are cut in appropriate sizes and placed on the window edges on the profiles in the window cavity and the window edges are closed.

53

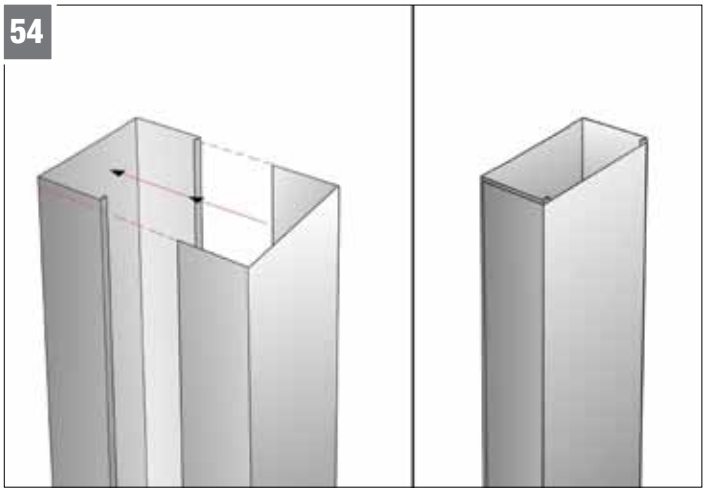


Window application details

The **BoardeX** pieces are fixed with Drillex screws and the window is made ready to fit the window assembly.

Doorway detail

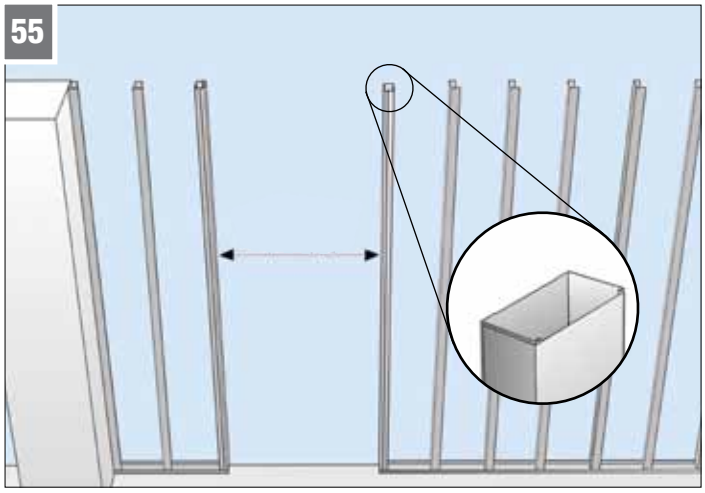
54



Doorway detail

On the vertical line where the door frame is going to be fixed, the **DCC** and **DU** profiles are inserted through each other.

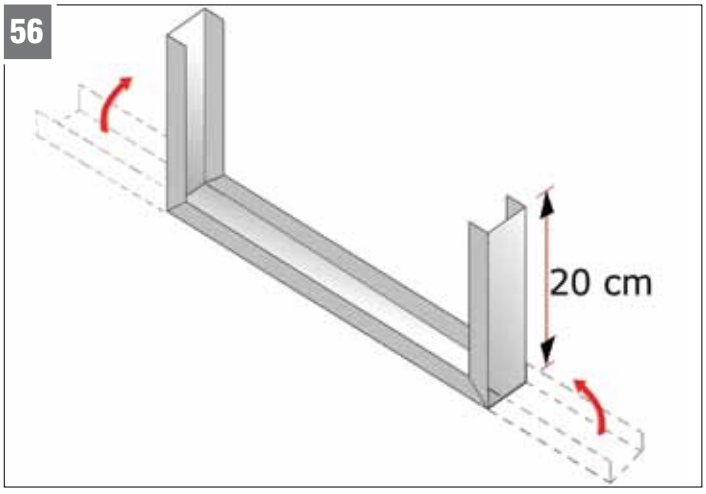
55



Doorway detail

These profiles are placed on both sides of the door to fit the door cavity horizontally.

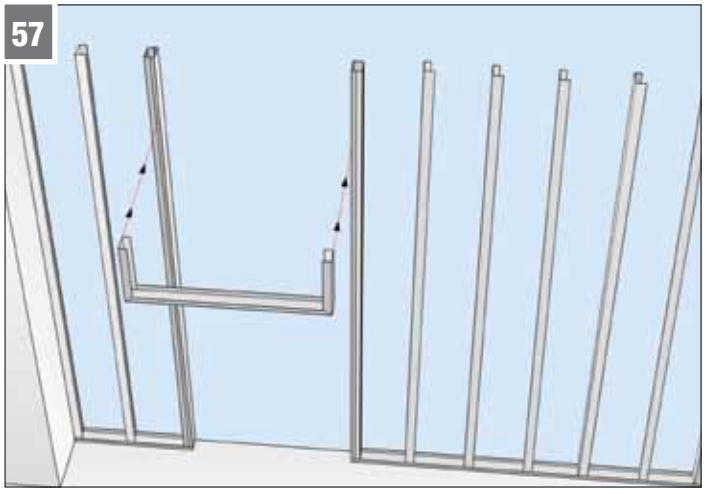
56



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the door width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

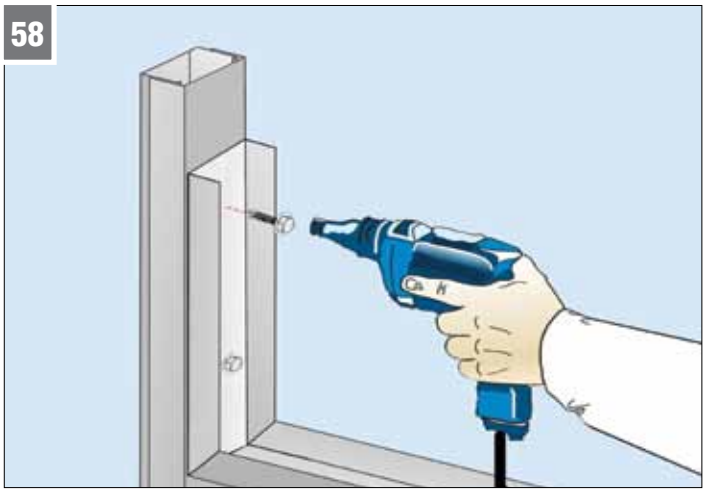
57



Placement of the lintel profile

The lintel profile is positioned according to the height of the door.

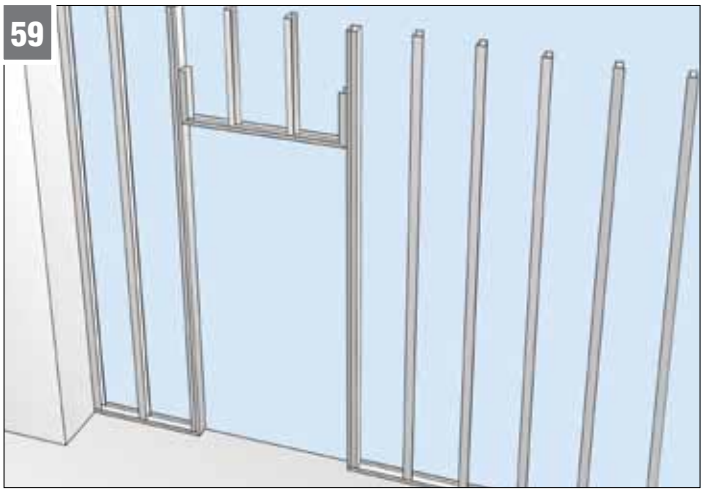
58



Fixing lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hex head screws from at least two points.

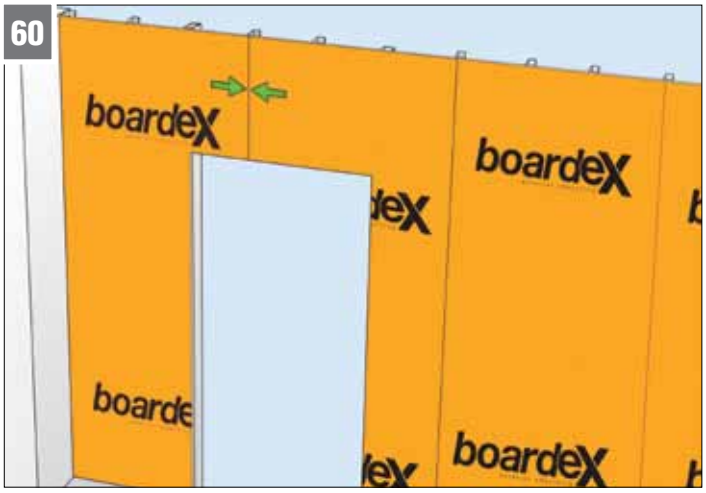
59



Doorway detail

Additional **DCC** profiles should be installed inside the lintel as required to allow the profiles to continue at a 40 cm axle spacing.

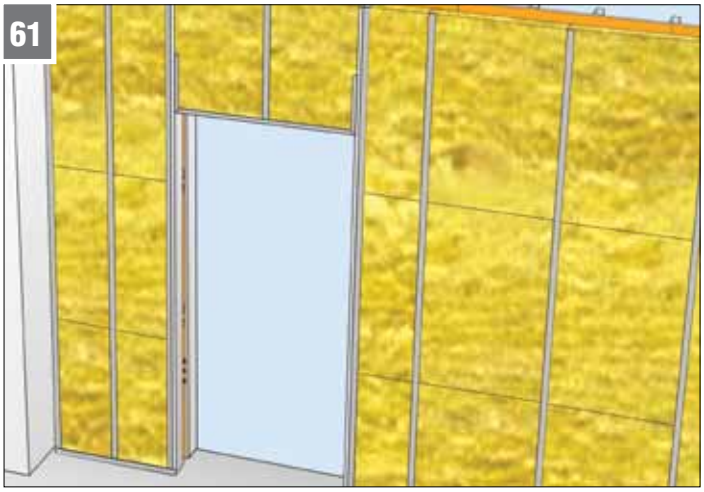
60



Fixing BoardeX

BoardeX joints in the door cavities should be fixed so that they would be above or below the lintel.

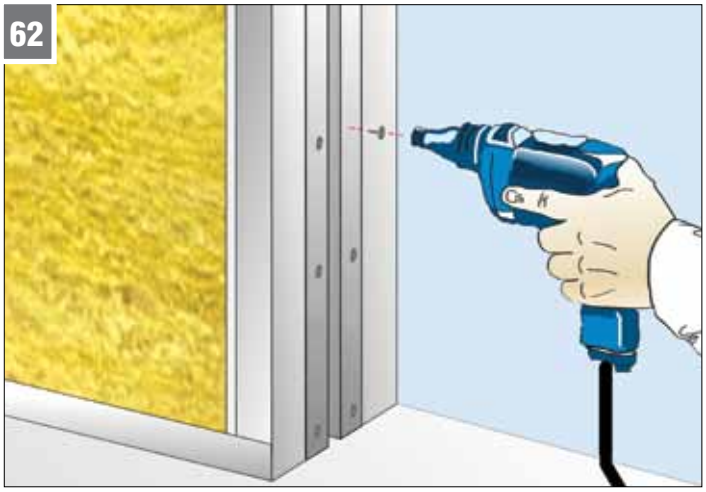
61



Completion of second row profile line

As described in the previous steps, the second-row profile line is completed and mineral wool is placed.

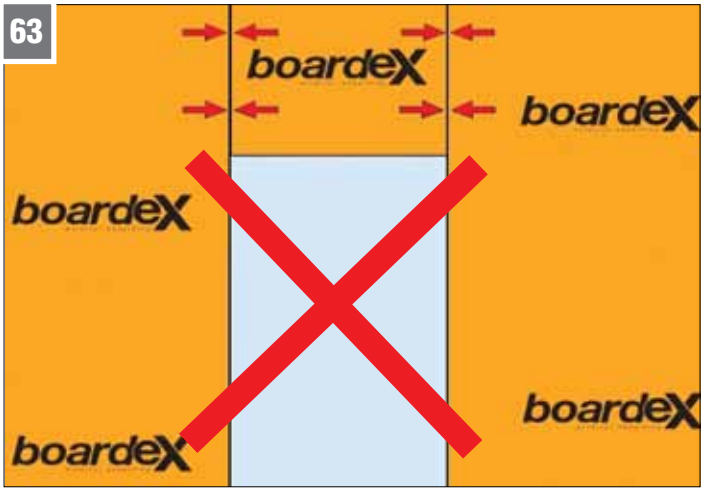
62



Doorway detail

The omega profile placed in the gap between the two rows of profiles is fixed by hook screws and in this way, the window cavity is strengthened.

63

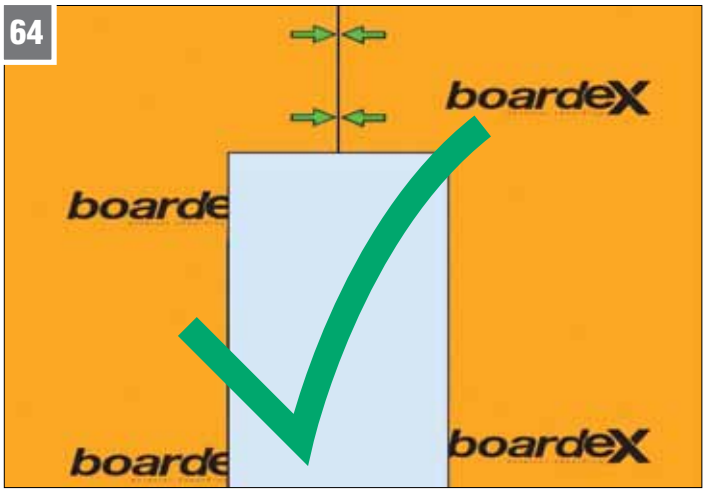


Wrong Application

The **BoardeX** joints in the door cavities should not coincide with the edge profiles.

Omega Exterior Wall System - Application

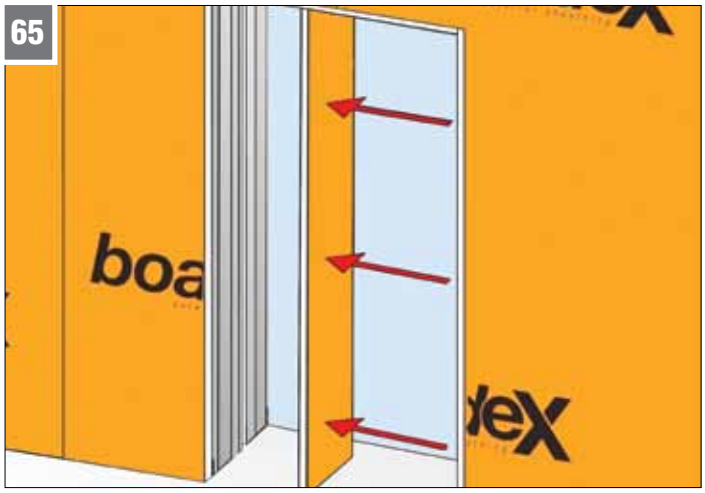
64



Right Application

BoardeX joints in the door cavities should be fixed onto the profiles so that they would be on the lintel.

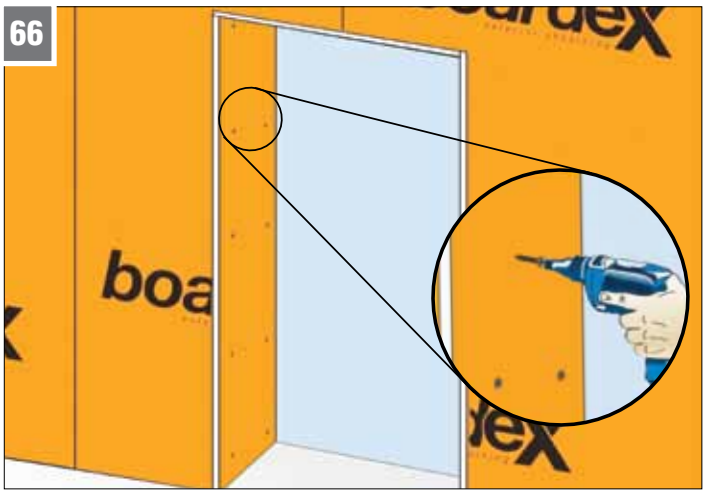
65



Doorway detail

Suitable sizes of **BoardeX** are cut and placed on the profiles in the door cavity and the edges of the doors are closed.

66



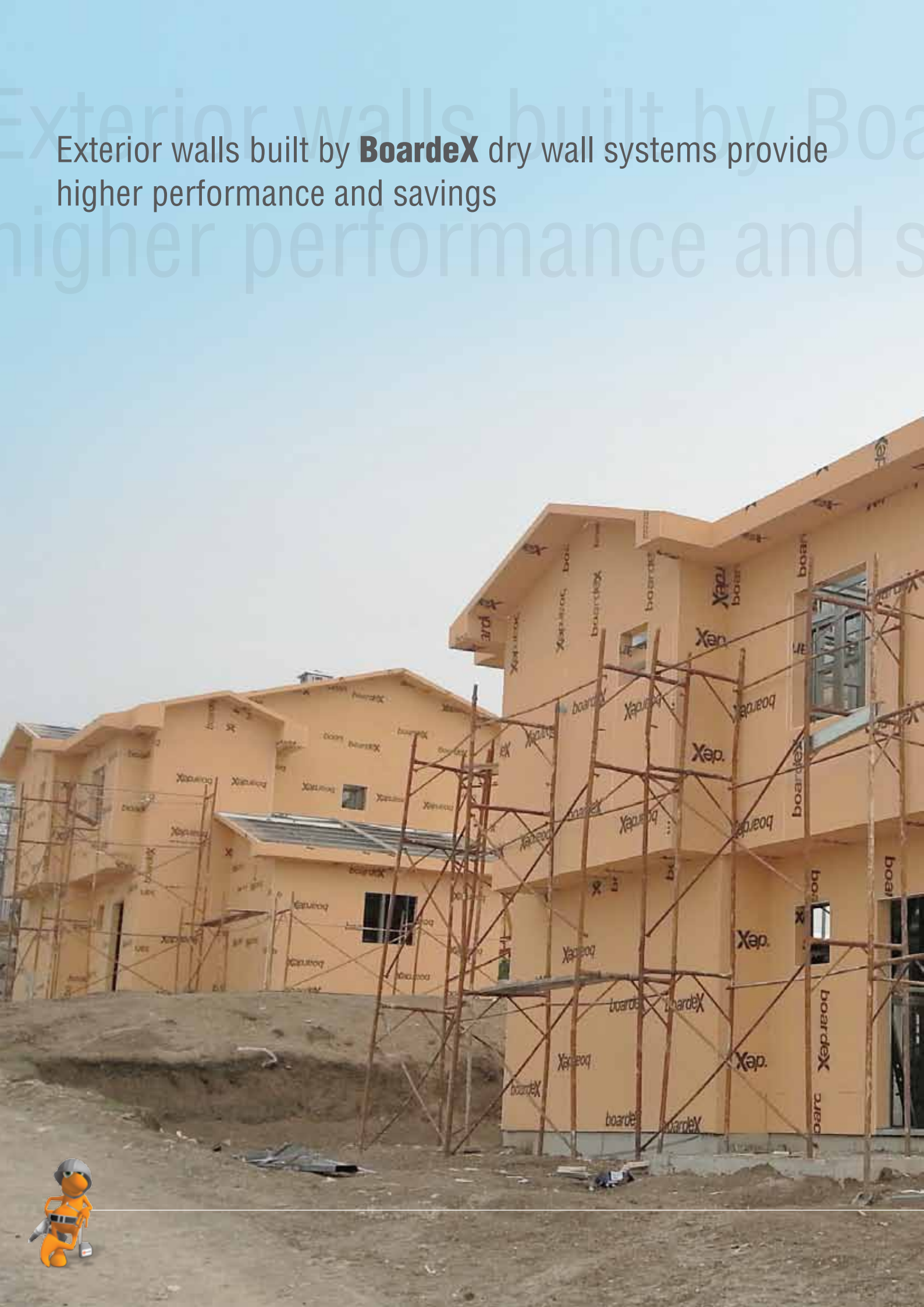
Doorway detail

The **BoardeX** pieces are fixed with Drillex screws and the window is made ready to fit the window assembly.

Frequently Asked Questions on Omega Exterior Wall System

QUESTION	ANSWER
What is the maximum height of a facade to apply Omega exterior wall system?	In the calculations conducted in accordance with the TS 498 standard, it is applied for a load-bearing system for 130 km/h wind speed at a maximum 20 m height facade.
What's the difference between a DCC profile and a DC profile?	**DCC** profiles are galvanized and used in the outward facing profile line with a flange width of 45x30 mm and at a wall thickness of 0.9 mm, and at the weight of 275 gr / m^2. **DC** is a type of galvanized profile, used in the second profile line, with a flange width of 53x42 mm and at a wall thickness of 0.6 mm and at a weight of 100 gr / m^2.
Why are the flange heights of the DCC and DC profiles different?	While the omega profiles of two profile lines are fixed onto each other, the profiles have different flange heights so that the screws can be fastened easily.
What is the difference between an Omega exterior system and a double framed system?	While the exterior wall is being constructed by using the **omega exterior wall system,** a scaffolding is not needed at the beginning. In the case of double frame system, the construction starts from outside the carcass.
Is there a need for omega profile in the omega exterior wall system?	In order to meet the loads on the surface, the first profile line should be connected to the second profile line by an omega profile.
Can fixing be carried out by using plasterboard screws in the Omega exterior wall system?	Plasterboard screws should not be used because they are not resistant to corrosion. Corrosion-resistant BoardeX self-drilling screws are used in exterior facades
Is it possible to carry out wet applications such as the screed or ceramic application after BoardeX is screwed on the interior?	Yes, it can be done. **BoardeX** is not affected by this type of application.
Why is plasterboard applied on the BoardeX surface facing interior?	In order to increase the fire, sound, mechanical and acoustic performance of the exterior wall, one layer of **COREX** is applied on **BoardeX** on the inner surface.
What should be used to fix the insulation material (EPS, XPS)?	The insulation material is fixed onto the 60 cm axle profile by using a self-drilling Thermal insulation dowel.

Exterior walls built by **BoardeX** dry wall systems provide higher performance and savings



boardeX
exterior sheathing

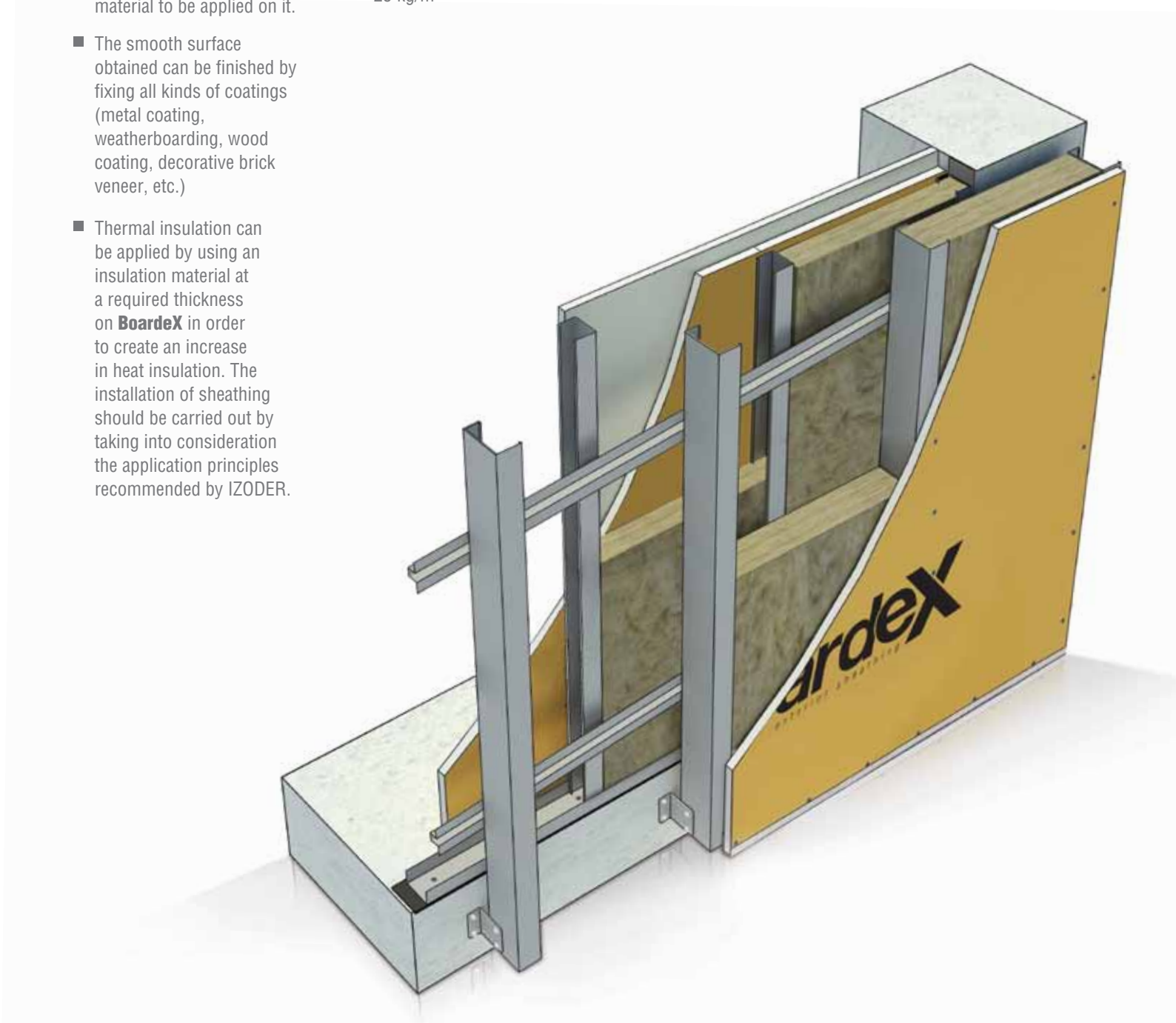
ardex dry wall systems pr

savings

www.boardeX.com.tr

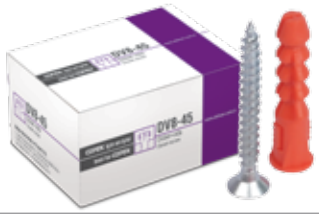
CEKET OMEGA EXTERIOR WALL SYSTEM

- **Ceket Omega** exterior wall system is a system used in the design of the external walls with quality insulation.
- It assists, to some extent, with the correction of the plumbness and any misalignment caused by workmanship errors in the reinforced concrete frame of the building.
- **Ceket Omega** exterior wall system creates a smooth surface for any coating material to be applied on it.
- The smooth surface obtained can be finished by fixing all kinds of coatings (metal coating, weatherboarding, wood coating, decorative brick veneer, etc.)
- Thermal insulation can be applied by using an insulation material at a required thickness on **BoardeX** in order to create an increase in heat insulation. The installation of sheathing should be carried out by taking into consideration the application principles recommended by IZODER.
- The usage area of buildings for which external walls are manufactured by **Ceket Omega** exterior wall system increases. **More floor area is gained.** In this system, only an area of 12,5 cm is occupied in the carcass.
- **Ceket Omega** exterior wall system provides perfect finishing surface for all types of ventilated walls. The ventilated facade system to be applied on the surface should weigh max 25 kg/m^2
- **Ceket Omega** exterior wall system is designed to withstand the wind load of 150 km/h at a building higher than 100 m depending on the selected profile axle spacing.

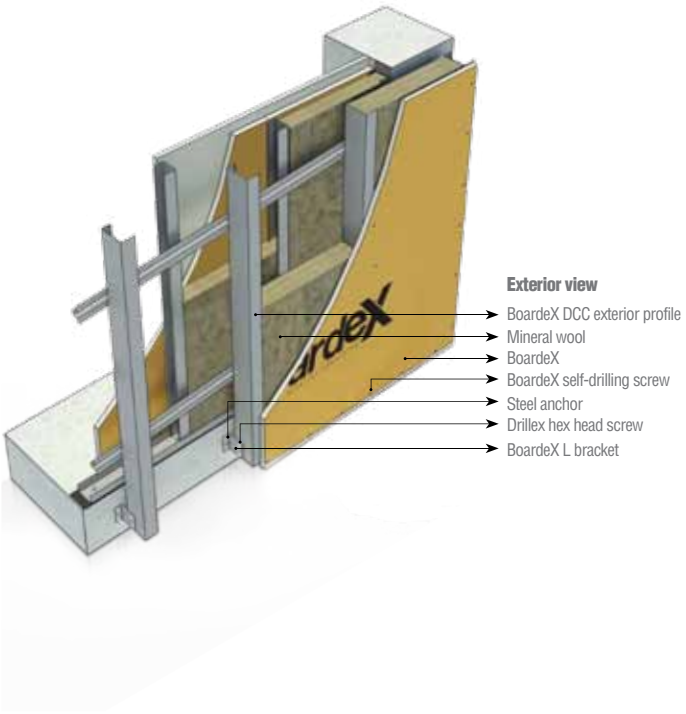


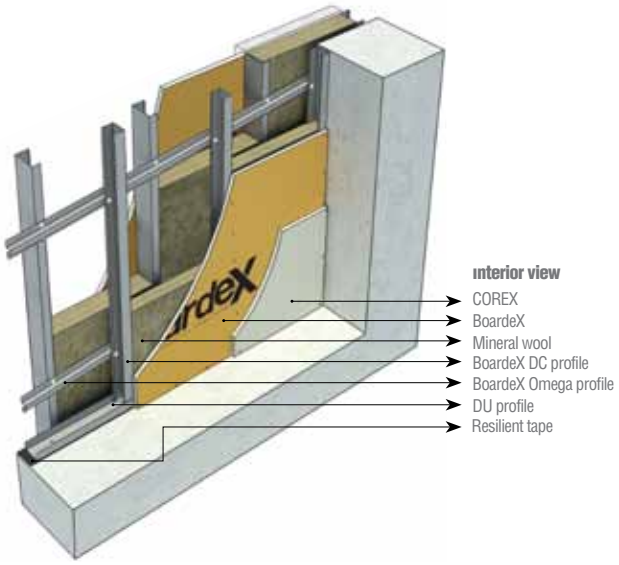
Ceket Omega Exterior Wall System Auxiliary Materials

DU 50-75-100 profile 38x38 mm		It is used in the **Ceket Omega exterior wall system** to form the exterior drywall system by fixing it onto the floor and ceiling.
BoardeX DCC 50-75-100 exterior profile 45x30 mm		**BoardeX DCC** is the profile with 0.9 mm wall thickness and 45x30 mm flange height to be used in the construction of the **Omega** exterior wall system.
BoardeX DC 50-75-100 profile 53x42 mm		**BoardeX DC** is a 275 gr/m² galvanized profile with 0.6 mm wall thickness and 53x42 mm flange height to be used in the construction of the **Omega** exterior wall system.
BoardeX Omega profile 26x25x26 mm		This is the galvanised profile with a thickness of 0.5 mm and a weight of 100 gr/m², which enables the system to work in an integrated form by securing two **DC** profiles to each other.
BoardeX L bracket 50-75-100-125-150		It is a 2 mm thick bracket made out of special steel with low heat conduction coefficient, which brings the wall into the correct plumbness and makes it possible for thicker insulation material to be used.
Resilient Tape 50-75-100		It is a self-adhesive resilient tape adhered to the bottom of the **DU**, and the **DC** profiles at the corners.
Drillex hex head screw		A special screw to fix CT facade profiles onto brackets and to fix two pieces of metal onto each other.
BoardeX self-tapping screw		A specially designed corrosion-resistant screw used for fixing exterior wall boards onto profiles with a wall thickness of up to 0.7 mm.

