duofuse®

THE NATURAL LOOK

Vertical

ALUMINIUM POSTS

Instruction manual

General information

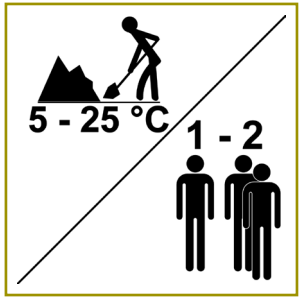
4 Required tools
6 Required parts
8 Preparation for vertical installation
- 8 Determining the length of the posts
- 12 Distance between the posts

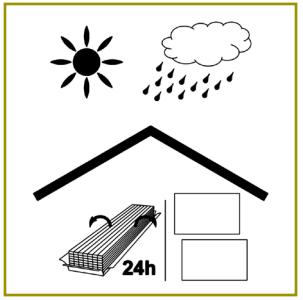
14 Placement of the posts
- 14 In the ground with concrete
- 20 Against a wall
- 22 On a solid surface

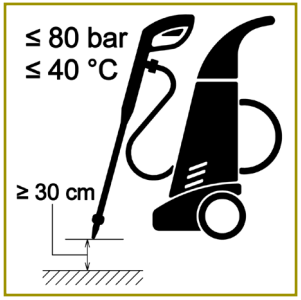
26 Creating a corner in the installation
30 Preparing the bottom profile
32 Support options
- 34 Supporting blocks
- 36 Concrete slab
- 38 Placing the bottom profile

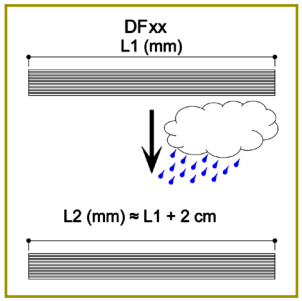
40 Preparing the installation of boards
- 40 Shortening the boards

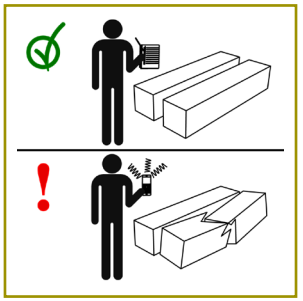
42 Placing boards
44 Preparing the top profile
46 Placing the top profile
48 Finishing the end post
50 Placing the cover cap











Before starting the installation, we recommend that you read the installation instructions carefully, the latest version is always available on the website *(https://www.duofuse.com).*
Questions can be forwarded via the contact form on the website (*www.duofuse.com/en/Contact/#form).*
Plastivan disclaims any responsibility if these regulations are not complied with.

Storing
Stack Duofuse® products flat and protected from rain, sunlight or other external factors..

Placement
Do not install the garden fence at temperatures below 5°

Allow the profiles to acclimatise for at least 24 hours before processing. Remove packaging if present. For vertical installation with aluminium or PVC boards, the total height of the garden fence without shortening the boards is 2080 mm as standard.

Safety
Wood composite boards do not provide a load-bearing structure. Duofuse® garden fencing should not be used as a balustrade or demarcation of terraces higher than 200 mm from ground level.

Personal protective equipment
Make sure you wear appropriate personal protective equipment, such as safety glasses, hearing protection, gloves, safety shoes and others if applicable.

Processing of Duofuse® products
Classic tools can be used for all operations on Duofuse® products. Use a drill with slow speed and high torque.

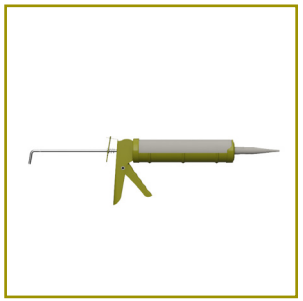
Ensure that all residues, sawdust and waste are carefully collected and properly disposed of according to applicable environmental standards.Avoid spilling or spreading residues during the processing process. If necessary, install protective barriers to prevent contamination of soil and water.

Visual appearance Duofuse® products
After the garden fences are exposed to some rain, drip edges or circles appear on the wood composite. This is a temporary process caused by the release of lignin from the wood. Rinsing with a garden hose makes this ringing disappear temporarily. After some time, this process stops and these markings disappear completely.

Colours and brushing may differ from one production to another and are not contractually binding. It is not recommended to mix boards from different production batches. You can find the production date on the top of each board.

Damage
In the event of any damage, the distributor/placer responsible for supplying/installing the garden fence should be contacted.