BoardeX **self-drilling screw**		It is a specially designed corrosion resistant screw to fix exterior boards onto profiles with a wall thickness of up to 2 mm.
Self Tapping Screw		It is the screw used to fix the plasterboards on the interior side onto the profiles up to 0.7 mm wall thickness through **BoardeX**.
Dowel-Screw		Plastic dowels and washer-head screw set used for fixing the galvanized profiles onto the floor in the construction of the exterior wall. It consists of 8 mm plastic dowel and 45 mm washer-head screw.
Begginning Profile		It is a PVC based profile to isolate **BoardeX** from the floor.
Mineral Wool **Glass Wool or Rock Wool**		It is used in the desired thickness to increase the heat - sound and fire insulation.

Material Analysis





Material Analysis

Material Name	Consumption ✕=60 cm	Consumption ✕=40 cm
BoardeX	2,10 m²	
COREX	1,05 m²	
BoardeX DC 75/100 profile (53x42; 0.6 mm; Z100)	2,10 mt	2,90 mt
BoardeX DCC 75/100 exterior facade profile (45x30; 0.9 mm; Z275)	2,10 mt	2,90 mt
DU 75/100 profile (38x38; 0.6 mm; Z100)	0,84 mt	
BoardeX omega profile (27x25; 0.5mm; Z100)	1,60 mt	
BoardeX L 75/100/125/150 bracket (30x75/100/125; 2 mm;/150;3 mm)	1,70 mt	2,4 pcs
BoardeX self-drilling screw(with 20 cm intervals)	18 pcs	24 pcs
BoardeX self-tapping screw (with 40 cm intervals)	13 pcs	14 pcs
Drillex hex head screw	9 pcs	13 pcs
Self-tapping screw 38 (with 30 cm intervals)	13 pcs	16 pcs
Dowel-screw	3 pcs	
Steel anchor	3,40 pcs	4,8 pcs
Resilient tape	1,40 mt	
Joint tape or paper tape	1,80 mt	
DERZTEK joint grouting plaster	0,40 kg	
Mineral wool interior (low density)	1,05 m²	
Mineral wool exterior (low density)	1,05 m²	
Starter Track	Varies according to the base perimeter	

✕60, states that the DC and DCC profile axle spacings are 60 cm.

!!! The area of the wall for which the material analysis is conducted has been calculated to be 4mx2,5m = 10m², and 5% tolerance has been included in the calculations.

Note: For more information, please refer to “BoardeX system book” or www.boardeX.com.tr website

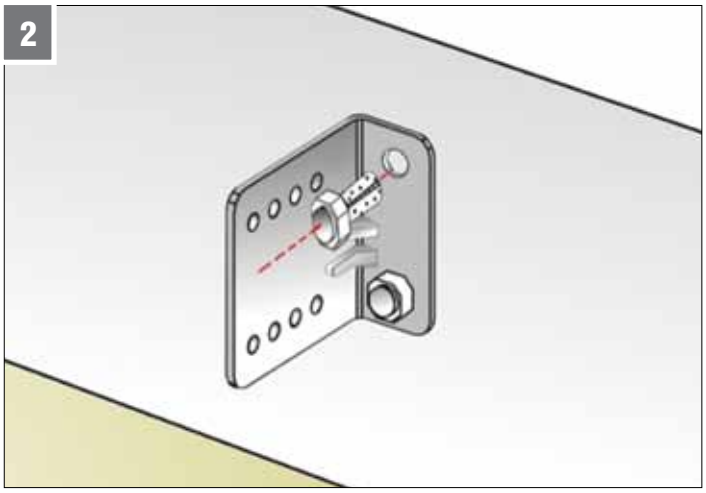
Ceket Omega Exterior Wall System - Application

1

Ceket Omega Exterior Wall System application area

Ceket Omega system assists, to some extent, with the correction of the plumbness and any misalignment caused by workmanship errors in the reinforced concrete frame of the building.

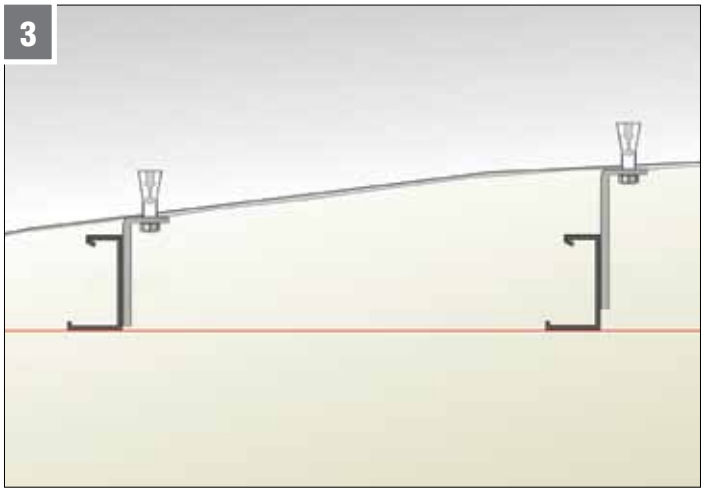
2



Screwing L brackets

The L brackets are fixed onto the reinforced concrete beams from two points by using steel anchors.

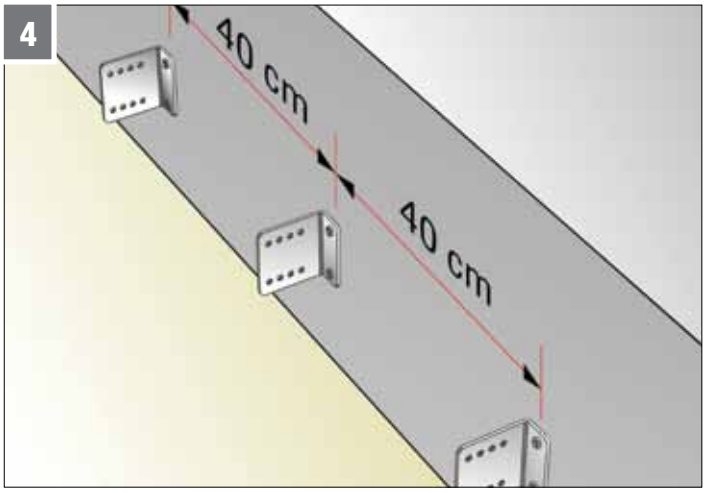
3



Screwing L brackets

In order to correct any level problems in the reinforced concrete system; L brackets of appropriate length should be selected on the facade by using a guiding string.

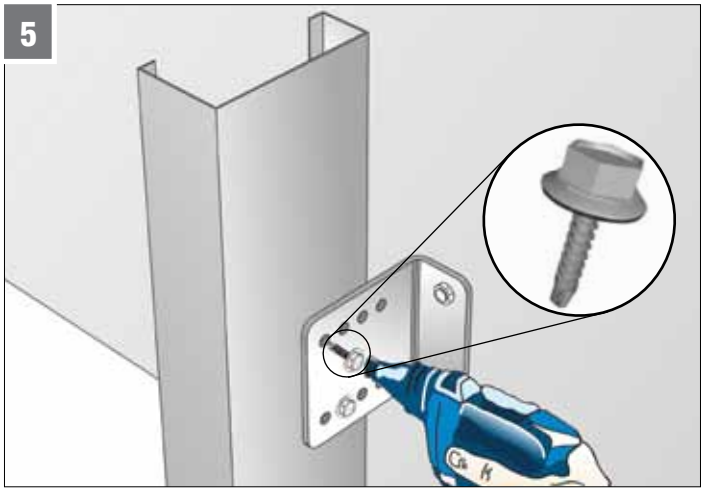
4



Screwing L brackets

L brackets are fixed onto the reinforced concrete beams from two points with steel dowels at a spacing of 40 cm (or 60 cm) horizontally, depending on the project.

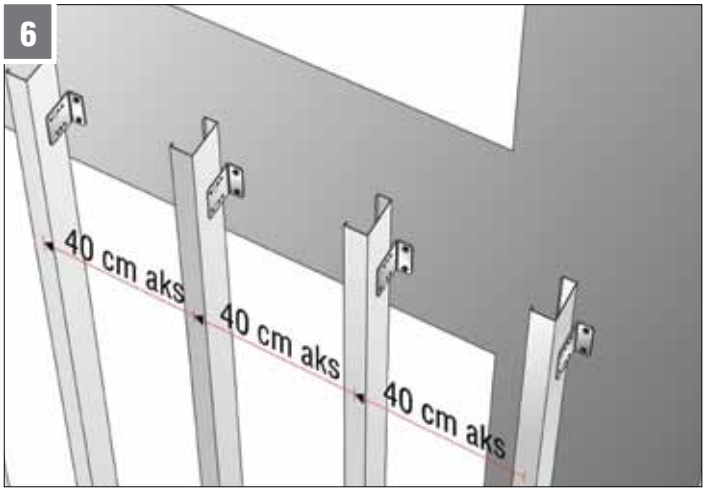
5



Fixing DCC profiles

The **DCC** profile is secured onto the L brackets by Drillex hex head screws from two points, by levelling its long flange facing outside.

6

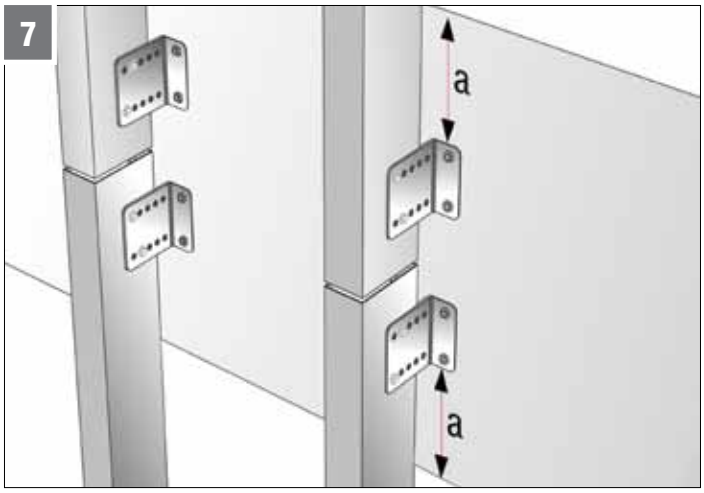


Fixing DCC profiles

Depending on the project, the **DCC** profiles are fixed onto L brackets at 40 cm (or 60 cm) intervals.

Ceket Omega Exterior Wall System - Application

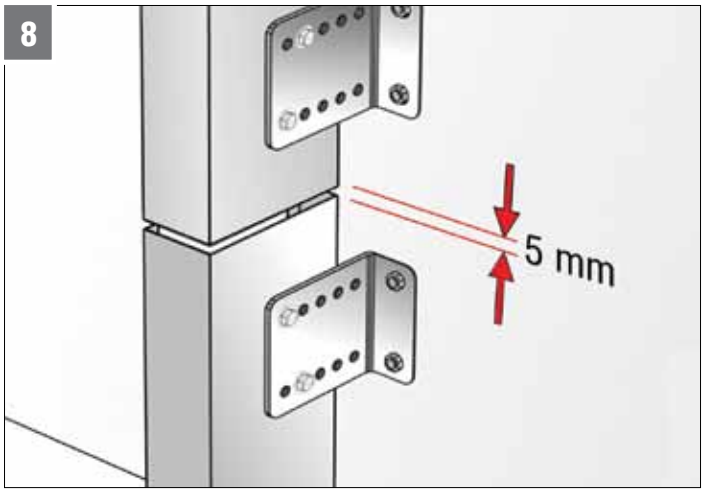
7



Fixing DCC profiles

L brackets are to be fixed in equal distances according to the thickness of the concrete. This distance (a) should not be less than 3 cm

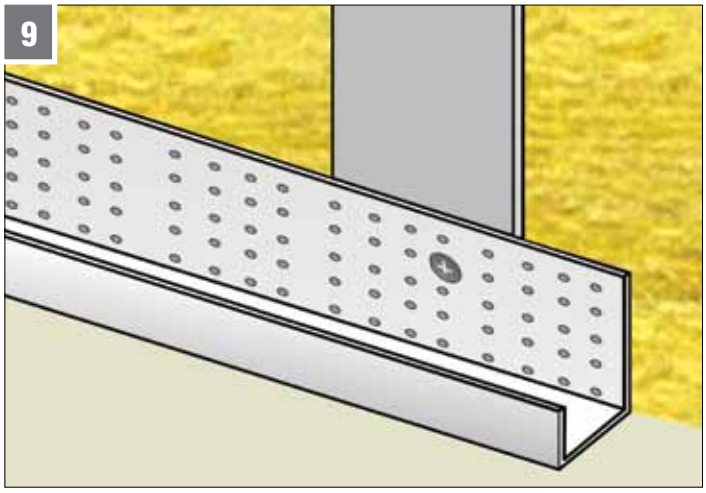
8



Fixing DCC profiles

A gap of at least 5 mm must be left between two successive **DCC** profiles.

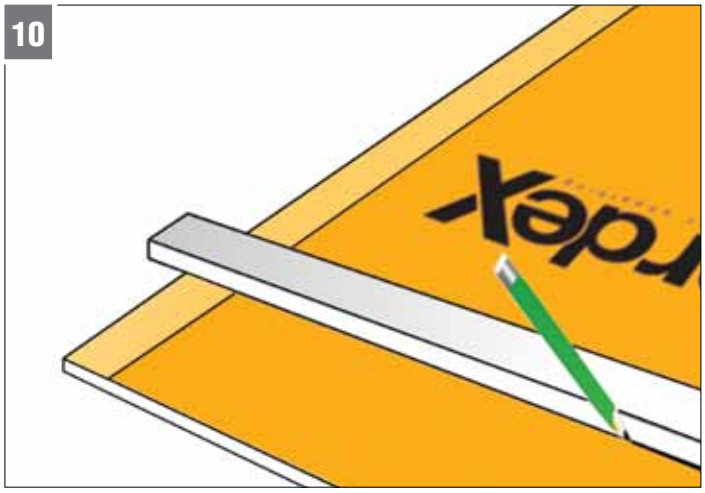
9



Placement of the starter track

In order to cut the contact of **BoardeX** with the floor, the PVC-based starter track is fastened onto the **DCC** profile along the wall surface.

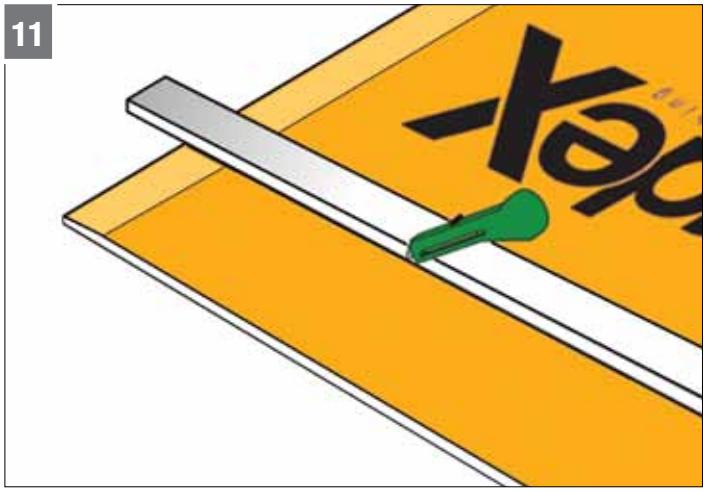
10



Cutting BoardeX

The **BoardeX** to be cut is marked on the surface with a pen.

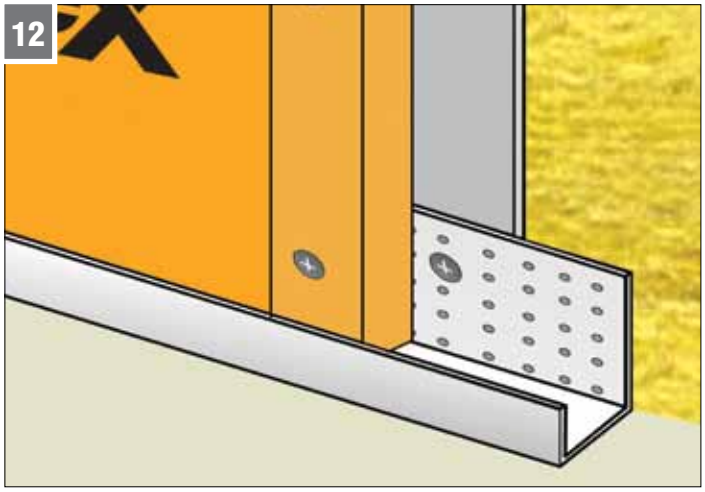
11



Cutting BoardeX

BoardeX is cut with the help of a gauge from the marked place using a carpet knife. In order to cut **BoardeX**, there is no need for spiral, jet stone, or any other dust emitting cutting tools.

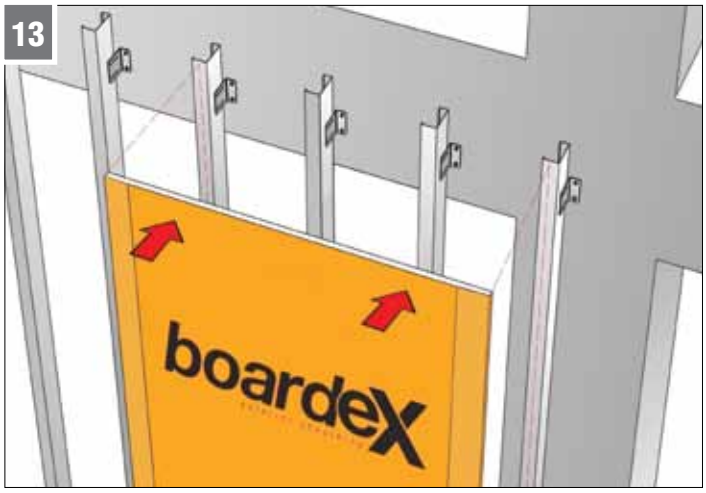
12



Fixing BoardeX

Inside the starter track previously fixed onto the **DCC** profiles, **BoardeX** is inserted and screwed.

13



Fixing BoardeX

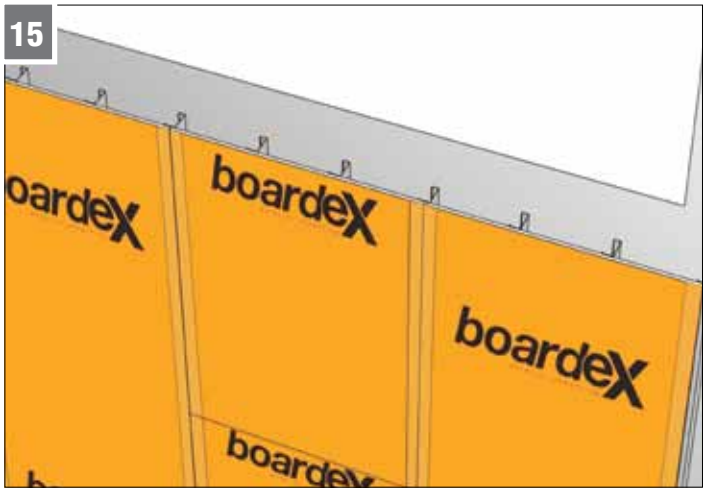
BoardeX is fixed onto **DCC** profiles outside the carcass.

14

Fixing BoardeX

BoardeX self-drilling screwshould be used for fixing. The BoardeX self-drilling screwis screwed with 20 cm and 40 cm (or 60 cm) vertically and horizontally, respectively.

15



Fixing BoardeX

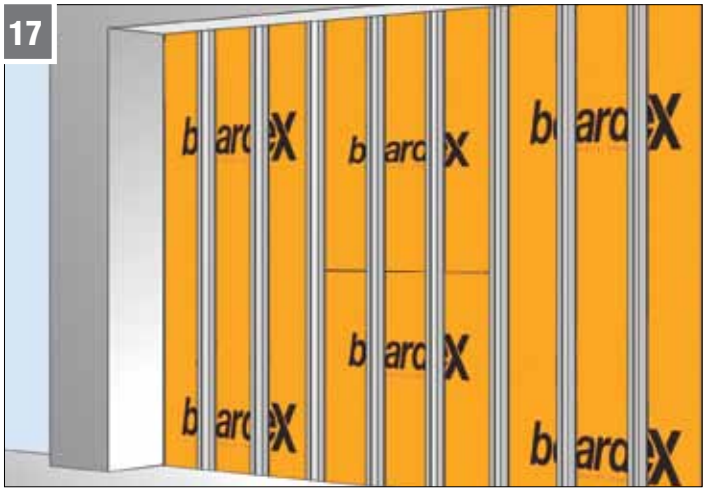
The joints of **BoardeX** are made in an interlaid pattern and the coating of the surface is completed.

16

The surface can be exposed to the atmosphere for up to 12 months

The surface of **BoardeX** can be left outdoors being exposed to atmospheric conditions for up to 12 months without any coating on it.

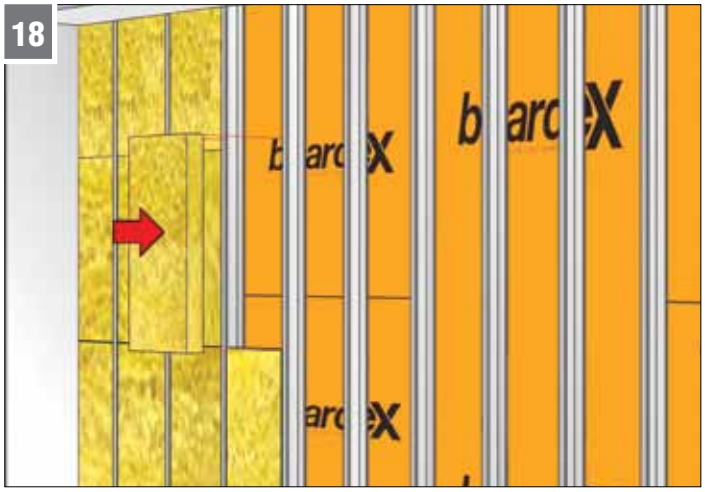
17



Layout of mineral wool

Folloflange the fixing of **BoardeX** outside, the work inside the building commences.

18

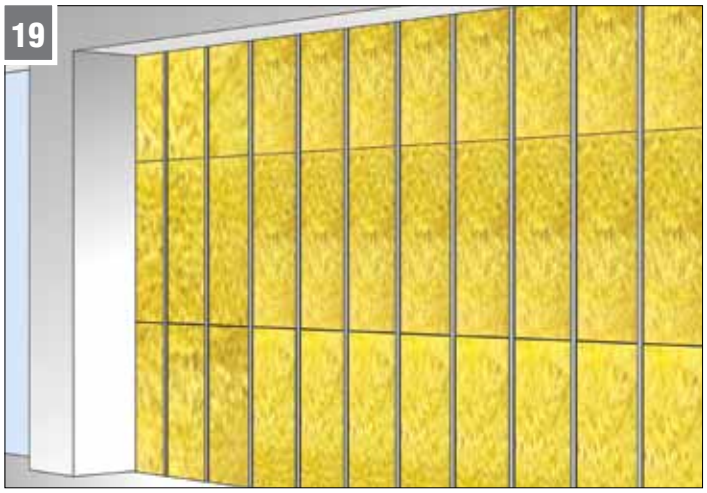


Layout of mineral wool

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

Ceket Omega Exterior Wall System - Application

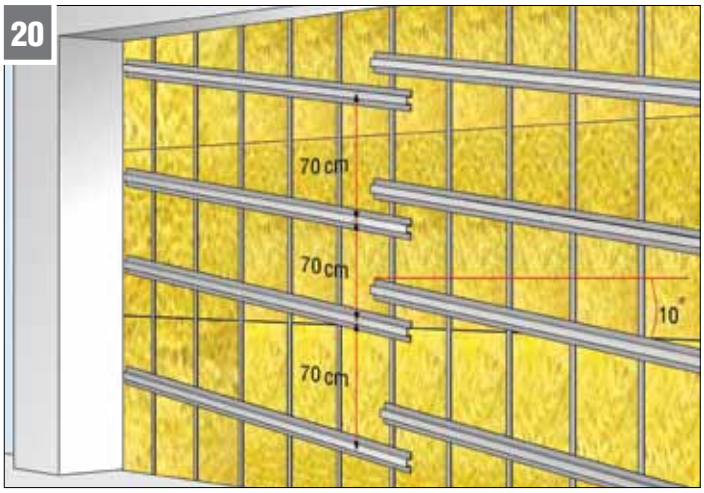
19



Layout of mineral wool

To ensure a homogeneous thermal insulation all throughout the wall, mineral wools are placed carefully to ensure continuity in thermal insulation, and with no gaps between the profiles and covering the entire wall surface.

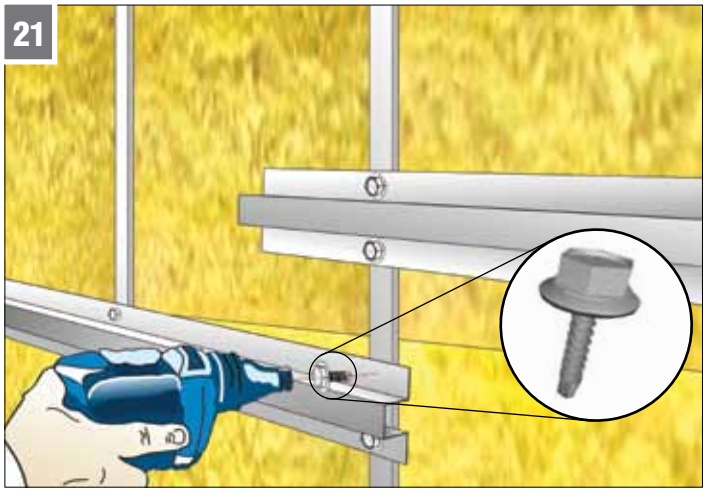
20



Omega profile placement

Omega profiles should be placed at a 10-degree angle, with a maximum spacing of 70 cm vertically.

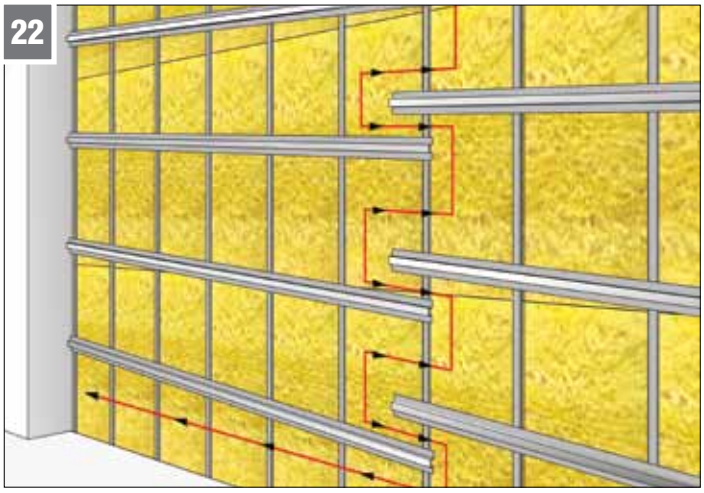
21



Fixing omega profiles

The omega profiles are fixed onto the flange of the wall C profiles by means of the Drillex hex head screws at two points to secure the **DCC** profiles outside the carcass to the Wall C profiles in the carcass.

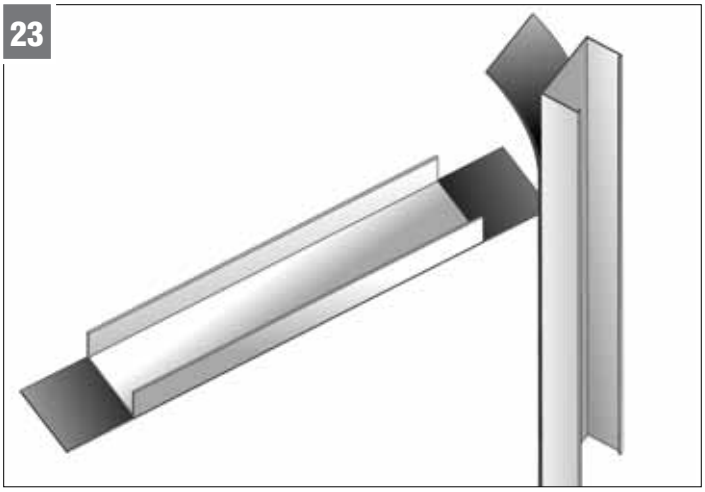
22



Omega profile placement

The space left between the omega profiles will also provide the air flow through the omega space.

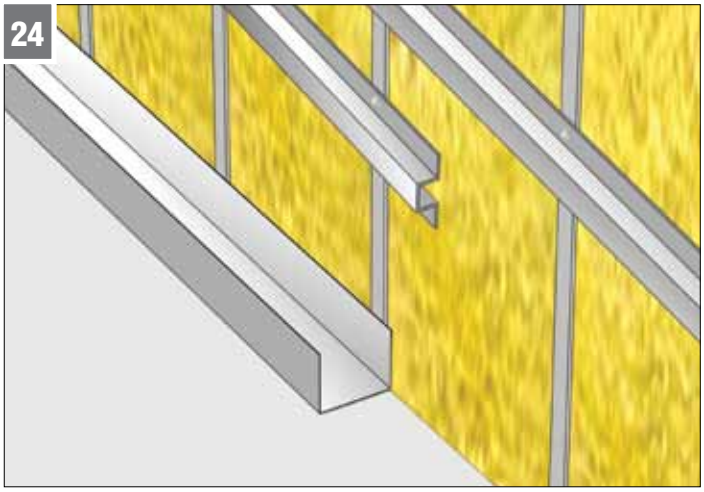
23



Preparation of resilient tape

A self-adhesive resilient tape is adhered to the bottom of the **DU**, and the **DC** profiles at the corners at an appropriate width.

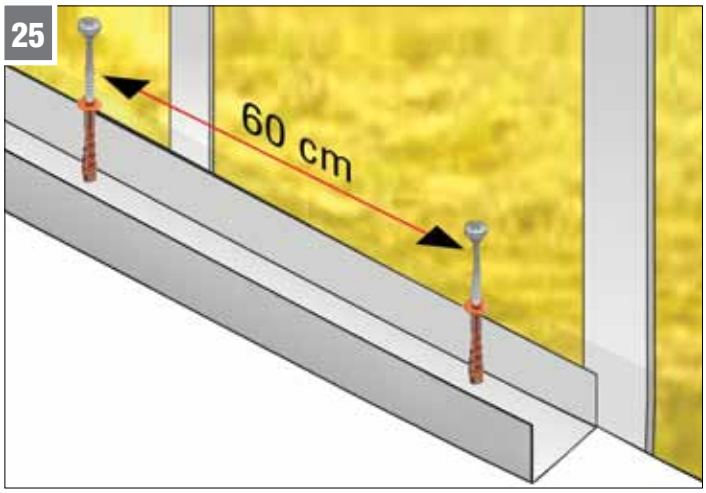
24



Screwing Profiles

A gap of 2.5 cm is left between the Wall U profiles under which resilient tape has been adhered to and the **DCC** profile outside the carcass.

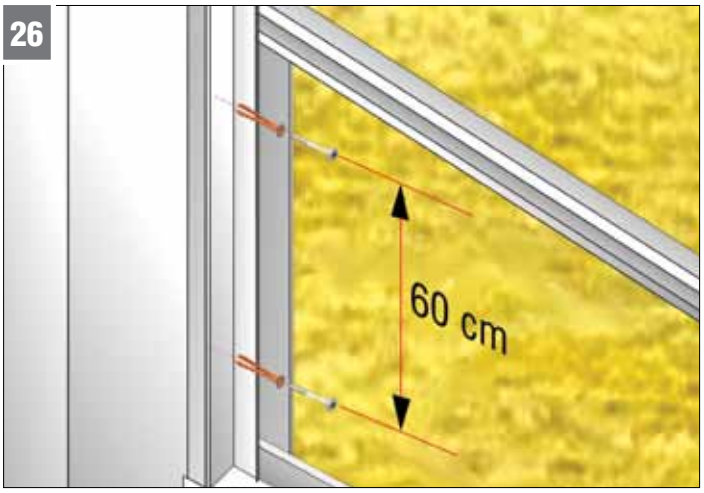
25



Screwing Profiles

The **DU** profiles are fixed onto the floor and the ceiling using dowel screws with 60 cm axle spacing.

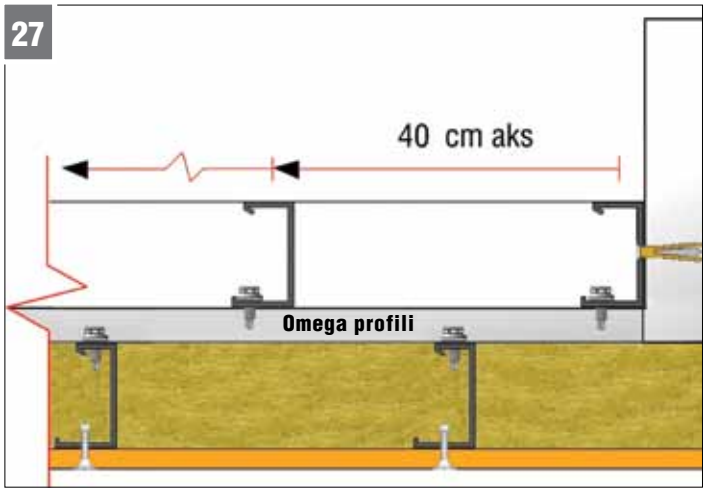
26



Screwing Profiles

The first **DCC** profiles whose bottom was affixed with resilient tape is fixed onto the existing column using a dowel-screw with a maximum of 60 cm spacing, with the long flange coinciding with the omega profile.

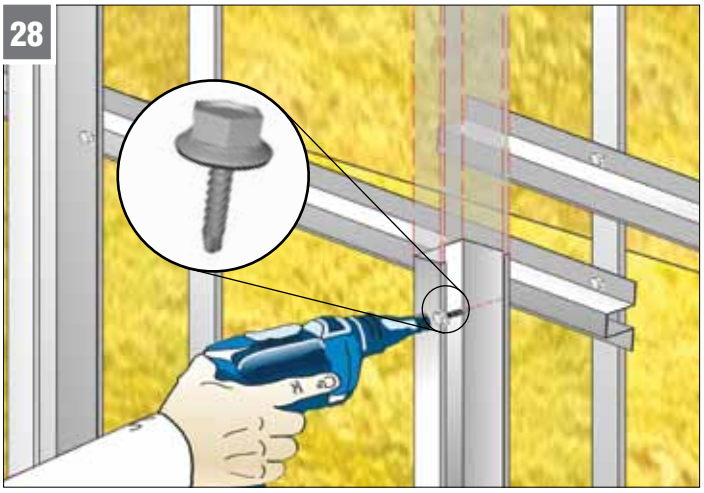
27



Screwing Profiles

The wall C profiles should be with 40 cm (or 60 cm) axle spacing.

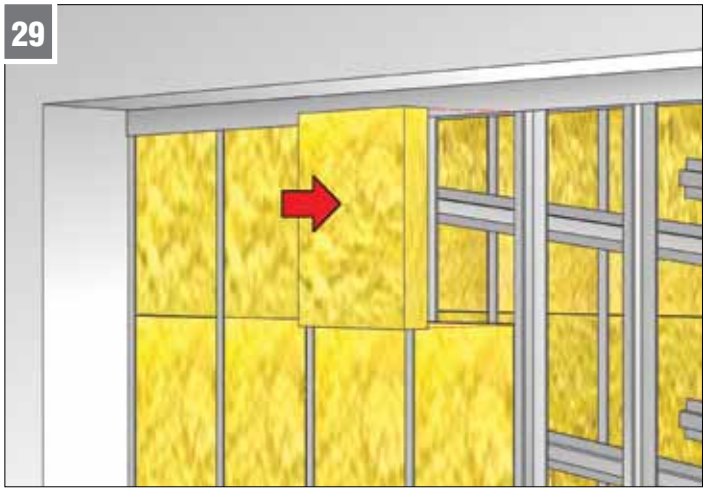
28



Fixing DC profiles

The wall C profiles are fixed onto the omega profiles from the inside of their longer flanges by using Drillex hex head screws only at one point.

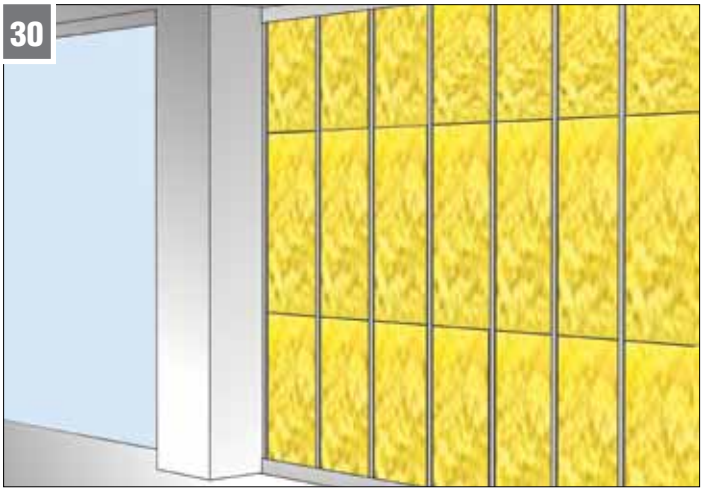
29



Placement of mineral wool

Low-density mineral wool is placed between the second row of profiles to increase the thermal insulation.

30



Placement of mineral wool

To ensure a homogeneous thermal insulation all throughout the wall, mineral wools are placed carefully to ensure continuity in thermal insulation, and with no gaps between the profiles and covering the entire wall surface.

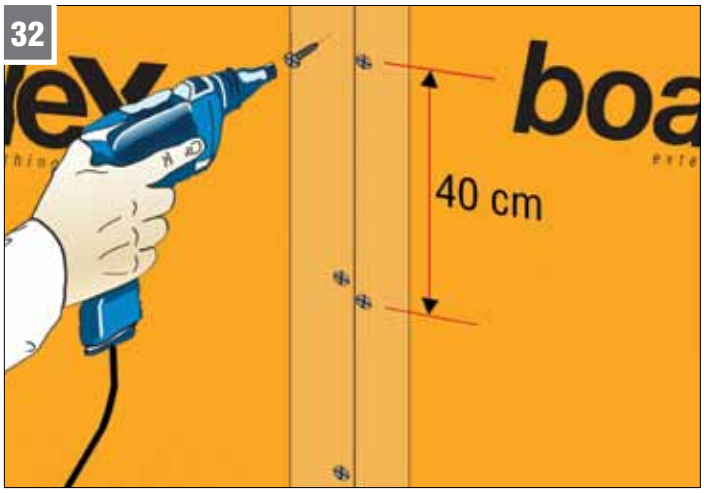
Ceket Omega Exterior Wall System - Application

31

Screwing BoardeX

The **BoardeX** to be applied to the inner surface of the wall must be applied in an interlaid pattern so that it does not coincide with the **BoardeX** joints on the outer surface.

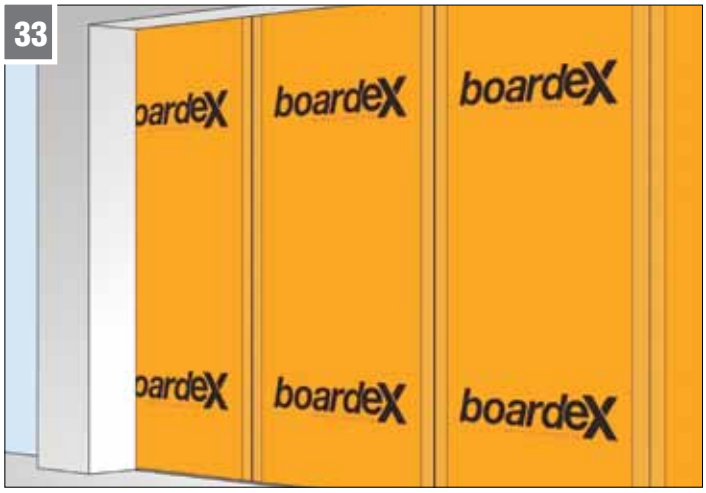
32



Screwing BoardeX

The **BoardeX** on the inside surface is fixed onto the profiles by BoardeX self-tapping screws with maximum 40 cm intervals.

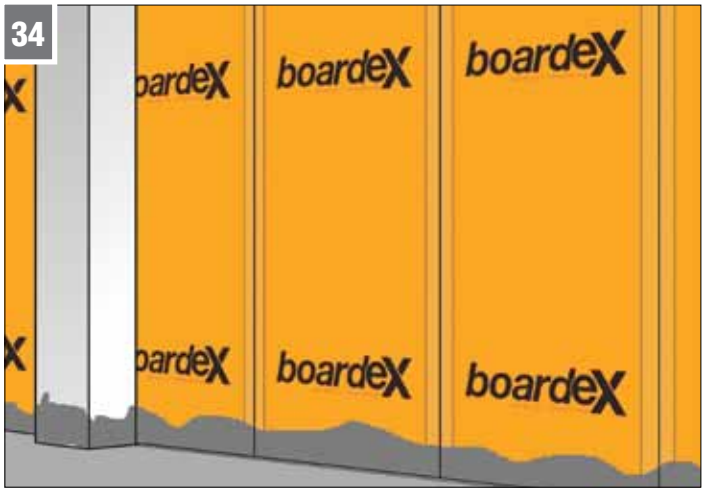
33



Closure of the interior facade surface

The application continues with a full-length **BoardeX** and the **BoardeX** is fixed onto the profiles. Thus, the **BoardeX** joints on the entire wall are in an interlaid pattern.

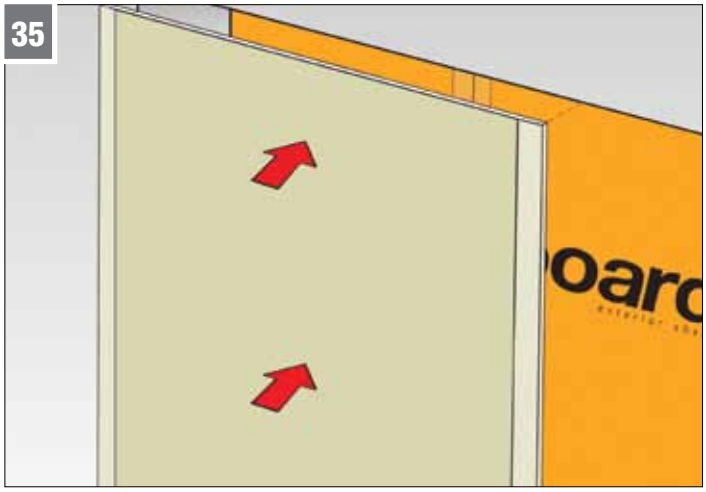
34



Practice of wet applications

After fixing the **BoardeX** in the inner surface, all wet applications such as screed and ceramic applications in the building can be completed.

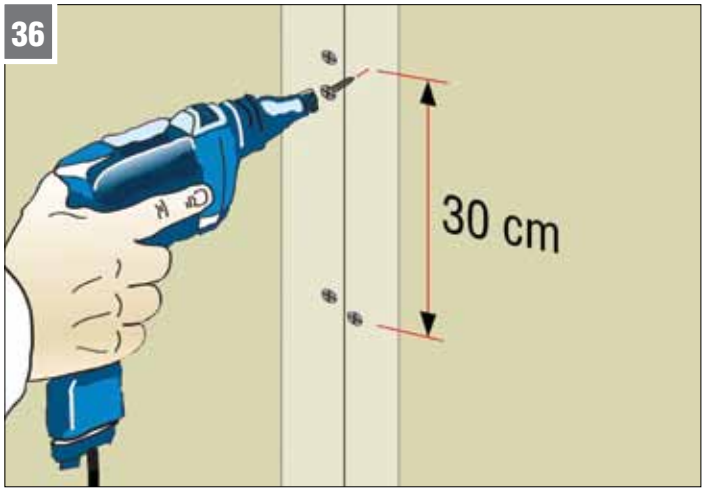
35



COREX application

After completing the wet applications on the interior, **COREX** application can be started. The **COREX** joints should be applied in such a way that they do not coincide with the joints of the underneath **BoardeX** layer, that is, applying in an interlaid pattern.

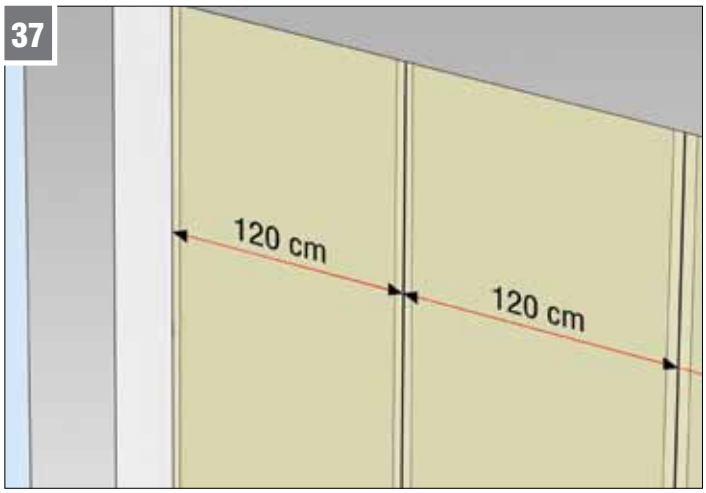
36



COREX screflange

COREX is fixed with self-tapping screws 38 with a maximum 30 cm vertical and 40 cm (or 60 cm) horizontal intervals.

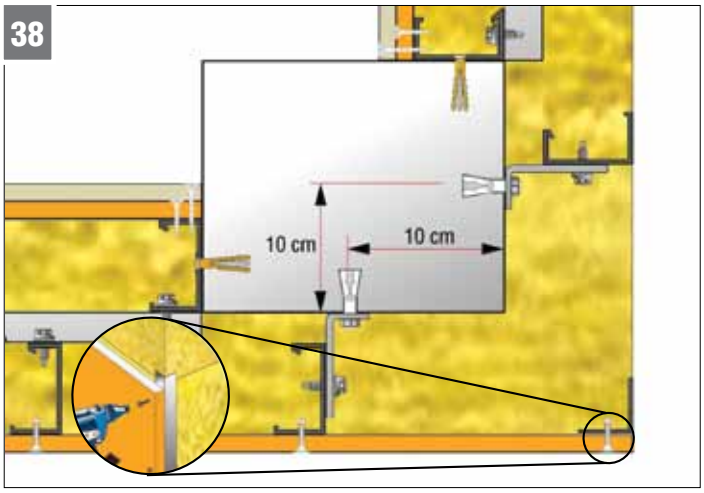
37



COREX application

The application continues with a full-length plasterboard and these plasterboards are fixed onto the profiles. Thus, the **BoardeX** joints on the entire wall are in an interlaid pattern.

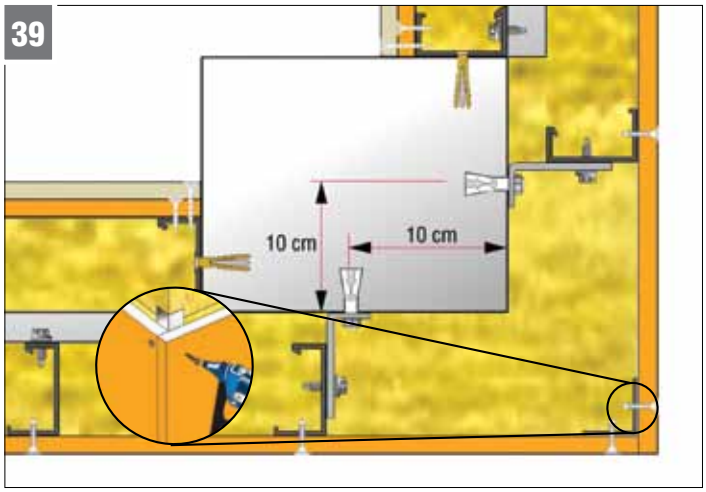
38



Combining exterior corners

The bracket corresponding the exterior corner should be at a maximum distance of 10 cm from the corner. Where an internal corner is to be formed, **BoardeX** is fixed onto a DKC corner profile.

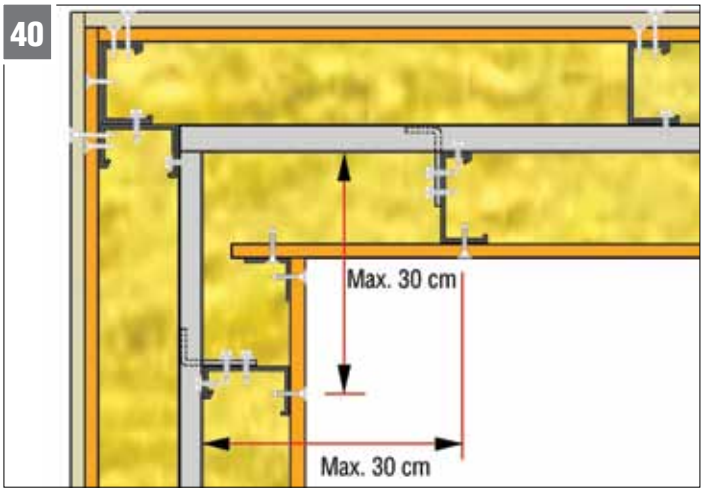
39



Combining exterior corners

Then the formation of the exterior corner is completed by fixing the **BoardeX** onto DKC corner profile from the other part of the exterior corner.

40



Combining interior corners

The bracket corresponding the interior corner should be at a maximum distance of 30 cm from the corner. Where an interior corner is to be formed, a DKC corner profile is fixed onto the **BoardeX**. Then the formation of the corner is completed by fixing the **BoardeX** onto DKC corner profile from the other part of the interior corner.

Thermal insulation application in Ceket Omega system

41

Thermal insulation application

Before the Thermal insulation application, PROBASE fix, a cement based adhesive mortar, is applied on the surface with the help of a notched trowel.

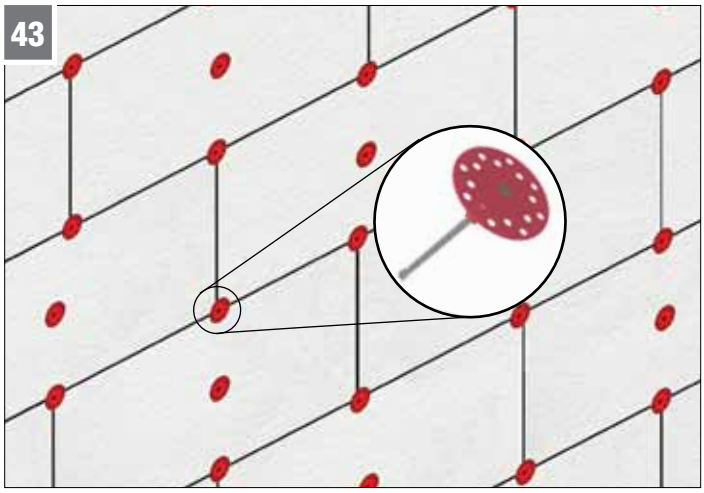
Ceket Omega Exterior Wall System - Application

42

Thermal insulation application

The insulation material (EPS, XPS or rock wool) selected depending on the project is affixed on the **BoardeX** surface.

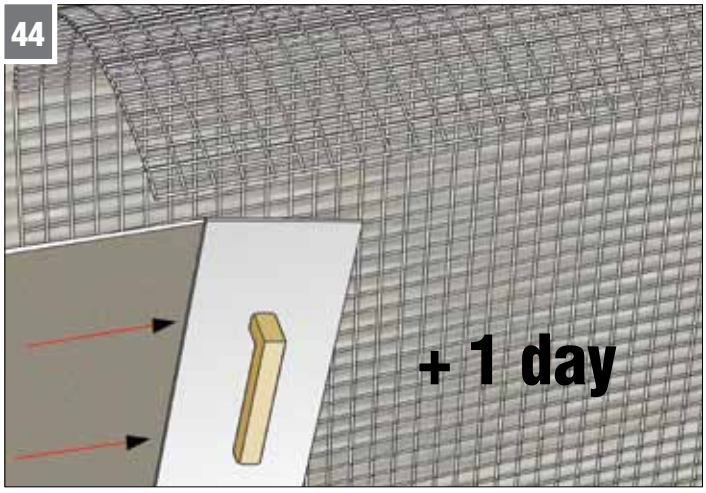
43



Fixing the insulation material

The insulation material is fixed onto the profiles with self-drilling tipped, parachute head dowels at the locations corresponding to the profiles.

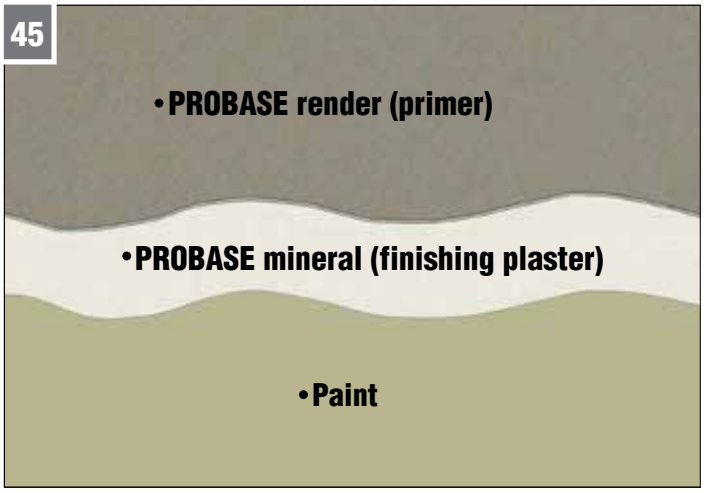
44



Thermal insulation application

After the base plaster is applied onto the entire surface, the alkali-resistant plaster mesh with a weight of 160gr / m^2 is slightly buried into the base plaster surface and the surface is made ready for finishing plaster to be carried out after 1 day.

45



Completion of surface

After the application of base plaster and mineral plaster (finishing plaster) on the surface of the insulating material used in the Thermal insulation, the surface is completed by painting.

Coating different types of materials on boardeX exterior sheathing surface

46

Joint filling

If the **BoardeX** surface is to be coated with another material, the joints are filled with an appropriate sealant resistant to water and moisture.

47

Metal cladding material

BoardeX surface can be finished with metal cladding materials. For this application, the load-bearing system of the cladding material should be fixed onto the system profiles over **BoardeX**.

48

PVC Siding application

The **BoardeX** surface can be completed with the PVC Siding material. For this application, the PVC Siding material should be fixed onto the system profiles over **BoardeX**.

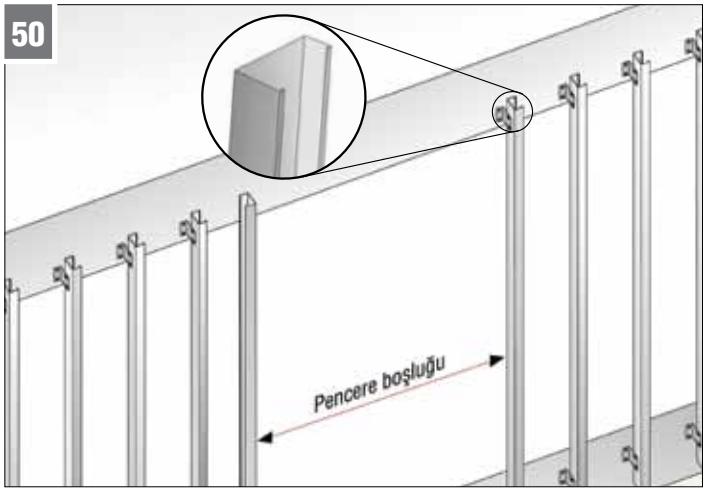
49

Wood cladding

The **BoardeX** surface can be completed by installing wood or cement based decorative cladding materials. For this application, the cladding material should be fixed onto the system profiles over **BoardeX**

Window application details

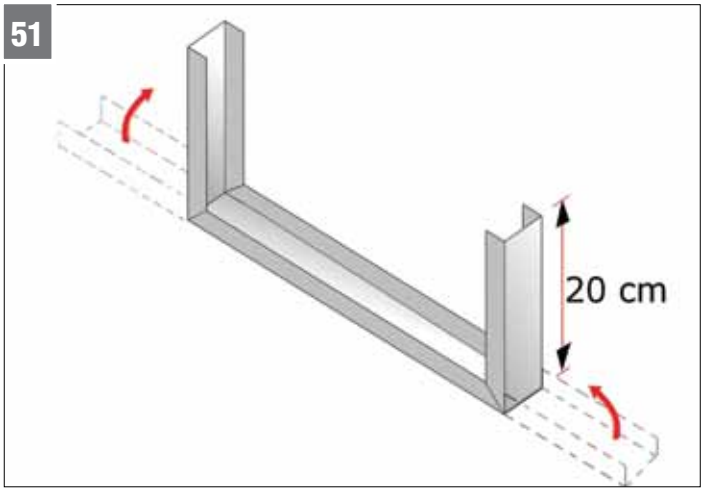
50



Window application details

Outside the carcass, **DCC** profiles are used to fix the window frame.

51

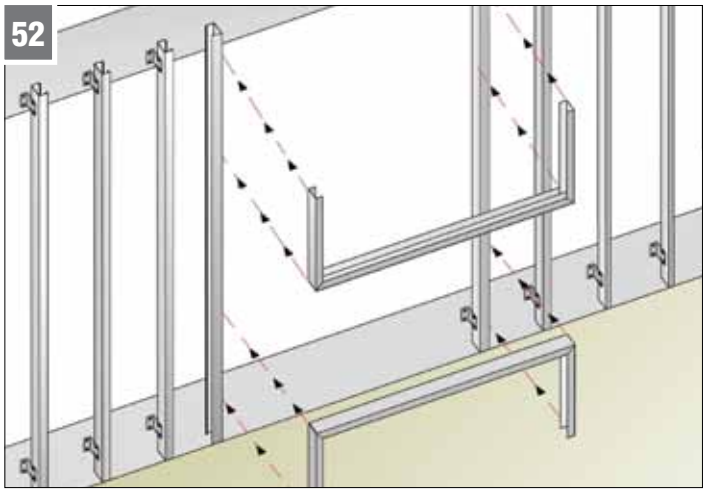


Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

Ceket Omega Exterior Wall System - Application

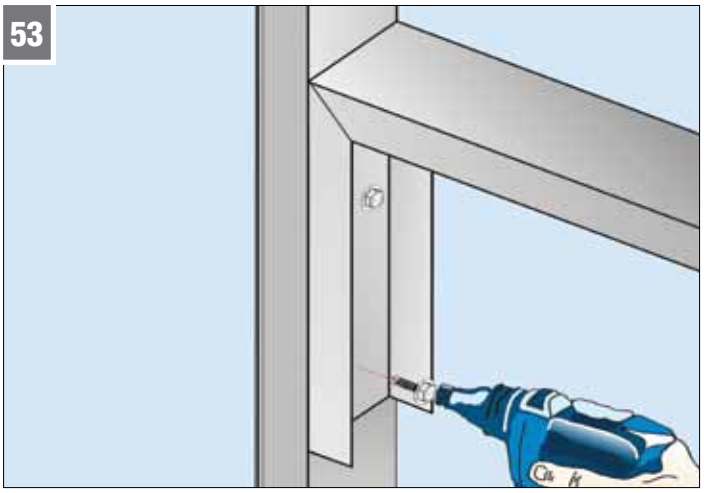
52



Placement of the lintel profile

The lintel which is determined in accordance with the window size is placed on the above and underneath sections.

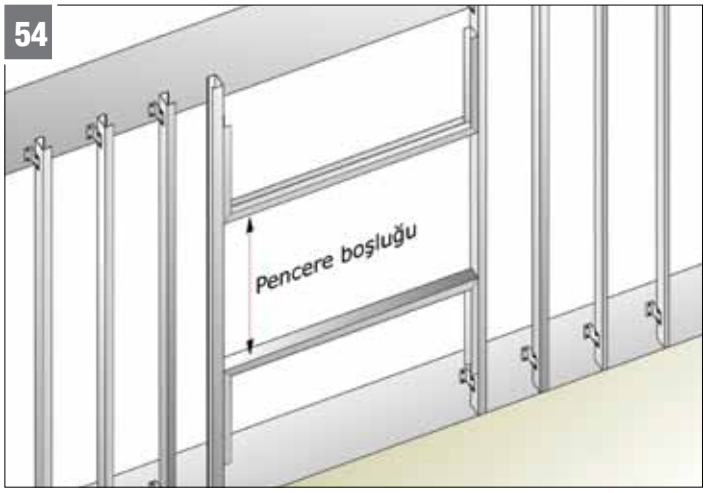
53



Placement of the lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hex head screws from at least two points.

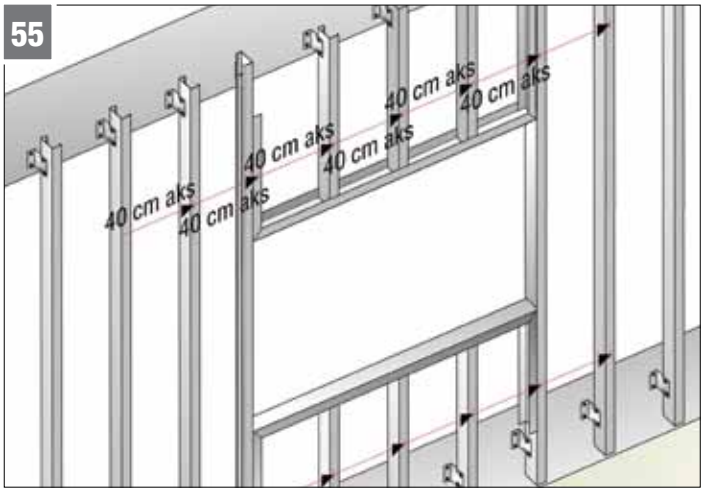
54



Window application details

This completes the metal frame in the cavity where the window will be installed.

55



Window application details

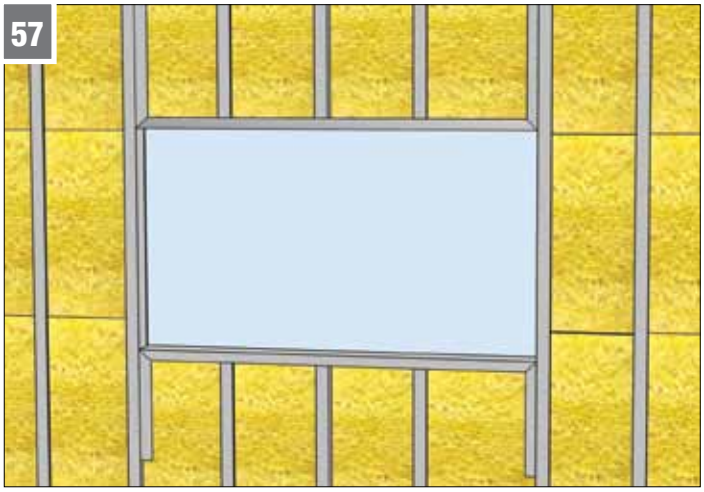
Additional **DCC** profiles should be installed inside the lintel as required to allow the profiles to continue at a 40 cm axle spacing depending on the project.

56

Window application details

The **BoardeX** joints in the window cavities should be fixed onto the profiles above or below the lintel.

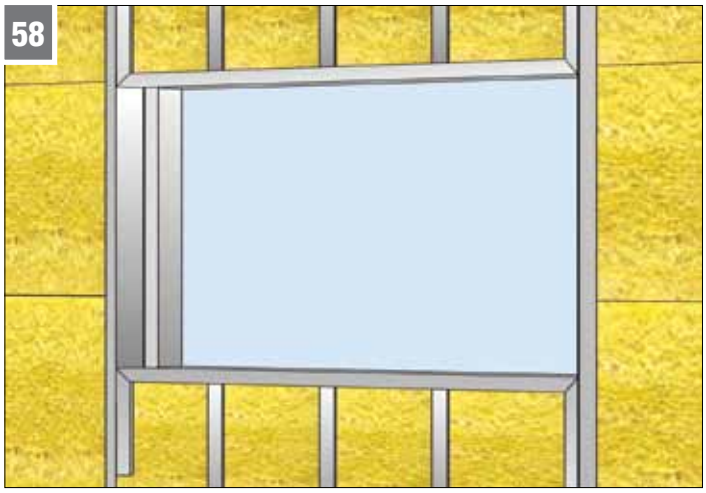
57



Placement of mineral wool

Low-density mineral wool is placed between the first row of profiles to increase the thermal insulation.

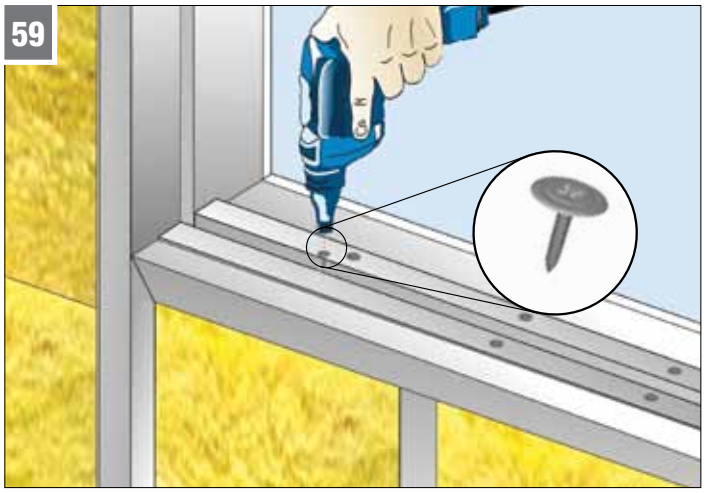
58



Completion of second row profile line

As described in the previous steps, the second-row profile line is completed and mineral wool is placed.

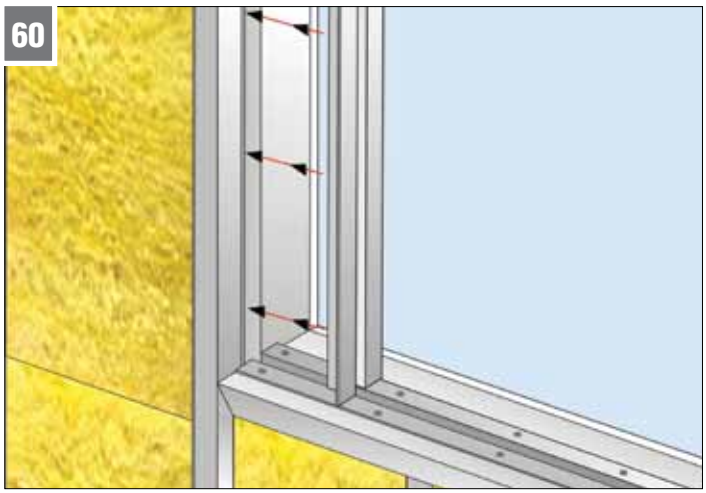
59



Window application details

The omega profile formed between the two rows of profiles is fixed by hook screws and in this way, the window cavity is strengthened.

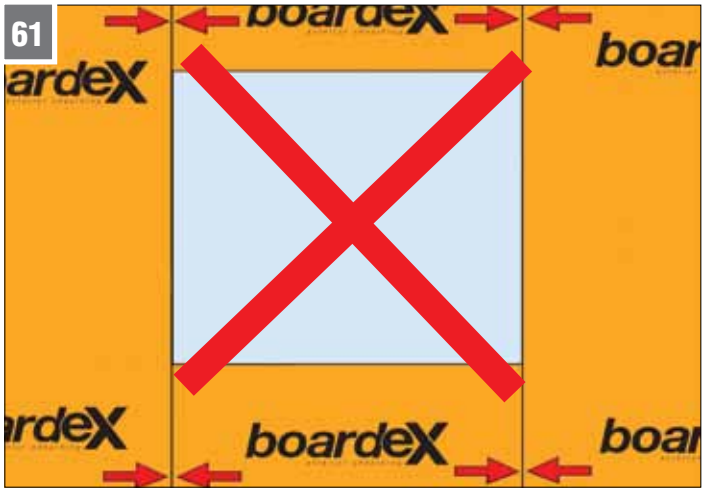
60



Window application details

Omega profiles should be placed and screwed in all the gaps formed between the two profiles in the window detail.

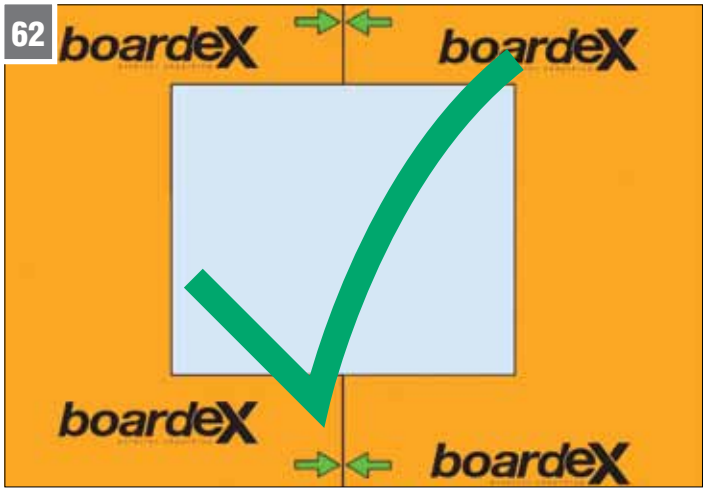
61



Wrong Application

The **BoardeX** joints in the window cavities should not coincide with the window edge profiles.

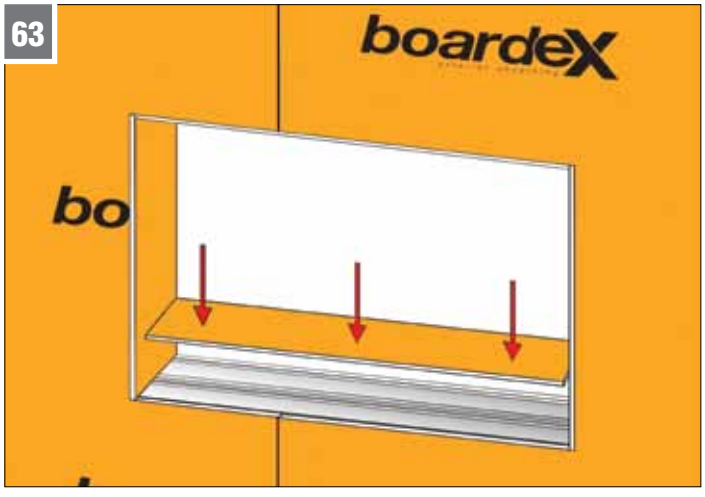
62



Right Application

The **BoardeX** joints in the window cavities should be fixed onto the profiles above or below the lintel.

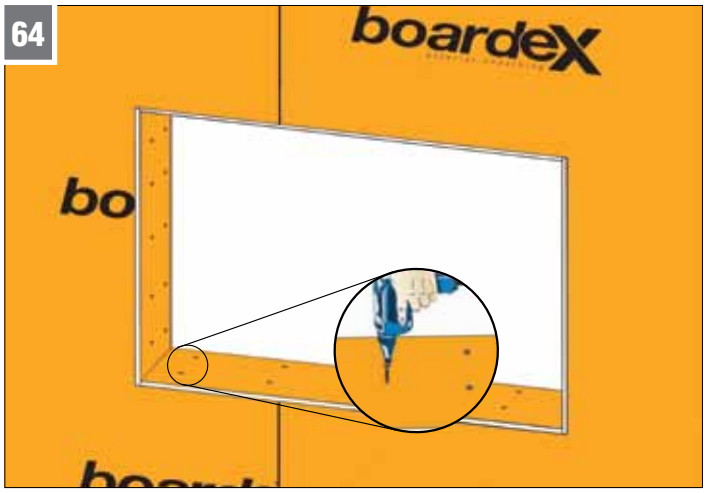
63



Window application details

Suitable sizes of **BoardeX** are cut and placed on the profiles in the window cavity and the edges of the windows are closed.

64

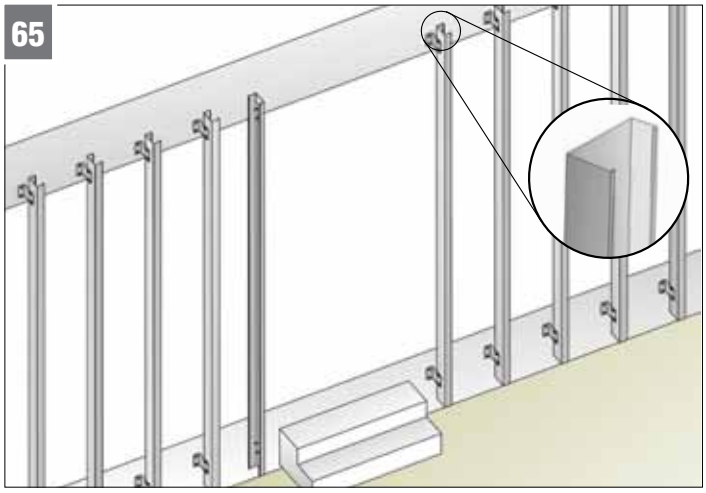


Window application details

The **BoardeX** pieces are fixed with Drillex screws and the window is made ready to fit the window assembly.

Doorway detail

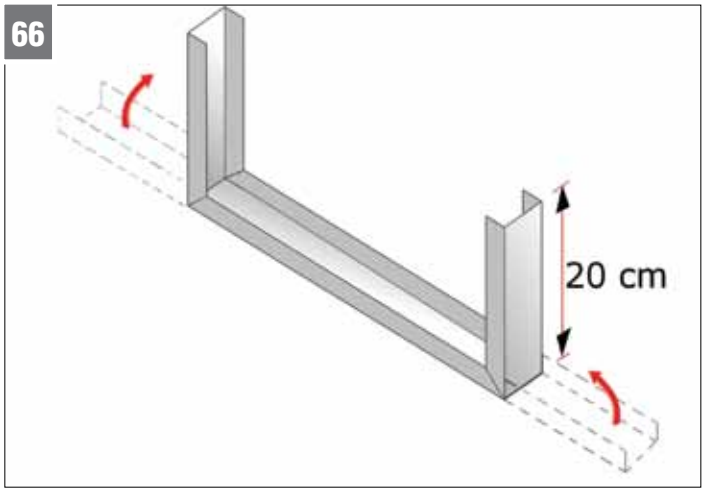
65



Doorway detail

Outside the carcass, **DCC** profiles are used to fix the window frame.

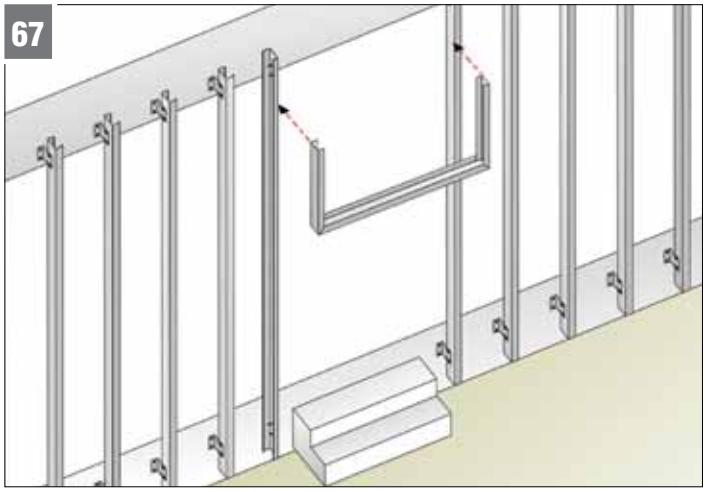
66



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the door width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

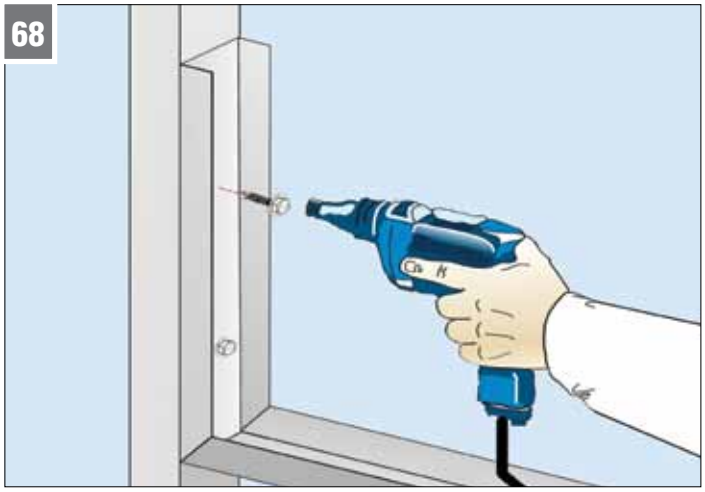
67



Placement of the lintel profile

The lintel which is determined in accordance with the door size is placed on the above and underneath sections.

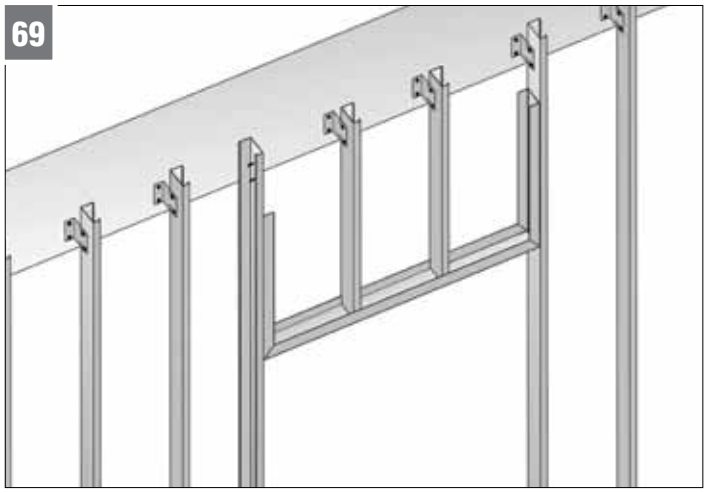
68



Fixing lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hex head screws from at least two points.

69



Doorway detail

Additional **DCC** profiles should be installed inside the lintel as required to allow the profiles to continue at a 40 cm axle spacing depending on the project.

70

Doorway detail

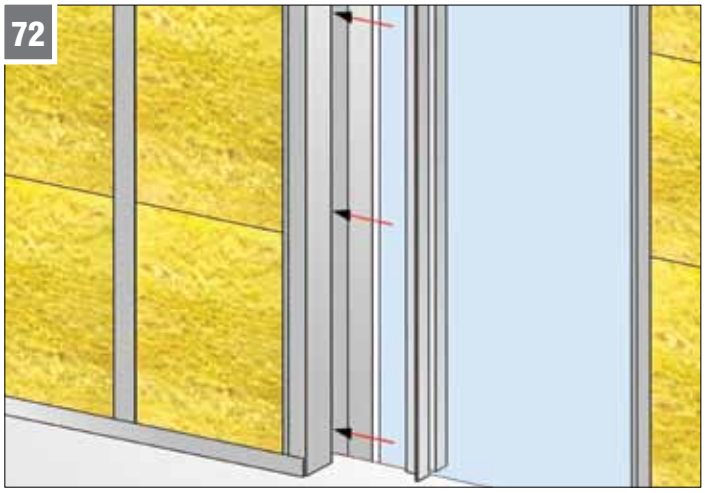
The **BoardeX** joints in the door cavities should be fixed so that they would be above or below the lintel.

71

Completion of second row profile line

The second-row profile line is completed and mineral wool is placed as described in the previous steps.

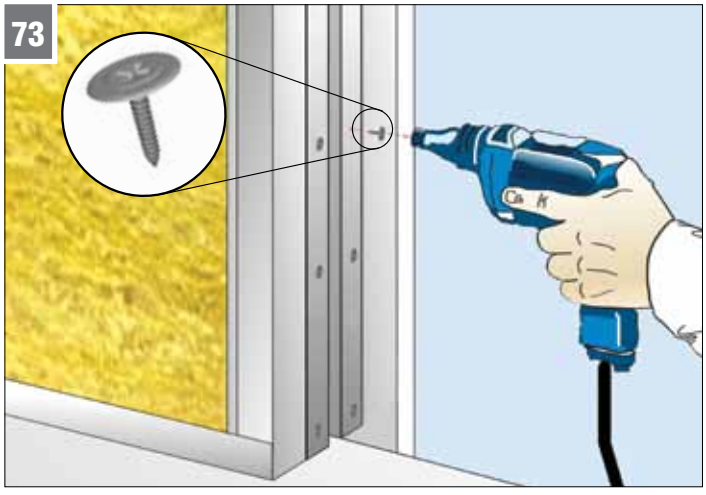
72



Doorway detail

Omega profiles are placed in the omega space between two rows of profiles.

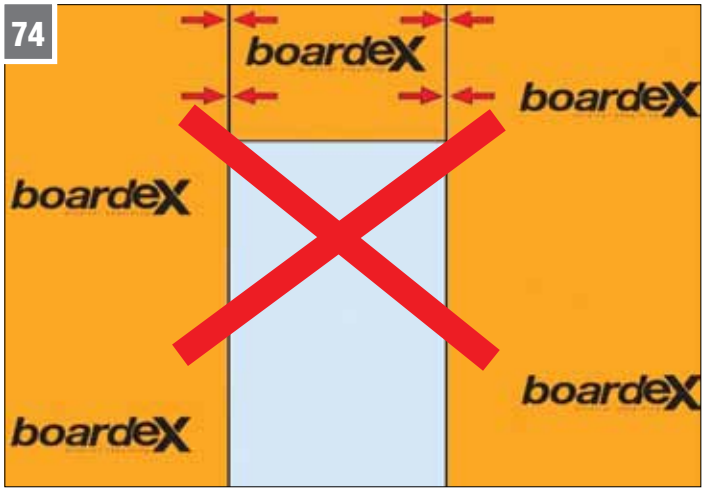
73



Doorway detail

The omega profile placed in the gap between the two rows of profiles is fixed by hook screws and in this way, the window cavity is strengthened.

74

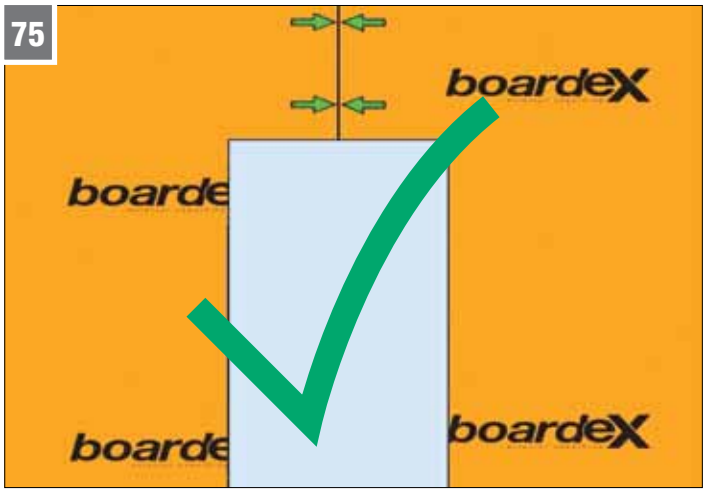


Wrong Application

The **BoardeX** joints in the door cavities should not coincide with the edge profiles.

Ceket Omega Exterior Wall System - Application

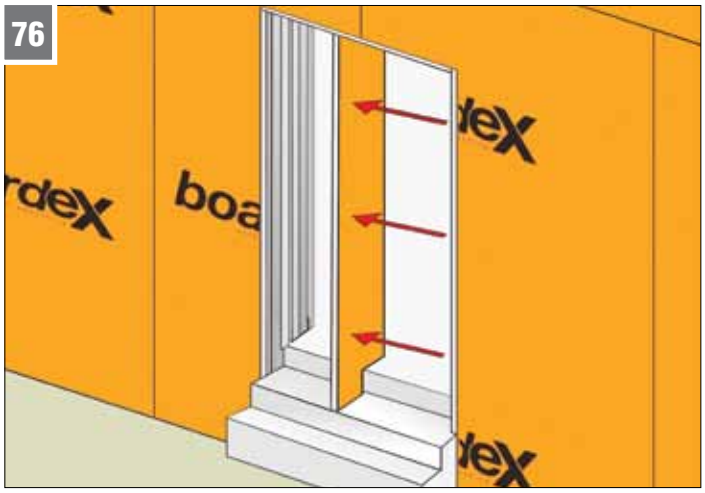
75



Right Application

BoardeX joints in the door cavities should be fixed onto the profiles so that they would be on the lintel.

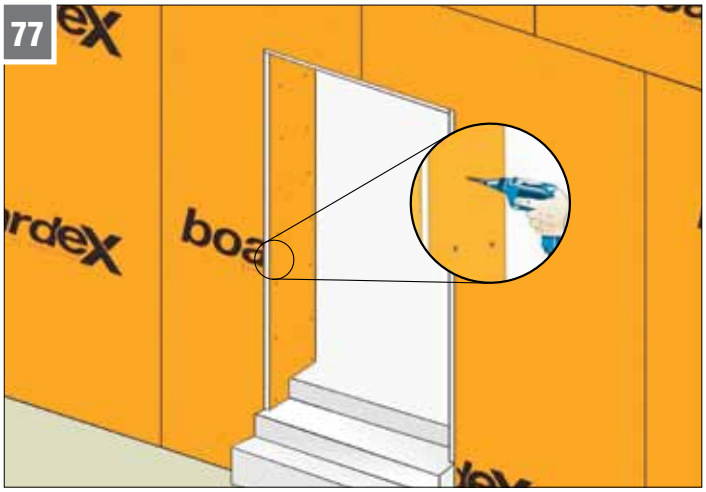
76



Doorway detail

Suitable sizes of **BoardeX** are cut and placed on the profiles in the door cavity and the edges of the doors are closed.

77



Doorway detail

The **BoardeX** pieces are fixed with Drillex screws and the door is made ready to fit the door assembly.

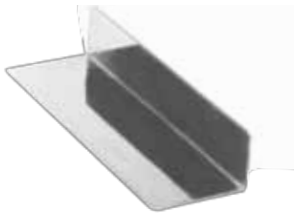
Frequently Asked Questions on Omega Exterior Wall System

QUESTION	ANSWER
What is the maximum height of a building to apply the Ceket Omega external wall system?	In the calculations conducted in accordance with the TS 498 standard, it is applied to a load-bearing system for 150 km/h wind speed at a maximum 100 m height facade.
How to eliminate the frontal level discrepancies in the Ceket Omega system?	Brackets (L75-L100-L125) with appropriate length are selected and the facade is levelled.
How many metres should the distance between L brackets (floor height) in the Ceket Omega exterior system be?	The distance between the L brackets in the **Ceket Omega** exterior system should be 3 metres.
Can we fix two vertically successive DCC profiles on a single L bracket on the Ceket Omega exterior system?	No, each **DCC** profile must be fixed onto separate L brackets. A clearance of at least 5 mm should be left between two **DCC** profiles.
Why do we need to use a starter track?	A PVC-based starter track is used to make sure **BoardeX** does not contact the floor.
Can we use plasterboard screws for fixing purposes in the Ceket Omega exterior wall system?	Plaster board screws should not be used because they are not resistant to corrosion. Corrosion-resistant BoardeX self-drilling screws are used in exterior facades
Why is mineral wool used in the profile spaces in the carcass?	Mineral wool should be placed in the second row of profile line to increase the heat and sound insulation.
Why is plasterboard applied on the BoardeX surface facing interior?	In order to increase the fire, sound, the mechanical and acoustic performance of the exterior wall, one layer of **COREX** is applied on **BoardeX** on the inner surface.

CEKETMAX EXTERIOR WALL SYSTEM

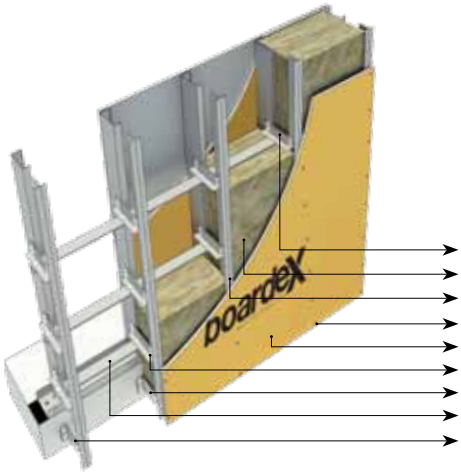
- The **CeketMAX** exterior wall system is a top level, A- energy class external wall system to be used in the external wall applications of buildings and in passive house designs.
- It assists, to some extent, with the correction of the plumbness and any misalignment caused by workmanship errors in the reinforced concrete frame of the building
- The smooth surface obtained can be finished by fixing all kinds of coatings (metal coating, weatherboarding, wood coating, decorative brick veneer, etc.)
- In this system, only an area of 12.5 cm is occupied in the carcass.
- As for the interior finishing, all wet productions such as screed and plaster can be completed before the final layer of plasterboard is fixed. Folloflange these wet applications, the final plasterboard is fixed onto the surface of the **BoardeX** and the wall is finished.
- The **CeketMAX** exterior wall system provides a perfect finish for all types of ventilated facades. The ventilated facade system to be applied on the surface should weigh max 25 kg/m^2.
- Thermal insulation can be applied by using an insulation material at a required thickness on **BoardeX** in order to create an increase in heat insulation. The application of the Thermal insulation should be carried out by taking into consideration the application principles recommended by IZODER.
- The **CeketMAX** exterior wall system is designed to withstand the wind load of 150 km/h at a building maximum 100 m high depending on the selected profile and axle spacing.

CeketMAX Exterior Wall System Auxiliary Materials

DU 50-75-100 **profile** **38x38 mm**		It is used in the **CeketMAX** exterior wall system to form the exterior drywall system by fixing it onto the floor and ceiling.
DCC 50-75-100 **Exterior Profile** **45x30 mm**		**BoardeX DCC** is the profile with 0.9 mm wall thickness and 45x30 mm flange height to be used in the construction of the **Omega** exterior wall system.
BoardeX CT **Facade Profile**		It is a galvanised facade profile, which is 275 gr/ m^2 with 0.9 mm thickness, and on which **BoardeX** is fixed.
BoardeX CL 38 **Support Profile** **50x50**		It is a galvanised support profile in the CeketMax system, which is 100 gr / m^2 with 0.60 mm wall thickness, and on which AL 160 or AL 210 adjustment pieces are fixed.
BoardeX **L bracket** **50-75-100-125-150**		It is a 2 mm thick bracket made out of special steel with low heat conduction coefficient, which brings the wall into the correct plumbness and makes it possible for thicker insulation material to be used.
BoardeX AL **Adustment piece**		It is a galvanised adjustment piece in the **CeketMAX** system, which is 275 gr / m^2, with 1.2 mm wall thickness and 16-21 cm in length, and which enables the facade to be at the right plumbness and allows the use of thicker mineral wool.
Resilient tape **50-75-100**		It is a self-adhesive resilient tape adhered to the bottom of the **DU** and the **DC** profiles on the edges.
Starter Track		It is a PVC based profile to isolate **BoardeX** from the floor.

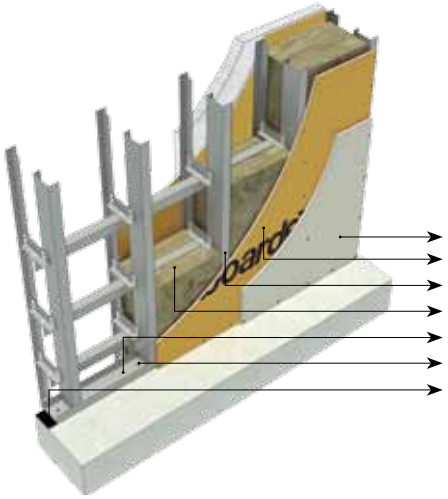
Mineral Wool Glass wool or Rock wool		It is used in the desired thickness to increase the heat - sound and fire insulation.
Drillex Cap Screw		A special screw to fix CT facade profiles onto brackets and to fix two pieces of metal onto each other.
BoardeX self-tapping screw		It is a specially designed corrosion resistant screw to fix exterior boards onto profiles with a wall thickness of up to 0.7 mm.
BoardeX self-drilling screw		It is a specially designed corrosion resistant screw to fix exterior boards onto profiles with a wall thickness of up to 2 mm.
Self-drilling screw 35		It is the screw that is used to fix the plasterboards facing the interior side onto **BoardeX**
Steel dowel		It is used to fix the L brackets onto reinforced concrete surfaces.
Dowel-Screw		Plastic dowels and washer-head screw set used for fixing the galvanized profiles onto the floor in the construction of the exterior wall. It consists of 8 mm plastic dowel and 45 mm washer-head screw.

Material Analysis



Exterior view

- BoardeX AL adjustment piece
- Mineral Wool
- BoardeX CT facade profile
- BoardeX self-drilling screw
- BoardeX
- Drillex hex head screw
- Steel anchor
- BoardeX CL38 support profile
- BoardeX L bracket



Interior view

- COREX
- BoardeX
- BoardeX DCC exterior profile
- Mineral yün
- DU profile
- Dowel-screw
- Resilient tape

Material Analysis

Material name	Consumption ✕=40 cm	Consumption ✕=30 cm
BoardeX	2,10 m²	
COREX	1,05 m²	
BoardeX DCC 75/100 exterior profile (45x30; 0.9 mm; Z275)	2,90 mt	4,00 mt
BoardeX DCC 75/100 exterior profile (45x30; 0.9 mm; Z275)	0,84 mt	
BoardeX CT facade profile (50x50; 0.9 mm; Z275)	2,90 mt	4,00 mt
BoardeX CL38 support piece (38X15; 0.6 mm; Z100)	1,50 mt	
BoardeX AL 160/210 adjustment piece (50x30; 1.2 mm; Z275)	3,40 pcs	4,90 pcs
BoardeX L 75/100/125/150 bracket (30x75/100/125; 2 mm;/150;3 mm)	2,4 pcs	3,2 pcs
BoardeX self-drilling screw(with interior - exterior 20 cm intervals)	44 pcs	51 pcs
Drillex hex head screw	22 pcs	44 pcs
Self-drilling screw 35 (with 30 cm intervals)	16 pcs	18 pcs
Dowel-screw	2,90 pcs	
Steel dowel	4,8 pcs	6,4 pcs
Joint tape or paper tape	1,40 mt	
Derz bandı veya kağıt bant	1,80 mt	
DERZTEK joint grouting plaster	0,40 kg	
Mineral wool interior (low density)	1,05 m²	
Mineral wool exterior (low density)	1,05 m²	
Starter Track	Varies according to the base perimeter	

✕ 40, states that the CT and DCC profile axle spacings are 40 cm.

!!! The area of the wall for which the material analysis is conducted has been calculated to be 4mx2.5m = 10m², and 5% tolerance has been included in the calculations.

Note: For more information, please refer to “BoardeX system book” or www.boardeX.com.tr website.

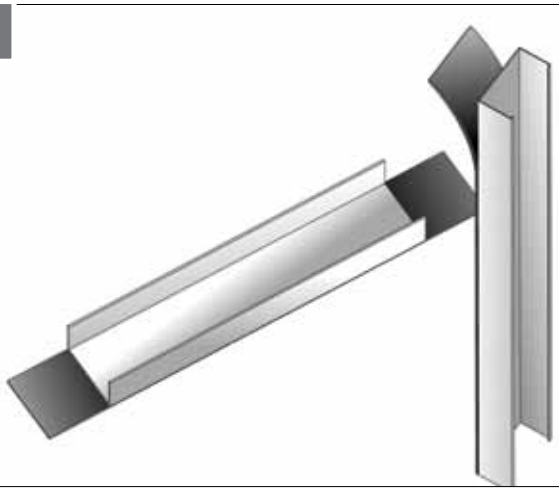
CeketMAX Exterior Wall System - Application

1

CeketMAX exterior wall system application area

CeketMAX exterior wall system provides high-quality insulation in high-rise buildings, provides the correct plumbness and more floor area.

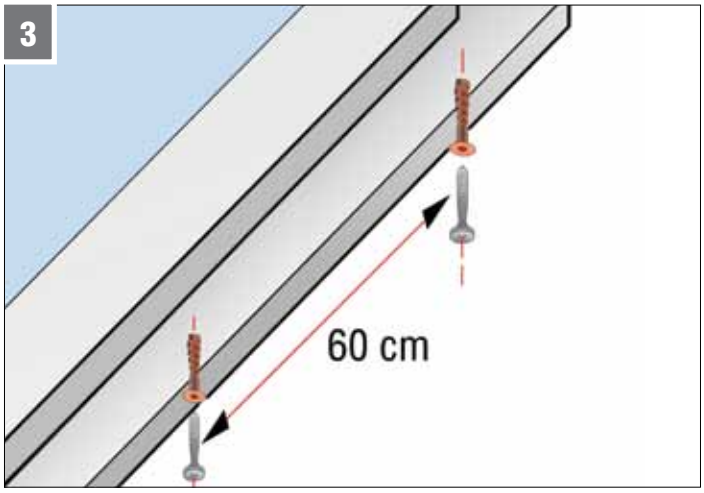
2



Preparation of resilient tape

A self-adhesive resilient tape adhered to the bottom of the **DU** profiles, and the **DCC** profiles on the edges.

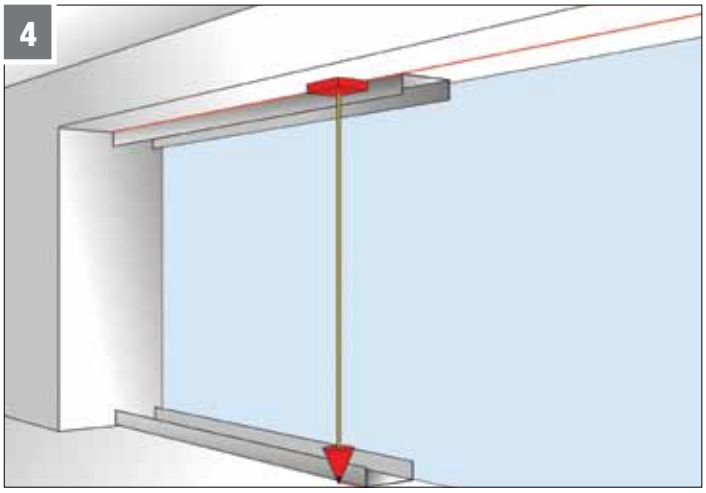
3



Screwing profiles

The **DU** profiles are fixed onto the ceiling using dowel screws with maximum 60 cm intervals from the carcass limit.

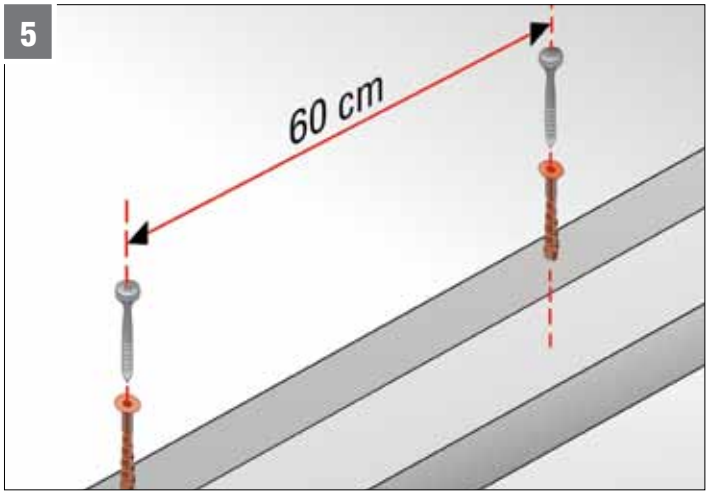
4



Screwing profiles

The **DU** profile line on the ceiling is carried onto the floor at the same plumbness.

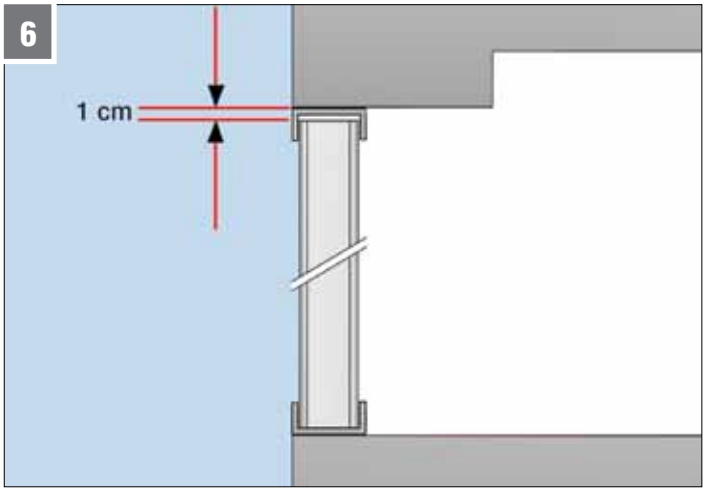
5



Screwing profiles

The **DU** profiles are fixed onto the floor using dowel screws with maximum 60 cm intervals from the carcass limit.

6

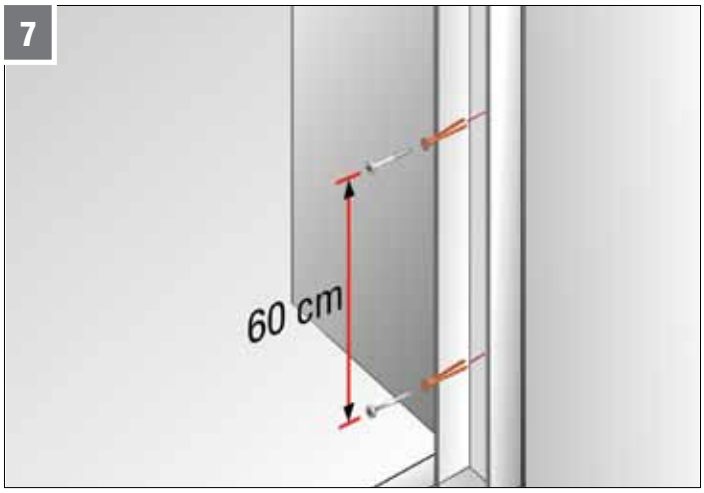


Preparing profiles

The **DCC** profiles should be cut at least 1 cm shorter than the floor height.

CeketMAX Exterior Wall System - Application

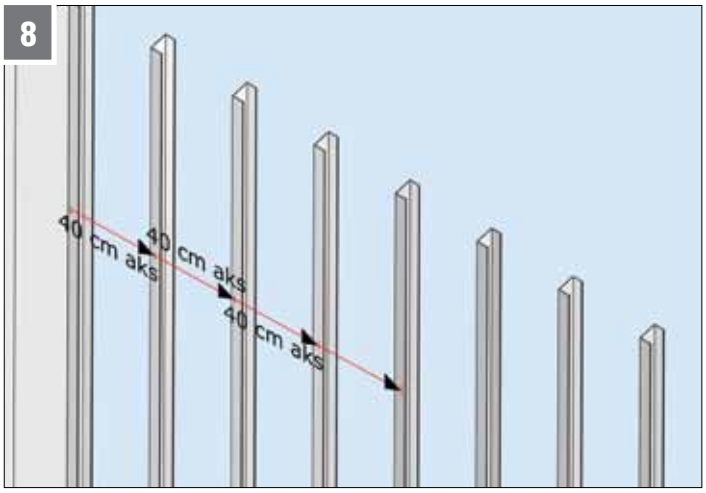
7



Screwing profiles

The **DCC** profile whose bottom was affixed with resilient tape is fixed onto the existing column using a dowel-screw with a maximum of 60 cm spacing, with the long flange facing outward.

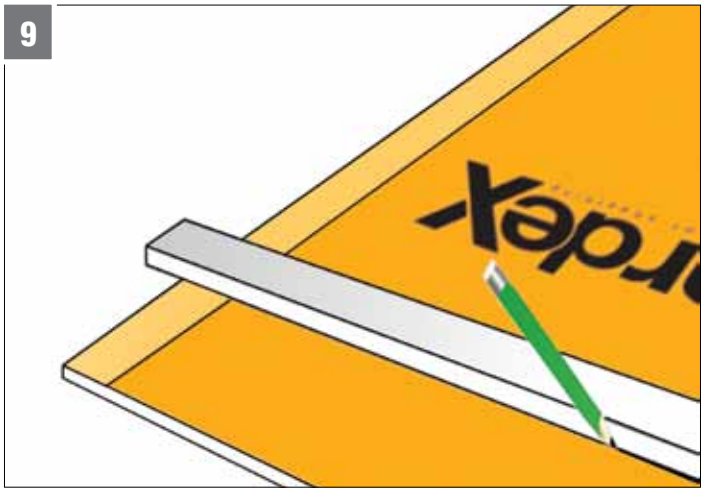
8



Placement of DCC profiles

DCC profiles, depending on the project, are placed within the Wall U profiles with the axle spacing of 30 or 40 cm.

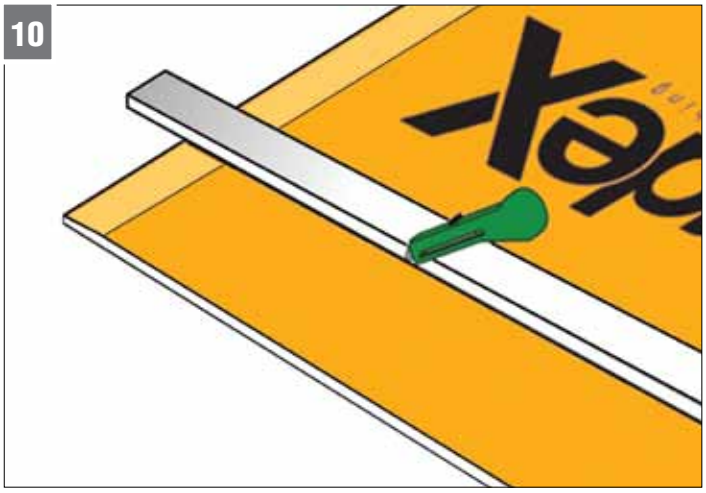
9



Cutting BoardeX

The **BoardeX** to be cut is marked on the surface with a pen.

10



Cutting BoardeX

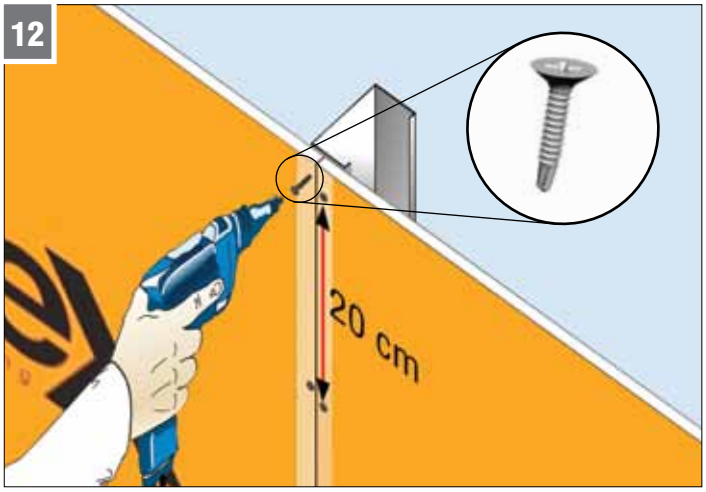
The **BoardeX** is cut with the help of a gauge from the marked place using a carpet knife. In order to cut **BoardeX**, there is no need for spiral, jet stone, or any other dust emitting cutting tools.

11

Fixing BoardeX

The **BoardeX** is fixed from inside with a full board.

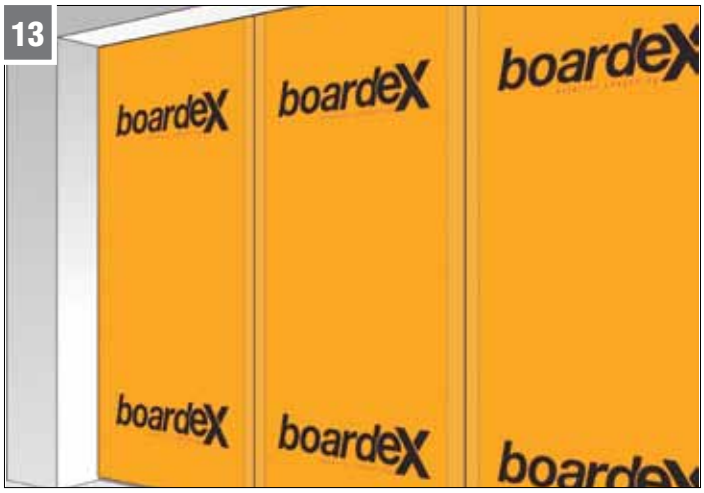
12



Fixing BoardeX

BoardeX self-drilling screwshould be used for fixing. The BoardeX self-drilling screwis screwed with 20 cm and 40 cm (or 30 cm) vertically and horizontally, respectively.

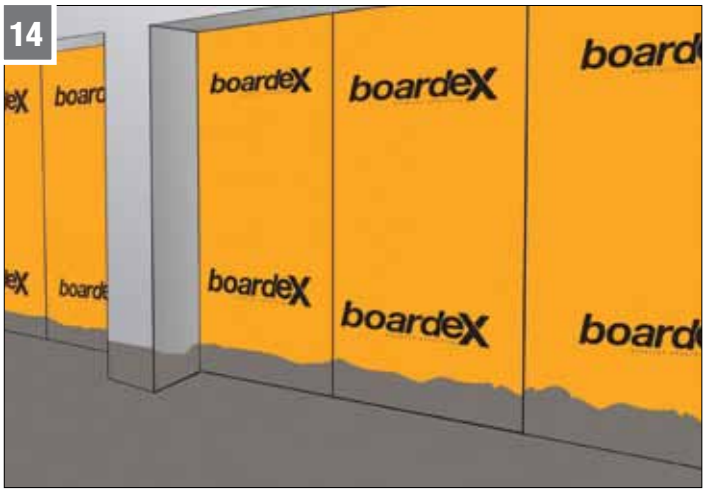
13



Screwing BoardeX!

All profiles are fixed with **BoardeX**, and the coating on the whole surface is completed.

14



Practice of wet applications

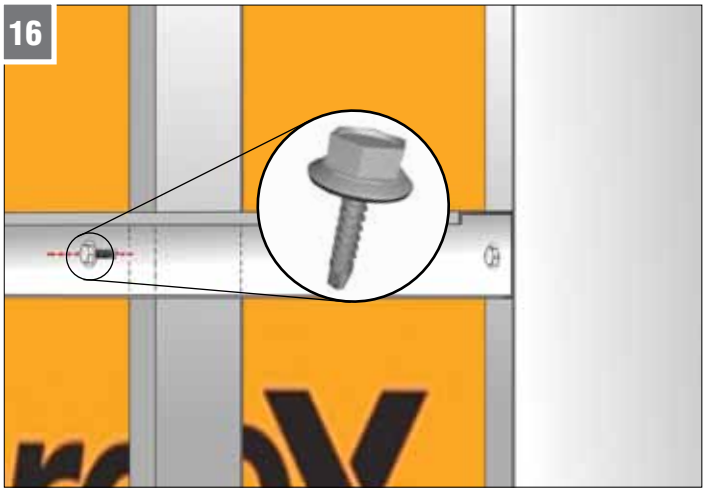
After fixing the **BoardeX** on the inner surfaces, all the wet practices such as the screed or the ceramic applications can be completed.

15

The Boardex surface can be exposed to the atmospheric conditions for 12 months.

When all surfaces are covered with **BoardeX**, the building site is protected from external factors and a more comfortable working environment is provided for the workers working inside. The **BoardeX** surface can be exposed to the atmospheric conditions for up to 12 months without the need to apply any coating on it.

16



Fixing the CL38 profile

Once the work inside the building is completed and the scaffolding is set up outside, the CL38 support profiles are fixed from the inner parts of these to the flanges of the **DCC** profiles with Drillex hex head screws at only one point.

17

Fixing the CL38 profile

The CL 38 support profiles are fixed at 70 cm intervals.

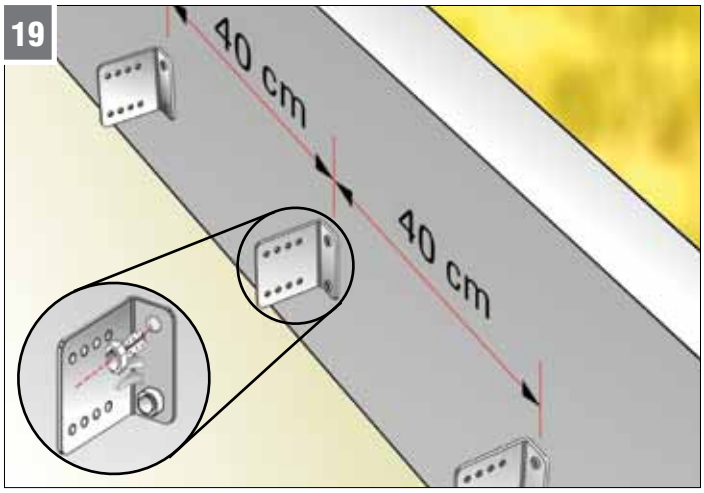
18

Placement of mineral wool

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

CeketMAX Exterior Wall System - Application

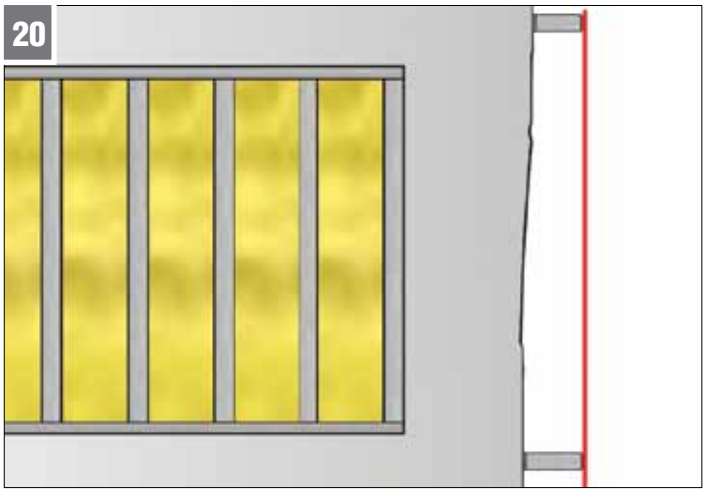
19



Screwing L brackets

The L brackets are fixed onto the reinforced concrete beams from two points by using steel anchors.

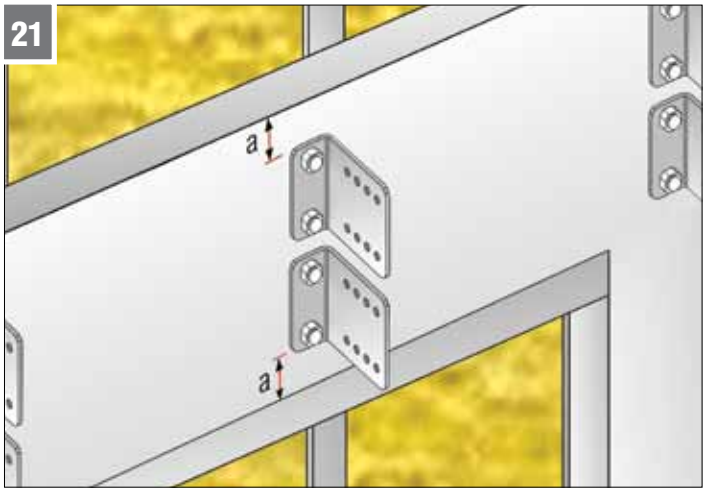
20



Adjusting the correct facade plumbness

On the facade brought to the correct plumbness by a piece of rope, L brackets of appropriate length are selected.

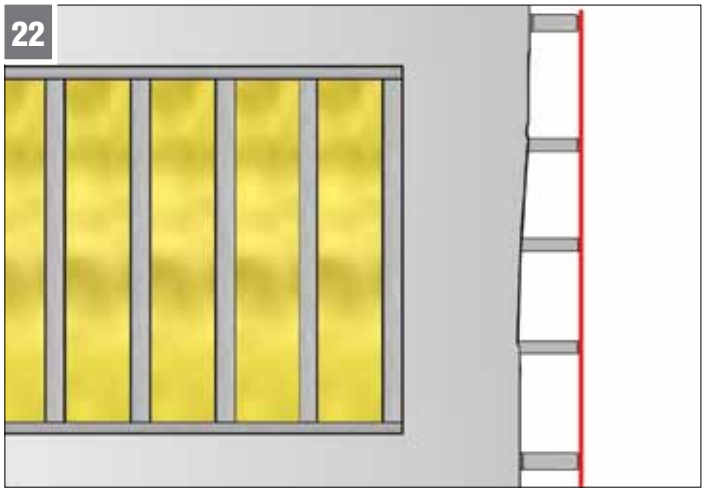
21



Screwing L brackets

The L brackets are fixed by leaving (a) equal distances between them depending on the reinforced concrete floor thickness. This distance should not be less than 3 cm.

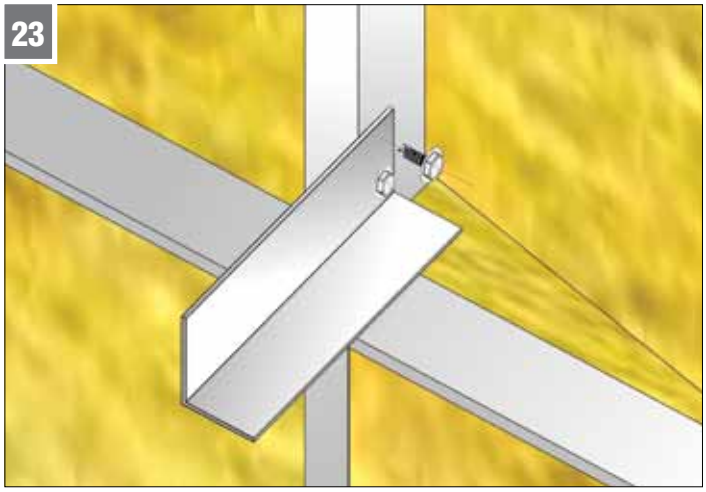
22



Selecting the BoardeX AL adjustment piece

In order to correct any level problems in the reinforced concrete system; appropriate AL adjustment pieces at the length of 16 or 21cm should be selected on the facade brought to the correct plumbness by using a guiding string.

23



Fixing the BoardeX AL adjustment piece

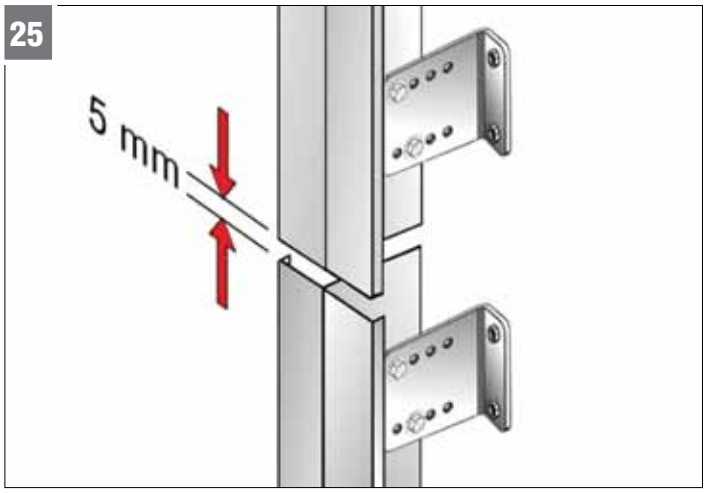
The selected AL adjustment piece must be fixed onto the **DCC** profile at two points.

24

Installation of the BoardeX CT profile

After all the **AL** adjustment pieces are fixed, the **BoardeX CT** profiles should be secured onto the L brackets by Drillex hex head screws from two points.

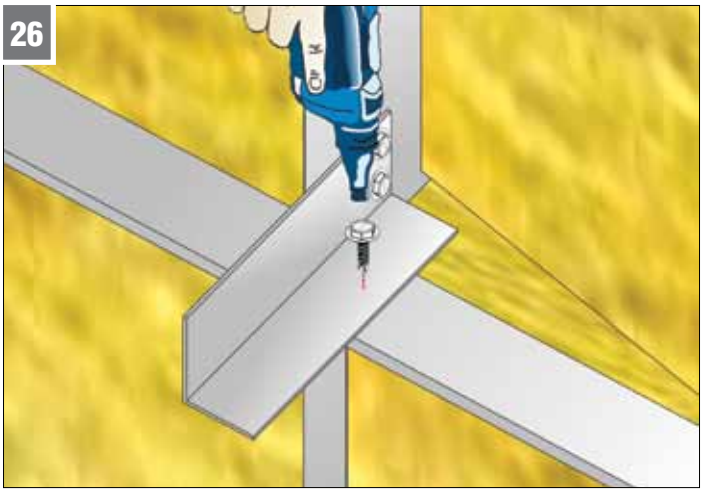
25



Installation of the BoardeX CT profile

A gap of at least 5 mm must be left between two vertically successive **BoardeX** CT profiles.

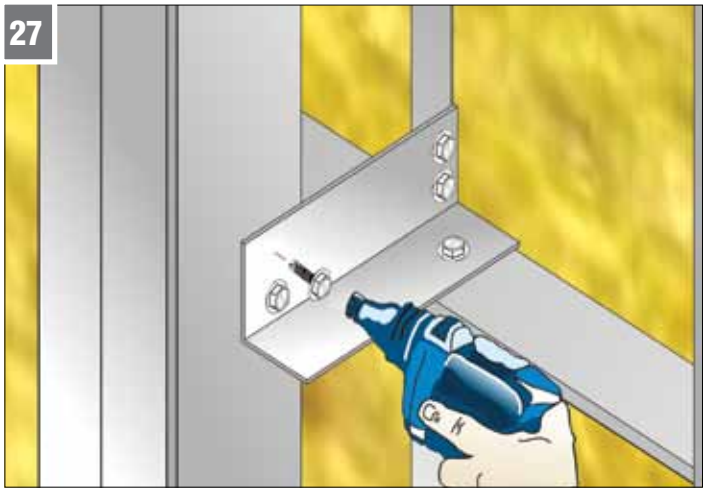
26



Installation of BoardeX AL adjustment piece

The AL adjustment piece is fixed from its short edge onto the CL 38 support profile at one point.

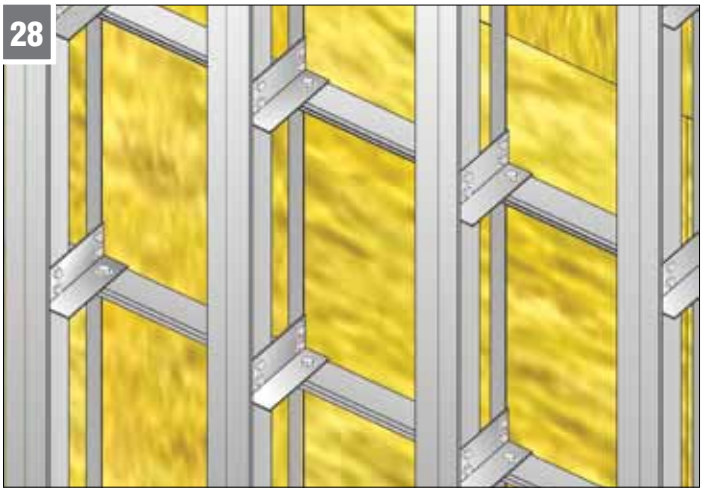
27



Installation of the BoardeX CT profile

The **BoardeX** CT facade profile is brought to the correct plumbness and fixed onto the AL adjustment pieces from two points with Drillex hex head screws.

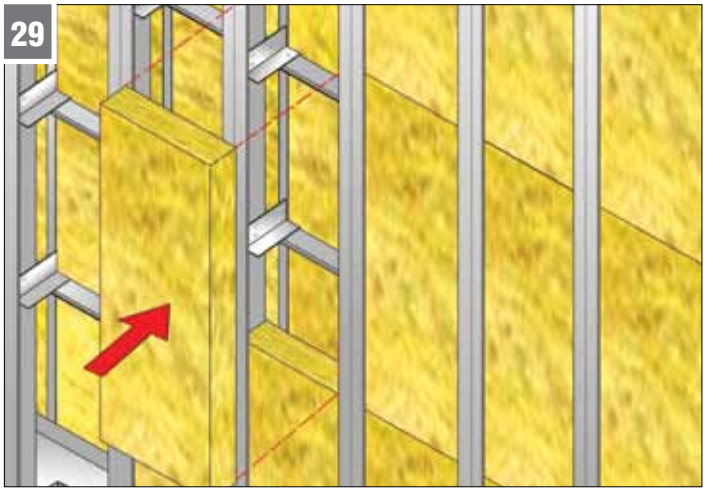
28



Installation of the BoardeX CT profile

The CT profiles on the entire facade are fixed onto the L brackets and the AL adjustment pieces to complete the metal frame.

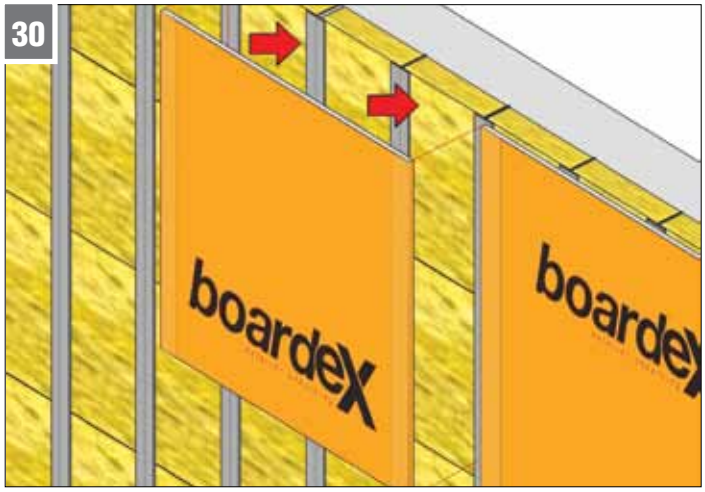
29



Placement of mineral wool

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

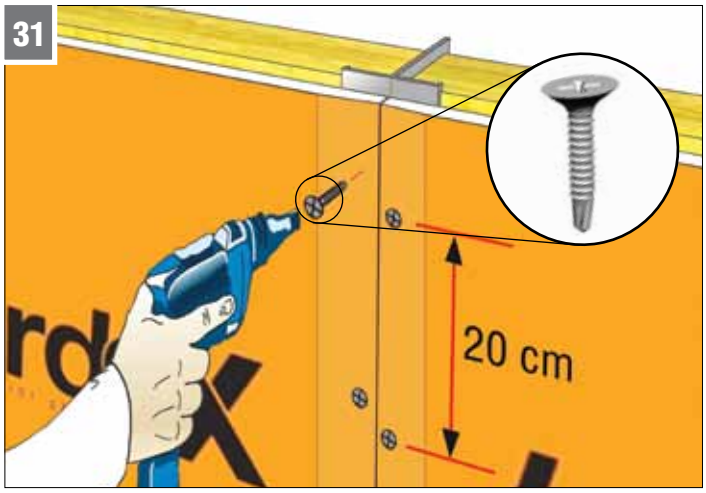
30



Fixing BoardeX

The joints of **BoardeX** are installed horizontally in an interlaid pattern.

31



Adjusting the correct facade plumbness

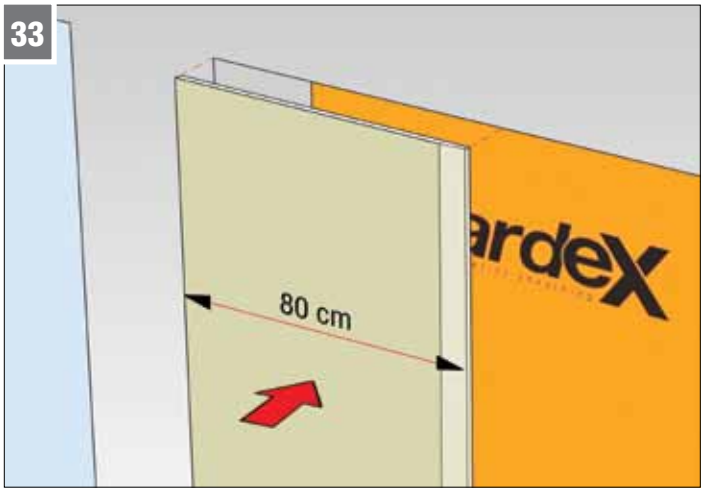
The **BoardeX** is screwed onto the levelled CT profiles at the correct plumbness. BoardeX self-drilling screws should be screwed for this purpose with maximum 20 cm intervals vertically.

32

The surface can be exposed to the atmosphere for up to 12 months

The surface of **BoardeX** can be left outdoors being exposed to atmospheric conditions for up to 12 months without any coating on it.

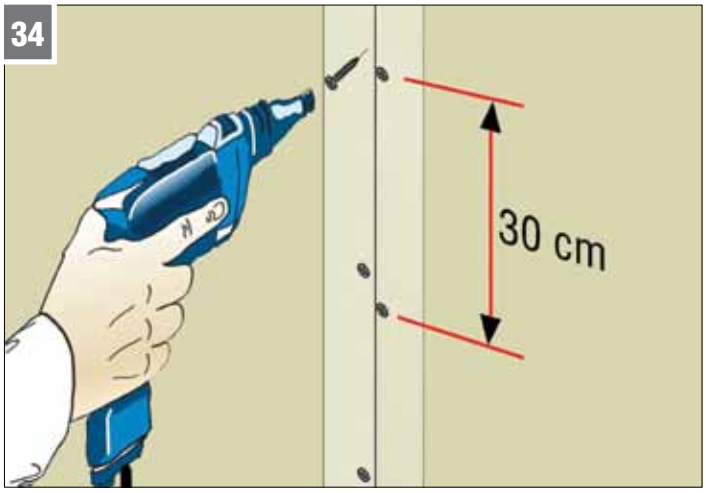
33



COREX application

The **COREX** joints should be applied by cutting 80 cm horizontally and in such a way that they do not coincide with the **BoardeX** joints on the first layer, that is, applying in an interlaid pattern.

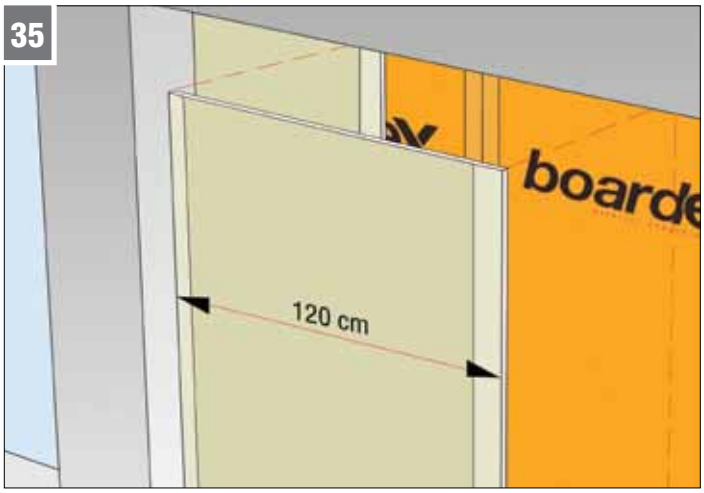
34



COREX application

COREX is fixed with a self-drilling screw 35 with a maximum 30 cm vertical interval.

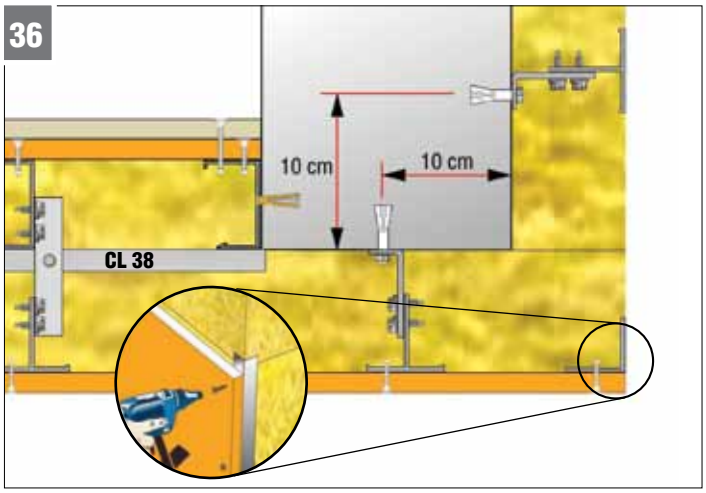
35



COREX application

The **COREX** application is continued with a full-size board 120 cm wide, and it is made ready to be completed.

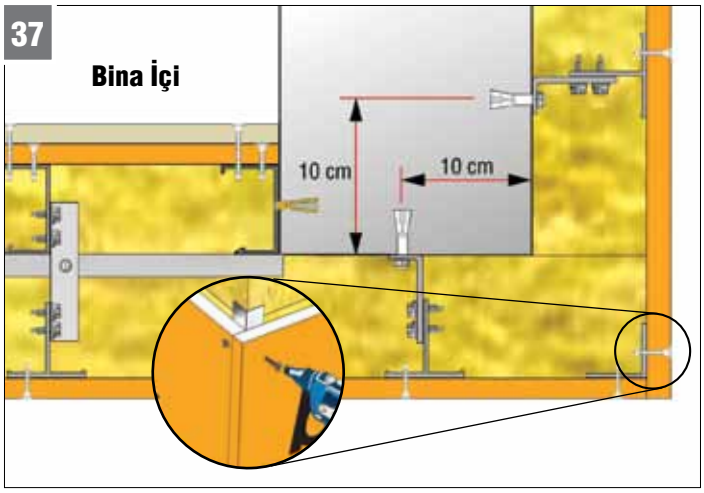
36



Combining exterior corners

The bracket corresponding the exterior corner should be at a maximum distance of 10 cm from the corner. Where an internal corner is to be formed, **BoardeX** is fixed onto a DKC corner profile.

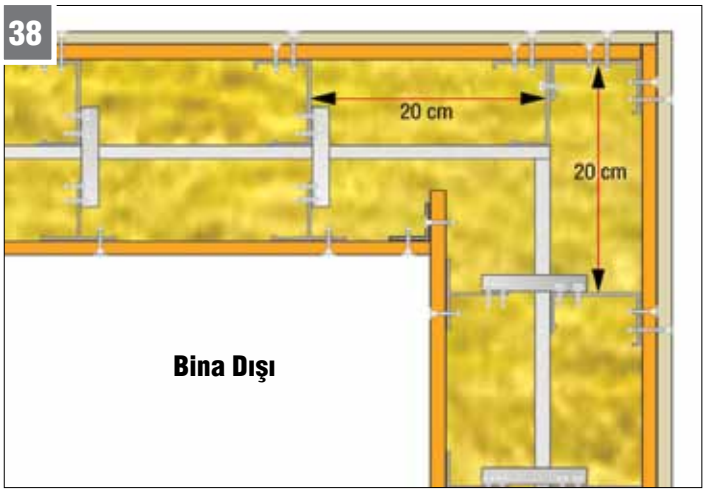
37



Combining exterior corners

Then the formation of the exterior corner is completed by fixing the **BoardeX** onto DKC corner profile from the other part of the exterior corner.

38



Combining interior corners

The **DCC** profile in the carcass is positioned at a distance of at least 20 cm from the last **DCC** profile. The DKC corner profile is fixed onto **BoardeX** where the interior corner is to be formed. Folloflange this, the formation of the corner is completed by fixing the **BoardeX** onto the DKC corner profile from the other side of the interior corner.

Thermal insulation application on boardeX surface

39

Thermal insulation application

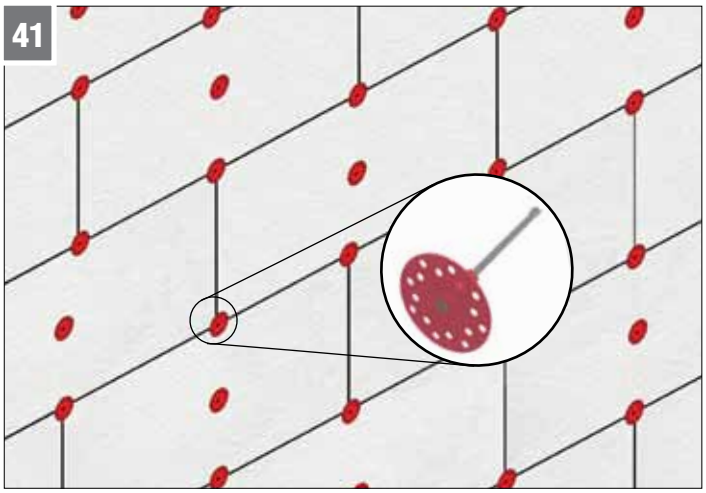
Before the Thermal insulation application, PROBASE fix, a cement based adhesive mortar, is applied on the surface with the help of a notched trowel.

40

Thermal insulation application

The insulation material (EPS, XPS or rock wool) selected depending on the project is affixed on the **BoardeX** surface.

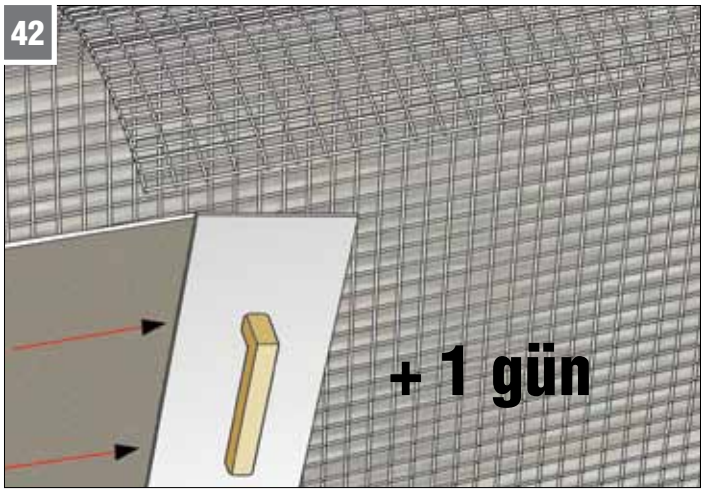
41



Fixing the insulation material

The insulation material is fixed onto the profiles with self-drilling screws and parachute head dowels at the locations corresponding to the profiles.

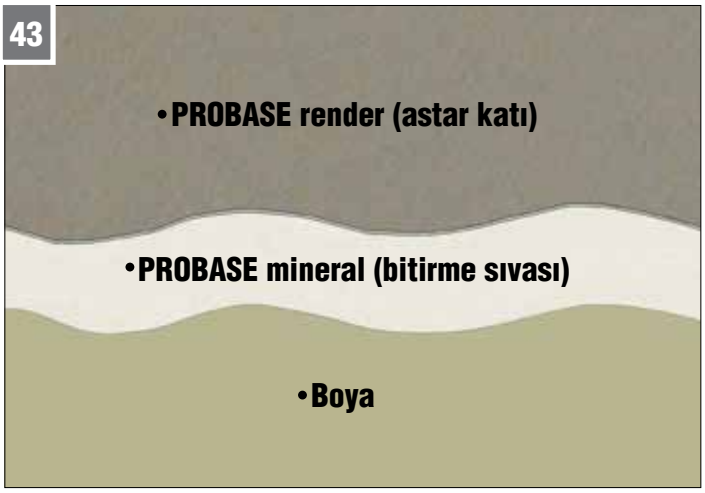
42



Thermal insulation application

After the base plaster is applied onto the entire surface, the alkali-resistant plaster mesh with a weight of 160gr / m^2 is slightly buried into the base plaster surface and the surface is made ready for finishing plaster to be carried out after 1 day.

43



Completion of surface

After the application of the base plaster and mineral plaster (finishing plaster) on the surface of the insulating material used in the Thermal insulation, the surface is completed by painting.

Coating different types of materials on boardeX exterior sheathing surface

44

Joint filling

If the **BoardeX** surface is to be coated with another material, the joints are filled with an appropriate sealant resistant to water and moisture.

45

Metal cladding material

BoardeX can be finished with metal cladding materials. For this application, the load-bearing system of the cladding material must be fixed onto the system profiles over **BoardeX**.

46

Wood cladding

The **BoardeX** surface can be completed by installing wood or cement based decorative cladding materials. For this application, the cladding material should be fixed onto the system profiles over **BoardeX**.

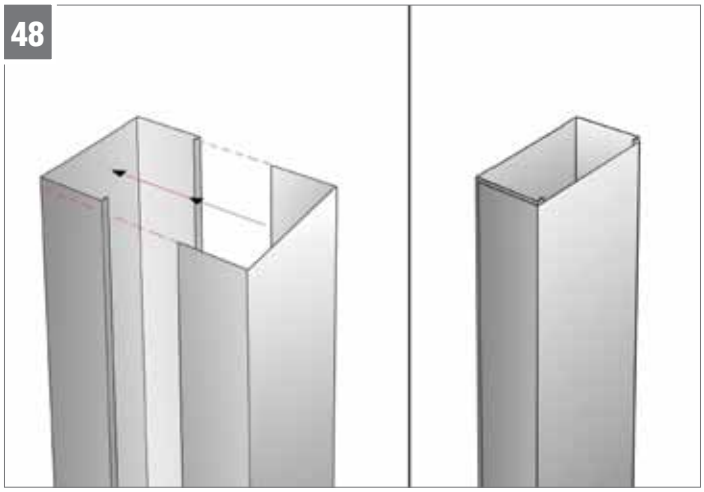
47

PVC Siding application

The **BoardeX** surface can be completed with the PVC Siding material. For this application, the PVC Siding material should be fixed onto the system profiles over **BoardeX**.

Window application details

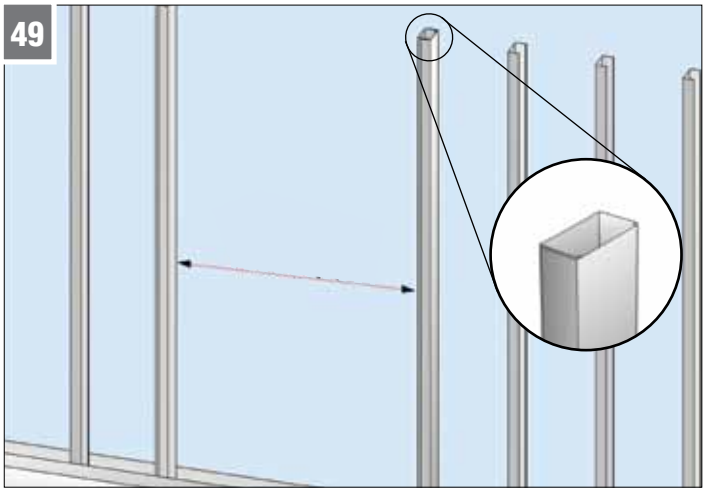
48



Window application details

On the vertical line where the window frame is going to be fixed, the **DCC** and **DU** profiles are inserted into each other.

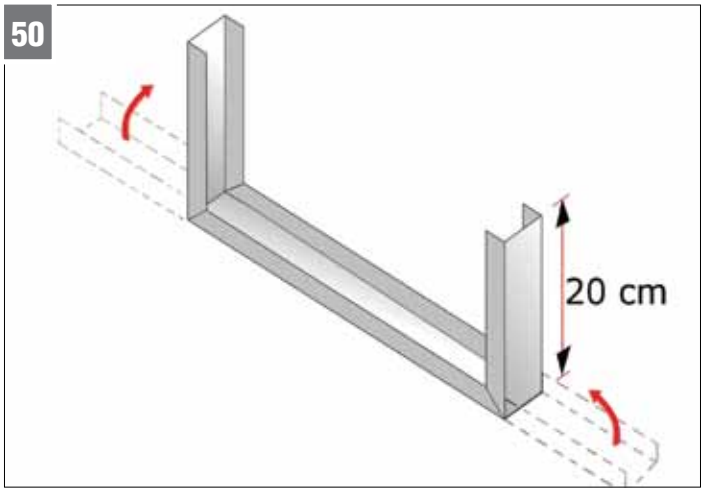
49



Window application details

These profiles are placed on both sides of the window to fit the window gap horizontally.

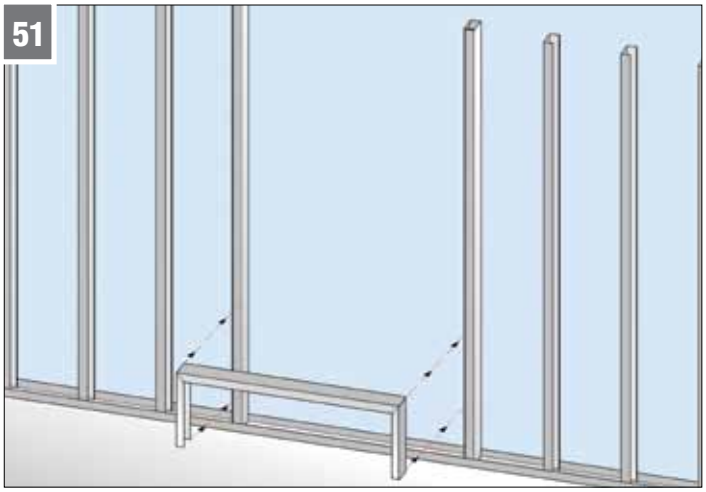
50



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

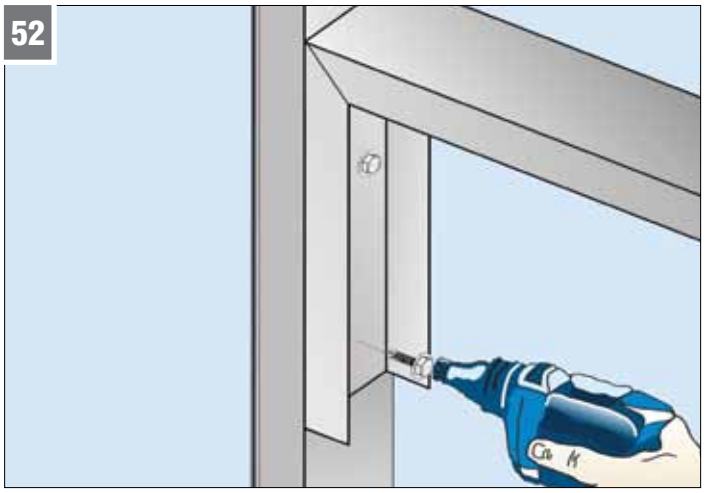
51



Placement of lower lintel profile

The lintel which is determined in accordance with the window size is placed on the underneath section.

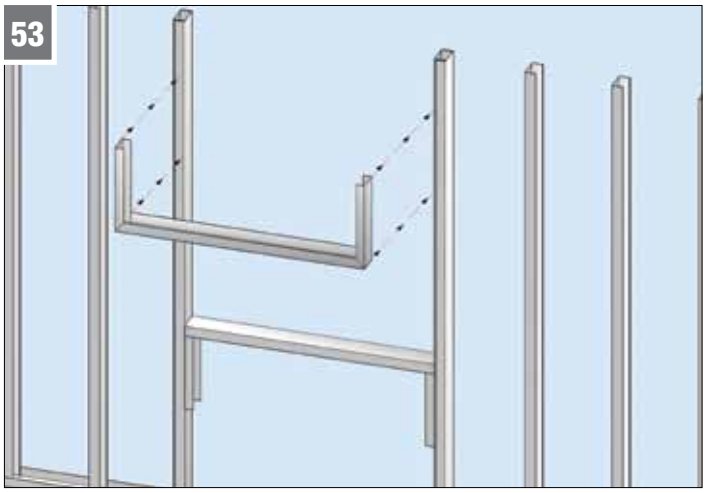
52



Fixing lintel profile

The created lintel is screwed onto the side profiles from the inside with Drillex hex head screws from at least two points.

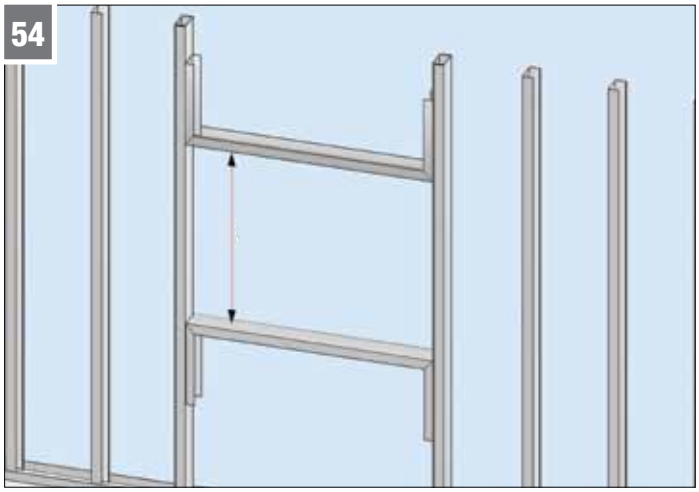
53



Placement of upper lintel profile

The determined second lintel profile is placed in the upper section in accordance with the window size and is screwed onto the side profiles from both sides.

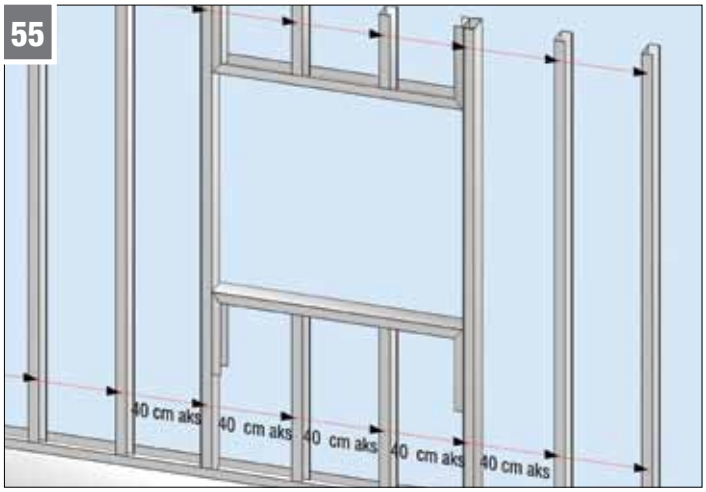
54



Window application details

In this way, the metal framefing in the cavity where the window will be placed is completed.

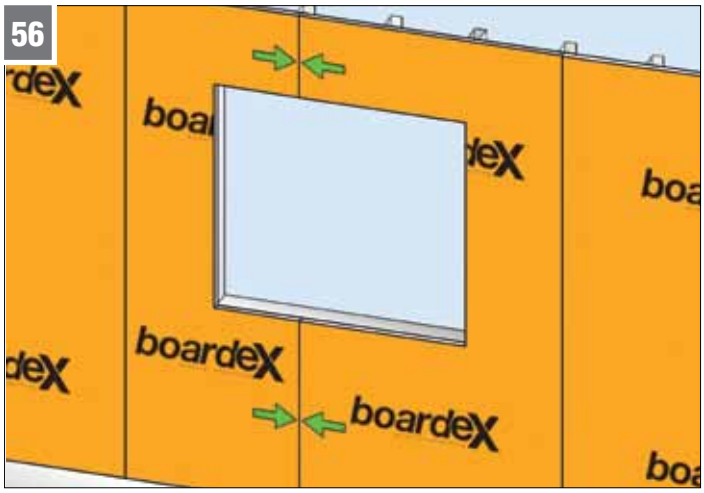
55



Window application details

Additional **DCC** profiles should be installed inside the lintel as required to allow the profiles to continue at the appropriate axle spacing depending on the project.

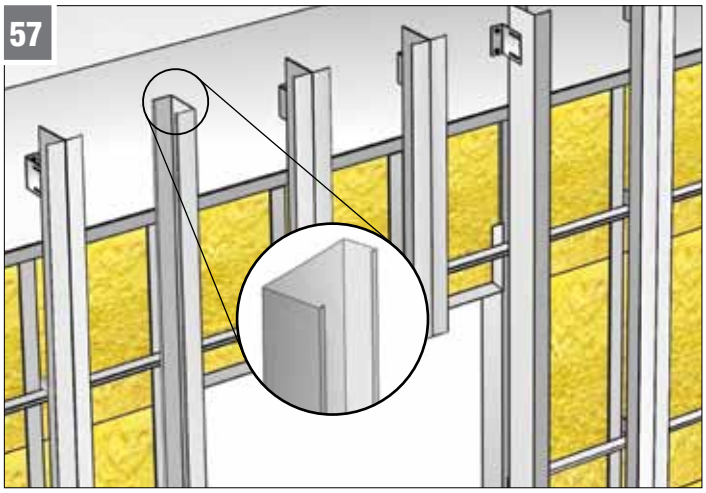
56



Window application details

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

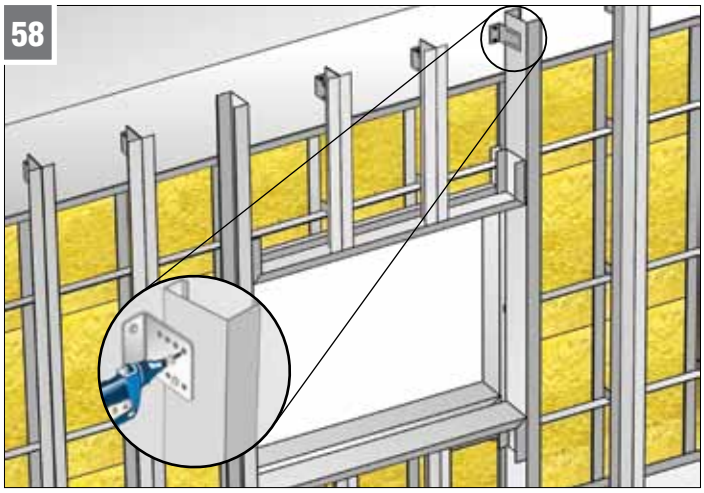
57



Window application details

Outside the carcass, **DCC** profiles are used instead of **BoardeX** CT profiles in the vertical line on which the window frame is to be fixed.

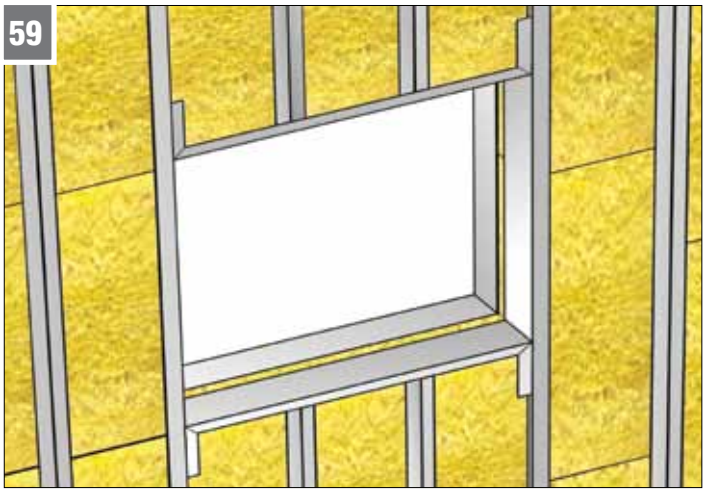
58



Window application details

DCC profiles are secured onto the L brackets at the base. The created lintel is screwed onto the **DCC** profiles from inside with Drillex hex head screws from at least two points.

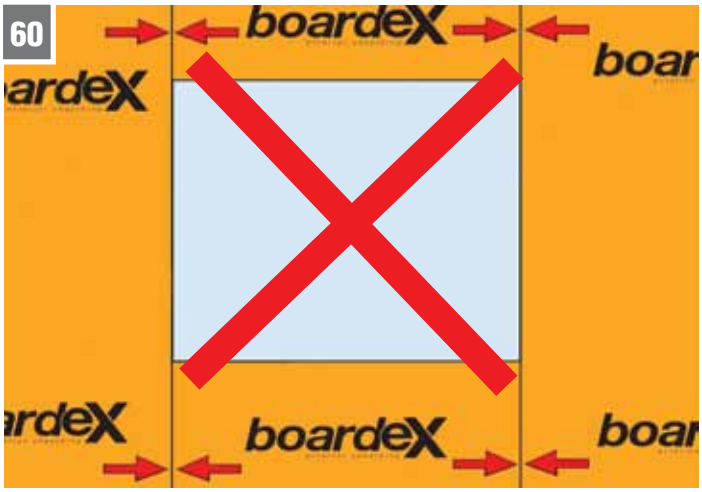
59



Window application details

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

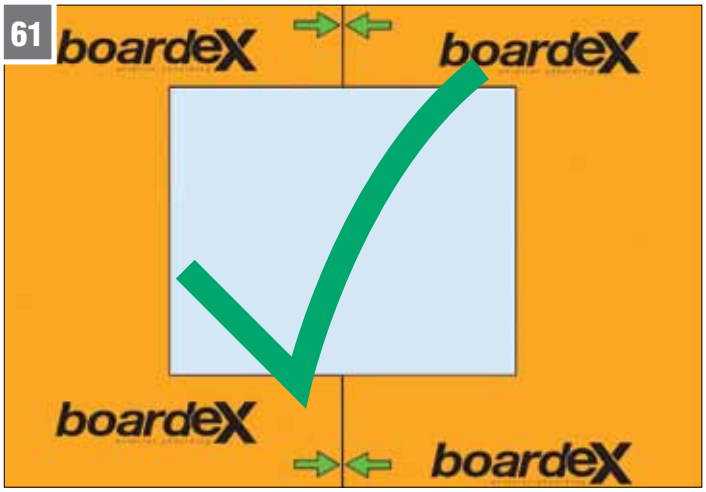
60



Wrong Application

BoardeX joints in the window cavities should not be aligned with the side profiles.

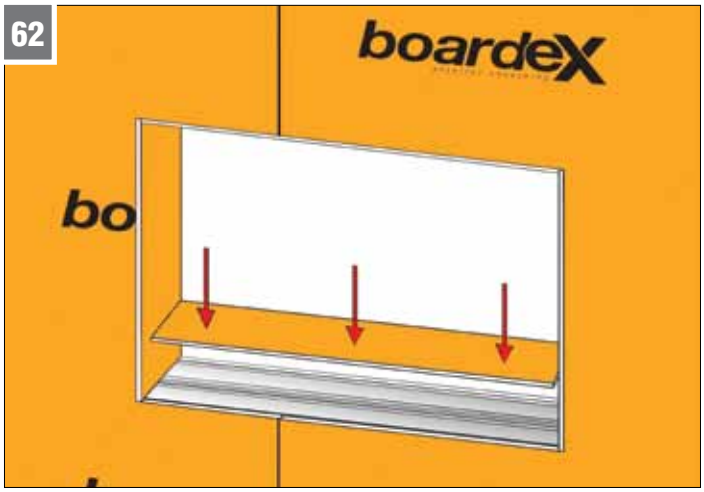
61



Right Application

BoardeX joints in the window cavities should be fixed onto the profiles above or below the lintel.

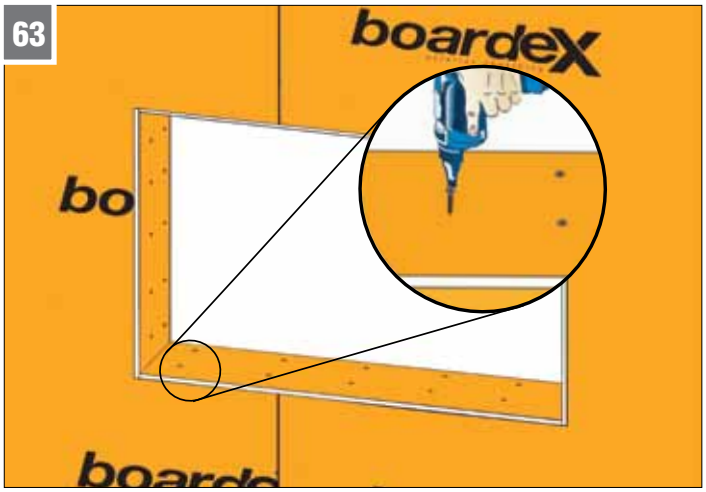
62



Window application details

BoardeX pieces are cut in appropriate sizes and placed on the profiles in the window cavity and the window edges are closed.

63

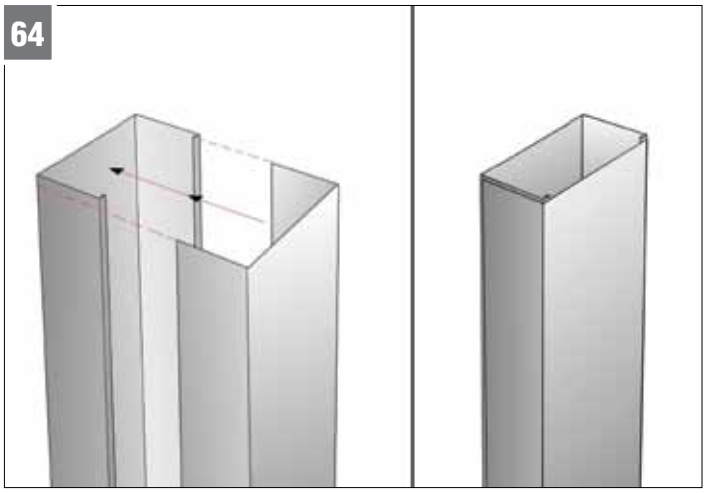


Window application details

The **BoardeX** pieces are fixed with Drillex screws and the window is made ready to fit the window assembly.

Doorway detail

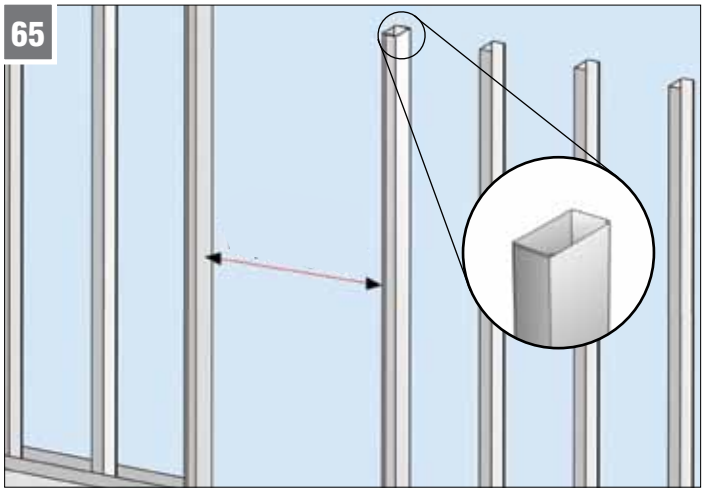
64



Doorway detail

On the vertical line where the door frame is going to be fixed, the **DCC** and **DU** profiles are inserted through each other.

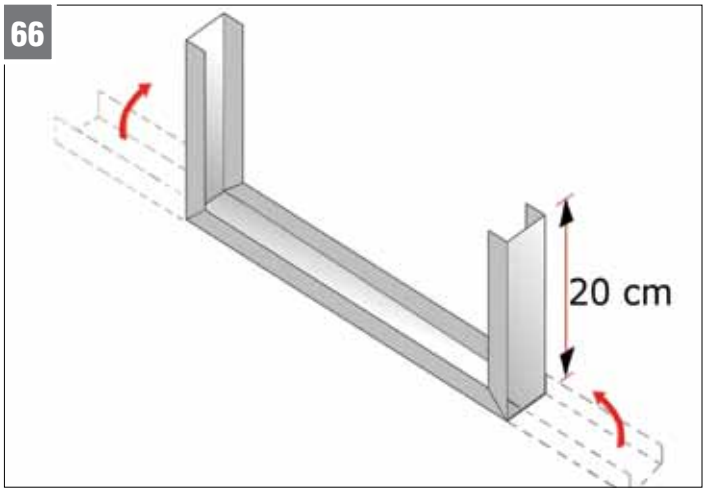
65



Doorway detail

These profiles are placed on both sides of the door to fit the door cavity horizontally.

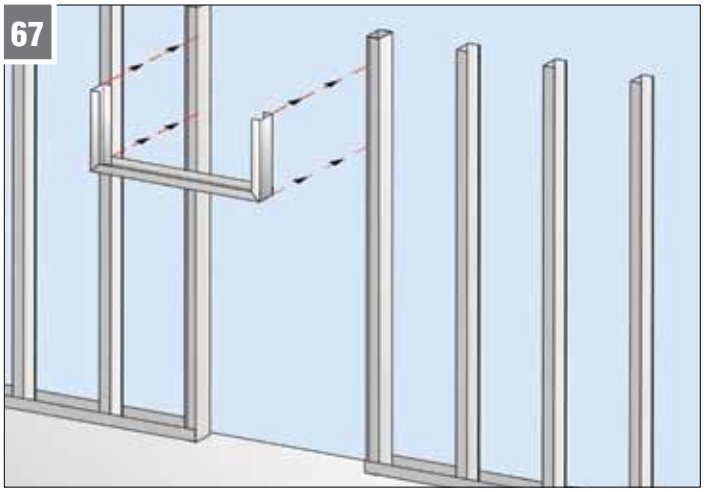
66



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

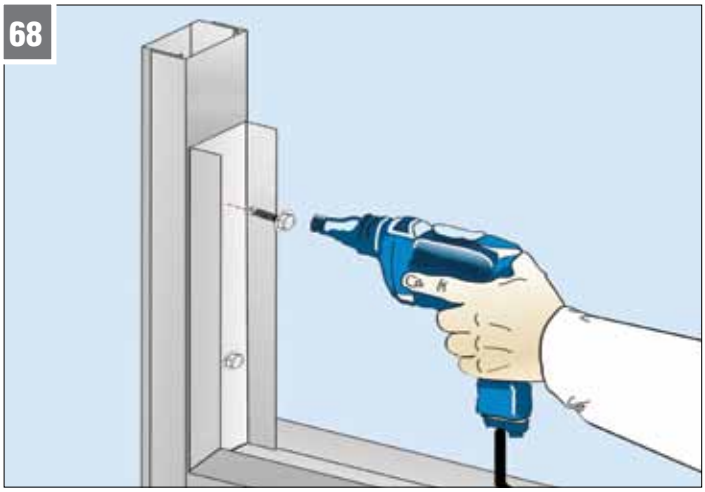
67



Placement of the lintel profile

The created lintel profile is placed in the door cavity corresponding to the upper section.

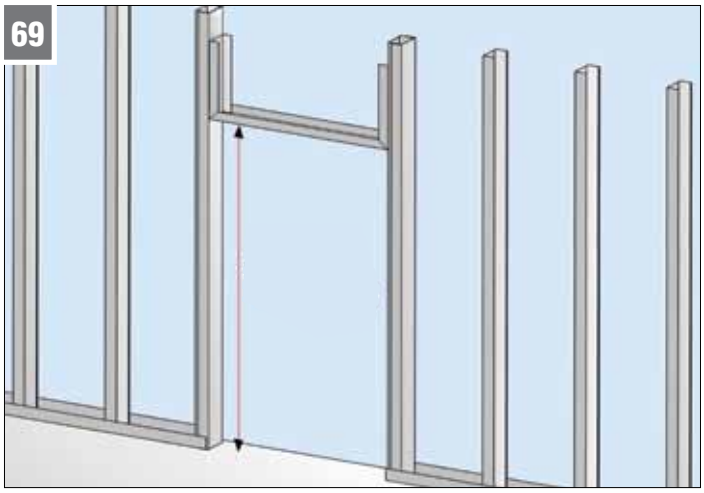
68



Fixing lintel profile

The created lintel is screwed onto the side profiles from inside with Drillex hex head screws from at least two points.

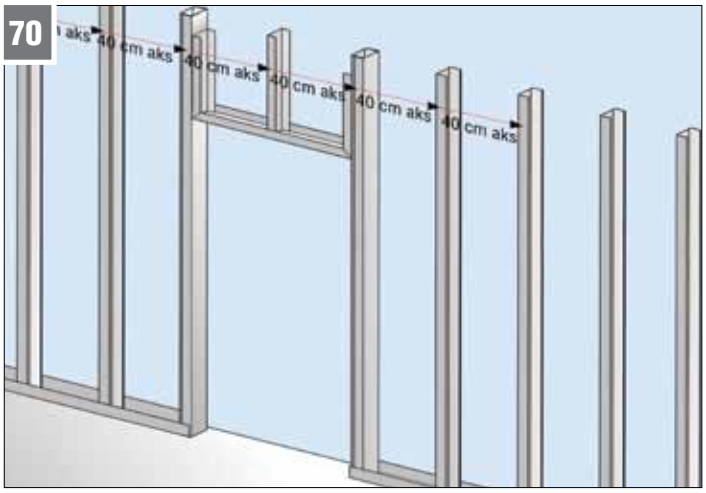
69



Placement of the lintel profile

The lintel profile is positioned according to the height of the door.

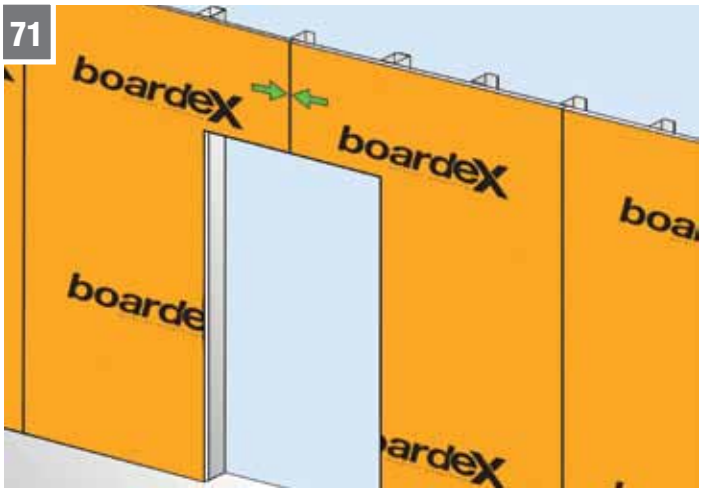
70



Doorway detail

Additional **DCC** profiles should be installed inside the lintel as required to allow the profiles to continue at a 40 cm (or 30 cm) axle spacing.

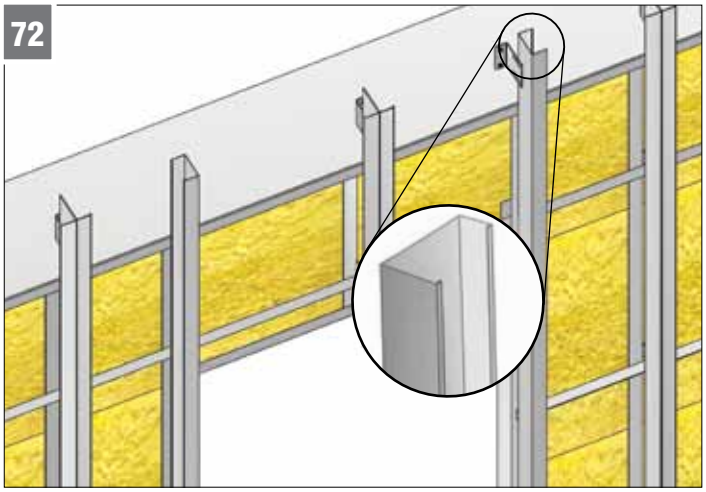
71



Doorway detail

The **BoardeX** joints in the door cavities are screwed in a way not to be aligned with the side profiles.

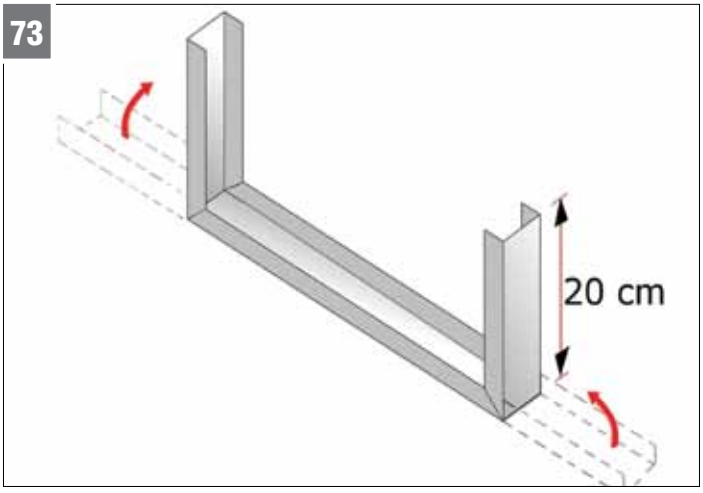
72



Doorway detail

Outside the carcass, **DCC** profiles are used instead of **BoardeX** CT profiles in the vertical line on which the window frame is to be fixed.

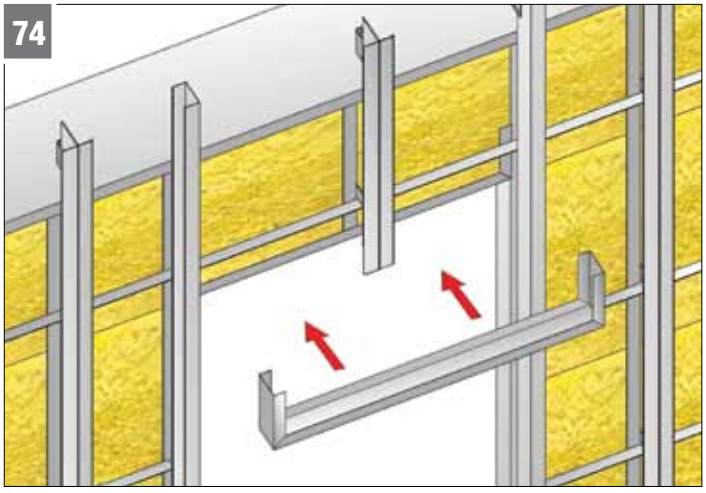
73



Creation of lintel profile

The **DU** profile at the thickness of 0.6 mm is cut according to the window width. It is folded in a right angle in a way to turn the side flanks 20 cm upwards.

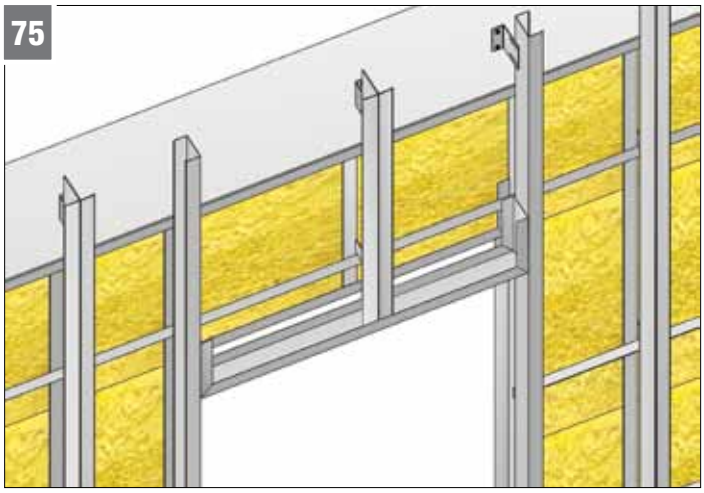
74



Placement of the lintel profile

The created lintel profile is placed in the door cavity corresponding to the upper section.

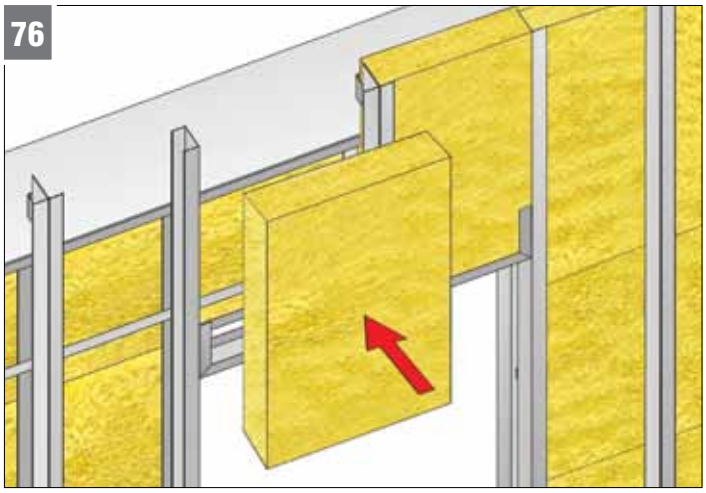
75



Placement of the lintel profile

The created lintel is screwed onto the side profiles from inside with Drillex hex head screws from at least two points.

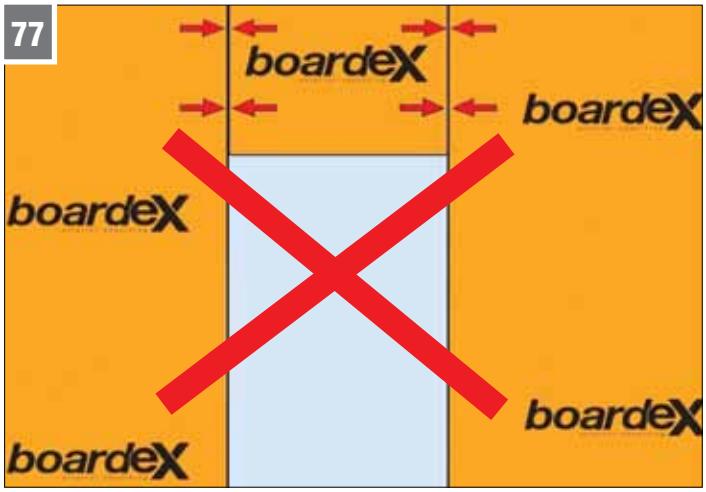
76



Doorway detail

Low-density mineral wool is placed between the profiles to increase the thermal insulation.

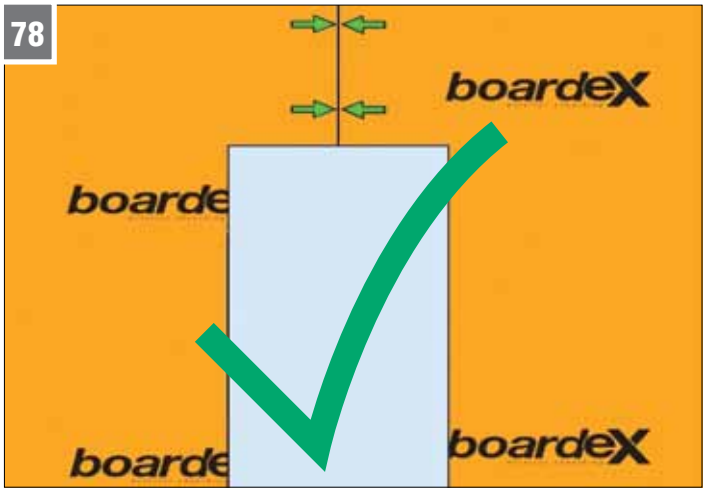
77



Wrong Application

The **BoardeX** joints in the door cavities should not be aligned with the side profiles.

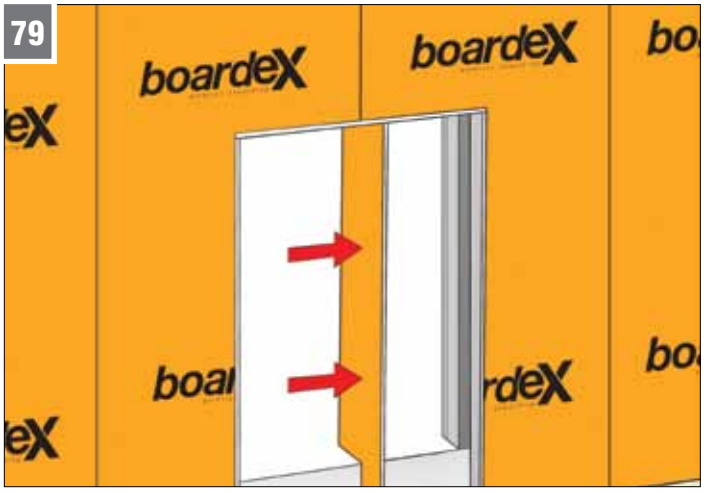
78



Right Application

The **BoardeX** joints in the door cavities should be fixed onto the profiles so that they would be on the lintel.

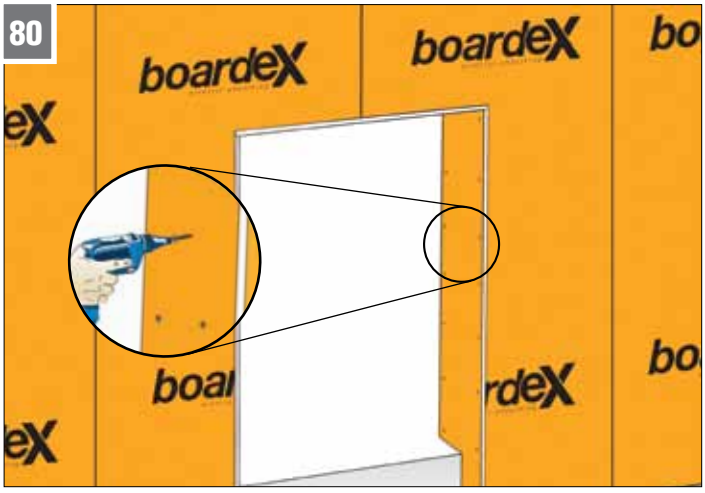
79



Doorway detail

Suitable sizes of **BoardeX** are cut and placed on the profiles in the door cavity and the edges of the doors are closed.

80

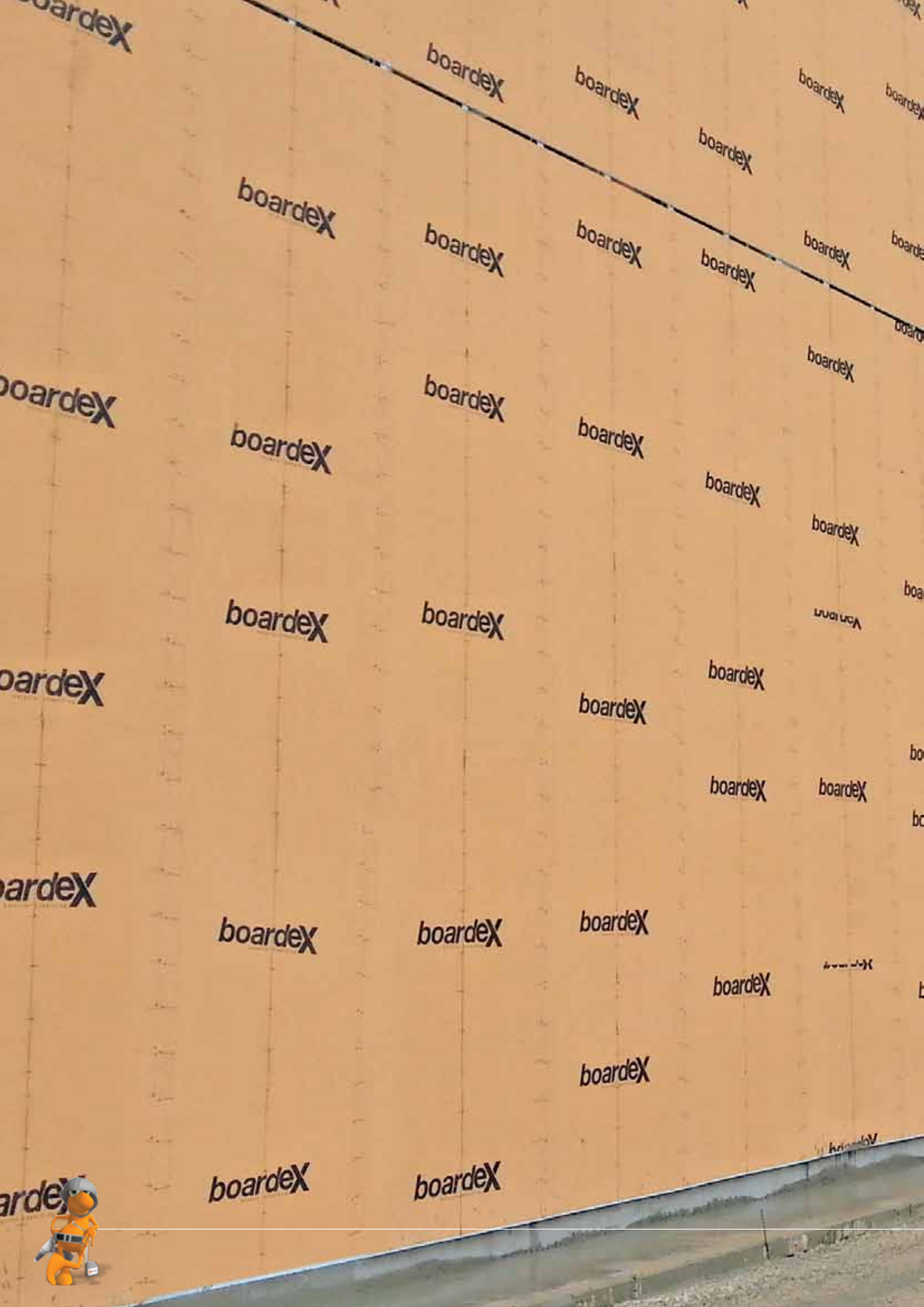


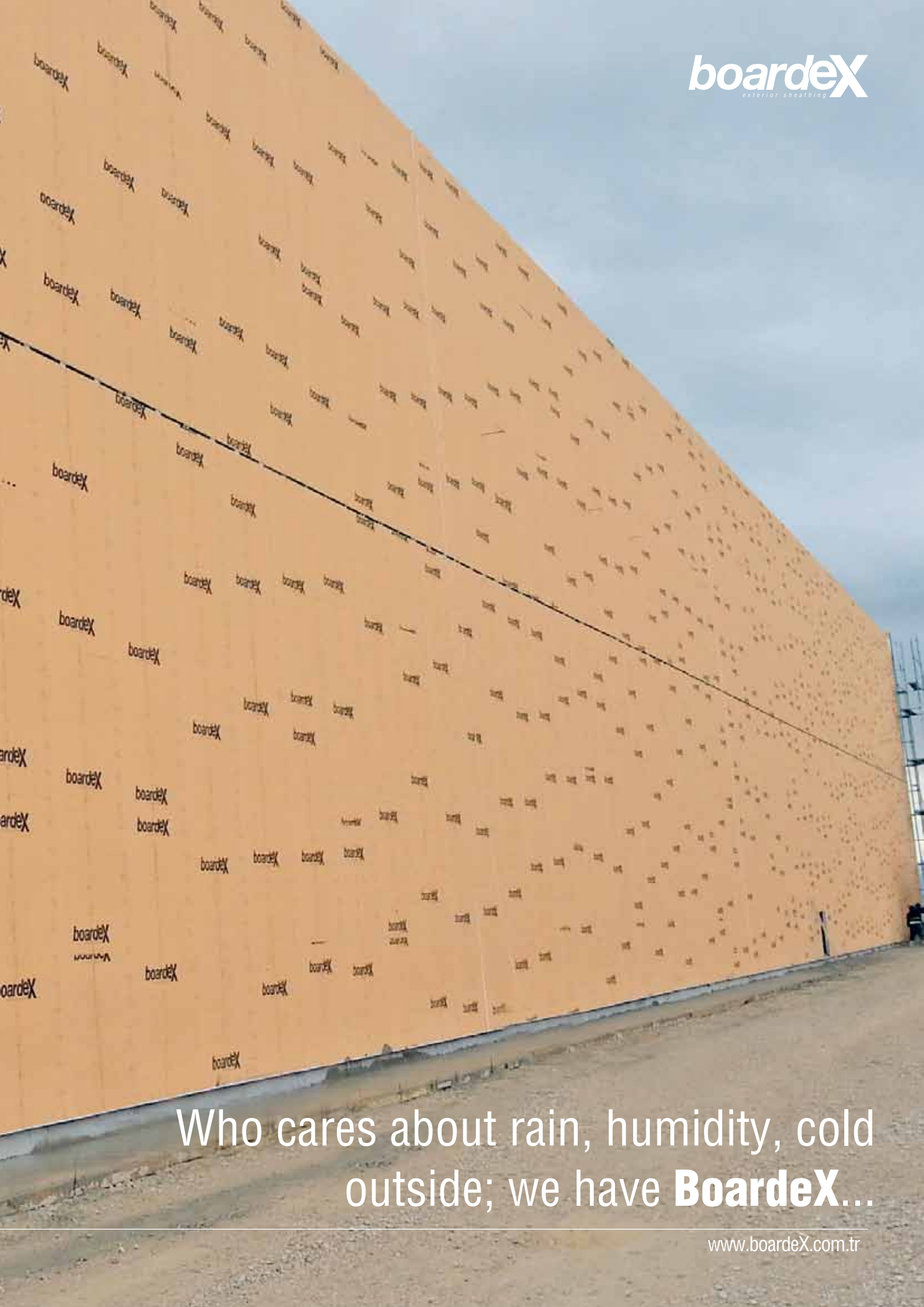
Doorway detail

The Edge **BoardeX** parts are fixed with BoardeX self-drilling screws and made ready for door assembly.

Frequently Asked Questions on CeketMax System

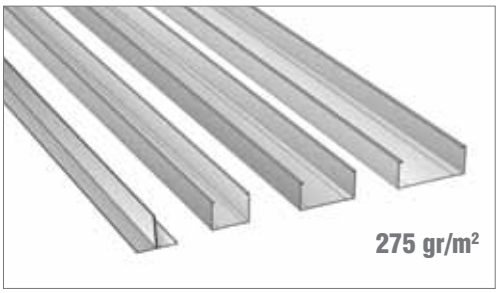
QUESTION	ANSWER
What is the maximum height of a building to apply the CeketMax exterior wall system?	In the calculations conducted in accordance with the TS 498 standard, it is applied to a load-bearing system for 150 km/h wind speed at a maximum 100 m height facade.
What is the maximum height between the floors to apply the CeketMAX exterior wall system?	The distance between the L brackets in the CeketMax exterior wall system should be 3 metres.
How far can we go outside the carcass in the CeketMAX exterior wall system?	With the **CeketMAX** exterior wall system, it is possible to create a maximum 16 cm wall outside the carcass.
Can we use a single L bracket at the junctions of the two CT profiles?	No, each CT profile must be fixed onto separate L brackets. A clearance of at least 5 mm should be left between two CT profiles.
Why is BoardeX used on the interior facing side of a CeketMax exterior wall system?	Yes, it can be done. **BoardeX** is not affected by this type of application.
Is it possible to carry out wet applications such as the screed or ceramic application after BoardeX is screwed on the interior?	Evet yapılabilir. **BoardeX** bu tip imalatlardan etkilenmez.
Why is plasterboard applied on the BoardeX surface facing interior?	In order to increase the fire, the sound, the mechanical and the acoustic performance of the exterior wall, one layer of **COREX** is applied on **BoardeX** on the inner surface.
Why is mineral wool used in the profile spaces in the carcass?	Mineral wool should be placed in the second row of profile line to increase the heat and sound insulation.
Why do we need to use a starter track?	A PVC-based starter track is used to make sure **BoardeX** does not contact the floor.


boardeX


boardeX
exterior sheathing
Who cares about rain, humidity, cold outside; we have **BoardeX**...
www.boardeX.com.tr

Considerations in BoardeX Applications

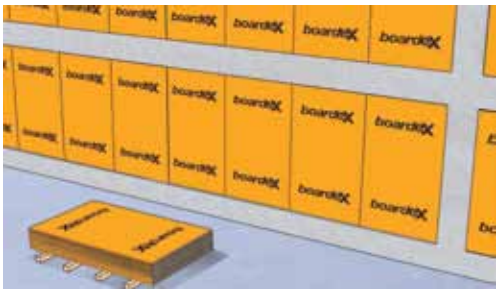
Considerations in BoardeX Applications



The metal profiles to be used in exterior wall construction should be galvanized at a weight of 275 gr/ m^2.

Resilient tape should be affixed underneath the **DU** and **DC** profiles which are fixed on floors, ceilings and walls in order to stop the formation of heat and sound bridges.

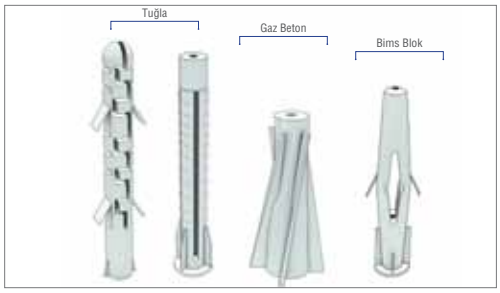
On the front surface of **BoardeX**, there are signs with 20 cm intervals indicating the screw entry points. These signs also display the horizontal axle spacings (40 or 60 cm) of profiles as well.



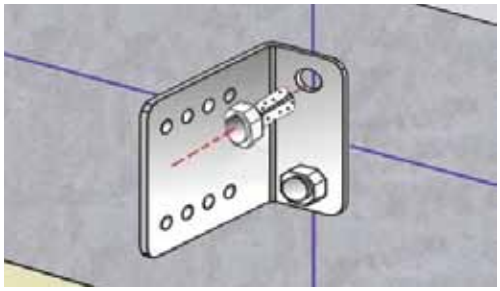
BoardeX can withstand for up to 12 months against outdoor weather conditions without requiring any cladding on the surface it is applied. **BoardeX** permits the construction of exterior walls while concrete is poured on the upper floors of the building. Pouring down concrete does not damage **BoardeX**.

On the inside of exterior walls constructed by **BoardeX**, wet applications such as screed and ceramic coating can be carried out before screflange plasterboard. After all these wet productions are finished, **COREX** can be fixed onto the surface of **BoardeX** , and the wall surface can be finished.

Considerations in BoardeX Applications

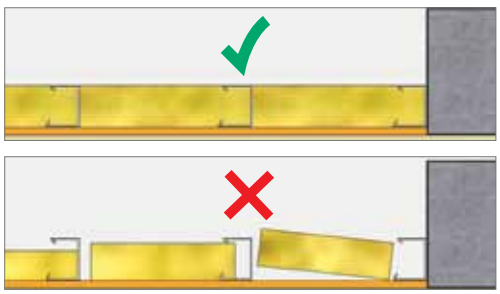


In the **CEKETLEME** system, L brackets should be fixed onto the existing wall from 2 points using dowels and screws suitable for the wall type (brick, aerated concrete, pumice block).



The L brackets should be fixed onto the reinforced concrete flooring by means of steel dowels from two points on a line determined by a guiding string.

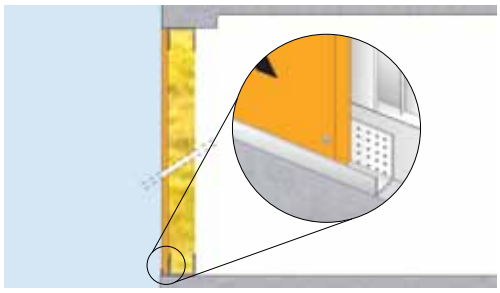
L brackets should be secured onto profiles by Drillex hex head screws from at least two points.



The mineral wools placed between the profiles should be filled in such a way that they do not form any gaps horizontally or vertically.

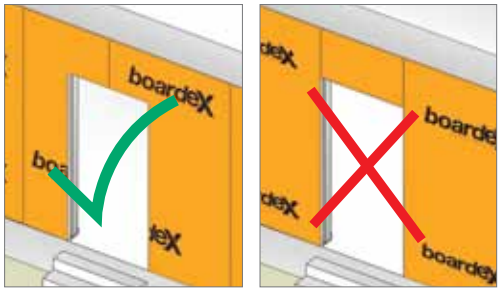
Right Application

Wrong Application



The first **BoardeX**, which corresponds to the floor, should be fitted to the PVC-based starter track so that the contact with the floor is cut off.

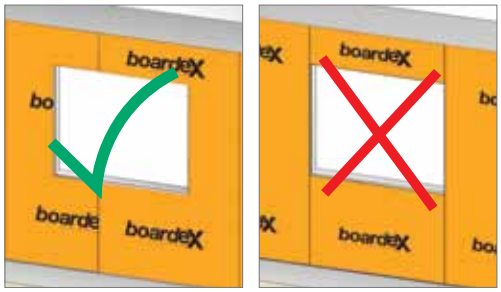
BoardeX should be fixed onto metal profiles by using corrosion resistant Drillex hard screws with 20 cm axle spacing.



BoardeX joints in the door cavities should not coincide with the door edge profiles, and the joints should be fixed onto the profiles above or below the lintel.

Right Application

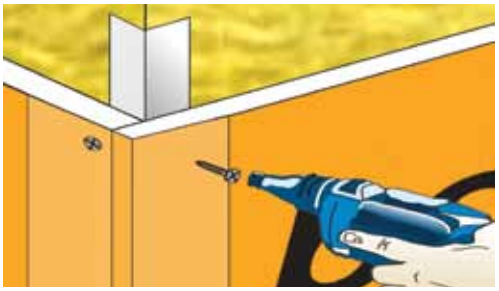
Wrong Application



BoardeX joints in the window cavities should not coincide with the window edge profiles, and the joints should be fixed onto the profiles above or below the lintel.

Right Application

Wrong Application



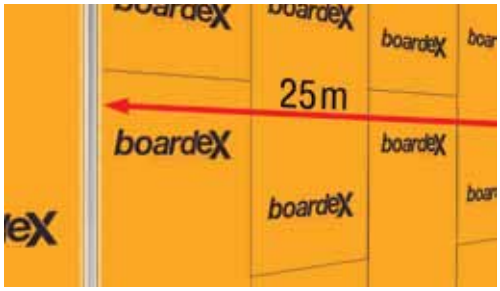
In the corner joints, **BoardeX** DKC corner profiles should be applied inside the corner.

Prior to installing any cladding material (siding, metal, wooden, decorative brick veneer, etc...) on **BoardeX** surface, an appropriate sealant should be used in the joints of **BoardeX**, in order to prevent air, moisture and water from leaking into the system.

Considerations in BoardeX Applications

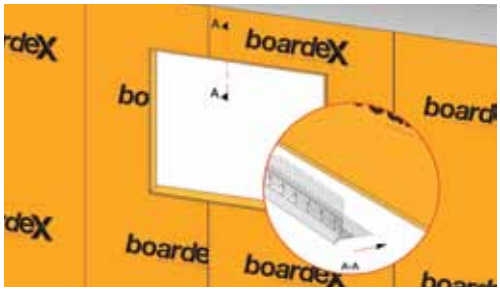
The carrier profiles of the ventilated wall systems are fixed onto the carrier profiles of the **BoardeX** exterior wall systems within the range of the axle spacings determined by manufacturing firms, and hence are designed to carry systems weighing 25 kg/m^2. As far as the ventilated wall systems to be applied onto **BoardeX** surfaces are concerned, the advice and application principles of the facade system manufacturers should be taken into account.

If the mineral plaster is to be applied on the BoardeX surface, the folloflange steps should be taken into consideration.

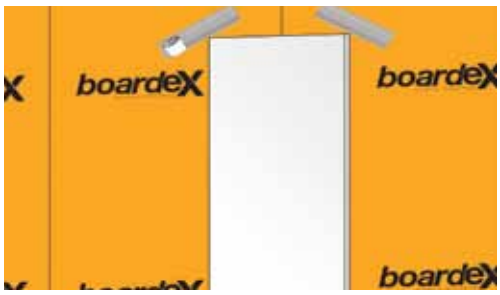


If the **BoardeX** surface is coated with mineral plaster, a joint profile with a PVC-based mesh should be used every 25 metres horizontally in order to maintain the dilation.

If the **BoardeX** surface is coated with mineral plaster, a joint profile with a PVC-based mesh should be used minimum every 6 metres vertically in order to maintain the dilation.



An edging with a PVC-based mesh should be used in the horizontal corners in areas such as eaves, doors and windows.

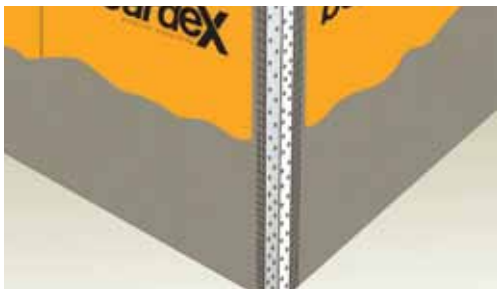


In order to reduce the risk of cracking in the corners of the door cavities, a joint tape should be applied in a cross manner and be covered by **Probase Render**.

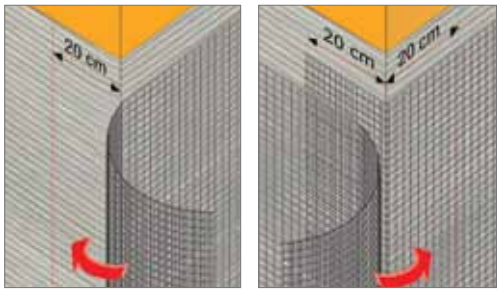
In order to reduce the risk of cracking in the corners of the window cavities, a joint tape should be applied in a cross manner and be covered by **Probase Render**.

Prior to coating mineral plaster on **BoardeX**, joint locations should be finished by applying alkali resistant joint band and **Probase Render**.

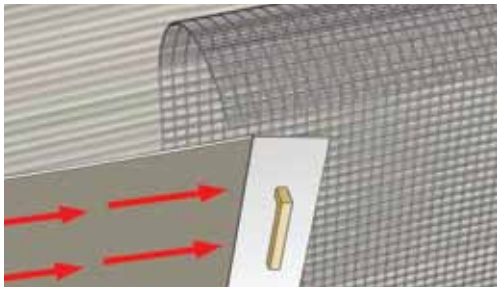
The primer coat application should be carried out at least 1 day after the joint application is completed.



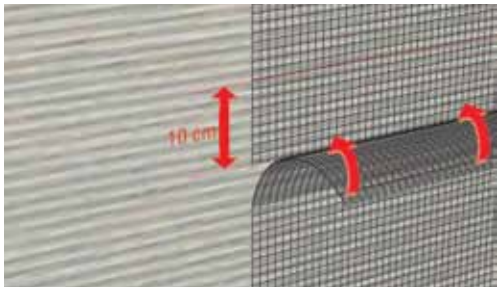
If the **BoardeX** surface is coated with mineral plaster, a corner profile with a PVC-based mesh should be used for the exterior corner joints.



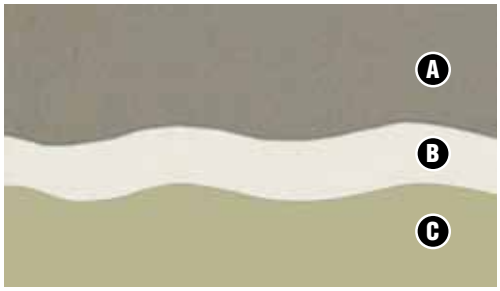
The plaster mesh to be used in the exterior corners should be overlaid 20 cm on both sides.



Probase Render should be applied on all the surface by using a notched trowel. A 160 gr / m^2 alkali-resistant plaster mesh should be placed near the surface to complete the primer before mineral plastering.



The plaster mesh should overlap around 10 cm at the joints.



After the prime coat is completed by **Probase Render** in accordance with the instructions above, for the application of mineral plaster to be applied on this primer coat and for paint application on the mineral plaster, advice and suggestions of mineral plaster and paint manufacturers should be complied with and information about application conditions should be obtained.

A **Probase Render**
B **Probase mineral**
C **Paint**

ALÇIDER
TÜRKİYE ALÇI ÜRETİCİLERİ DERNEĞİ

Regarding the plasterboard applications, the advice of **ALÇIDER** should be followed.

İZODER

In all the Thermal insulation applications to be applied on **BoardeX** surface, the advice of İZODER (Heat, Water, Noise and Fire Insulation Association) should be followed for the application principles of insulation material on **BoardeX** surface.

boardeX
exterior sheathing

Exterior Dry Wall Systems Application Manual

04/2018_Rev: 06

U Value Insulations -
Unit 3, Broadfield Business Park, Heywood, OL10 2TA - 01706 629793 - www.uvalueinsulations.co.uk
Unit 24 Trade City Business Park, Cowley Mill Road, Uxbridge, London, UB8 2DB - 0203 4811 322
Unit 510 Beech Road, Western Industrial Estate, Dublin 12 - 00353 016 931329
Unit 505B Northwest Business Park, Mitchelstown Road, Ballycoolin, Dublin 15 -00353 018 612000

CE mark Approved

U Value Insulation
Delivering Better Solutions