Required tools



Silicon pump

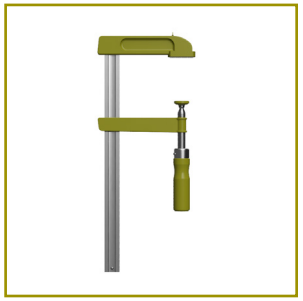
Cutter knife

Bucket

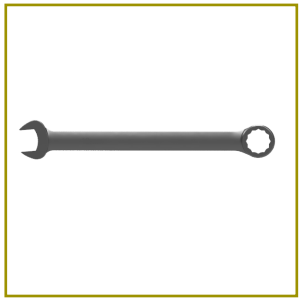
Stone drill Ø8-13

Bit PH1

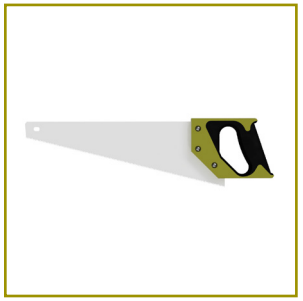
Bit T20



F-clamp

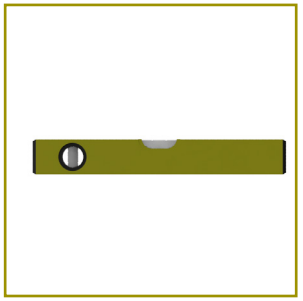


Hex key 13 mm

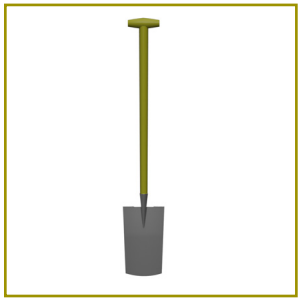


Wood saw

Screwdriver



Level



Spade

Metal saw

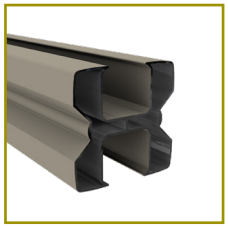
Screwdriver

Metal drill Ø3-13

Mason cord

Required parts

Standard placement



DF1PA82

Aluminium post

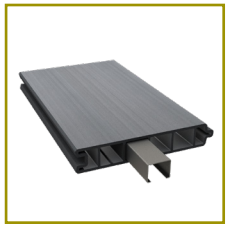
DF1CA8.2

Plastic cap

DFR35X35

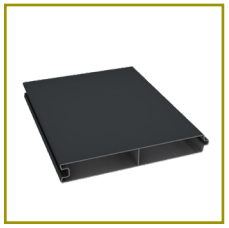
Cellular rubber band

Range of planks



DF1B150

Tongue and groove plank (WPC)



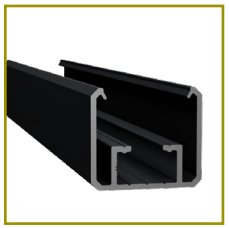
DF5BA200

Tongue and groove plank (ALU)

DF6BP250

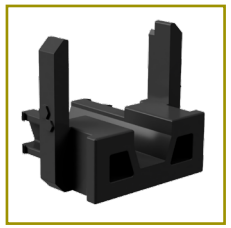
Tongue and groove plank (PVC)

Bottom profile



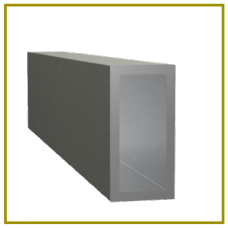
DF1UA2833

Aluminium U-profile



DF1SUPT

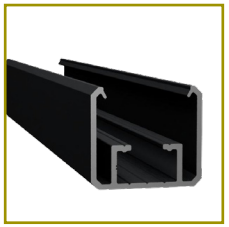
Plastic end piece for alu U-profile



DF1A5025

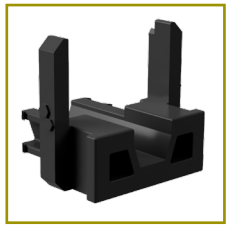
Aluminium tube profile

Top profile



DF1UA2833

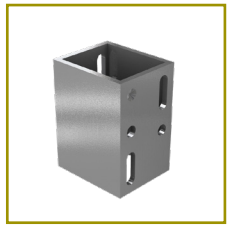
Aluminium U-profile



DF1SUPT

Plastic end piece for alu U-profile

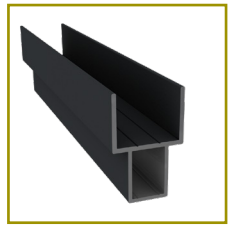
Ondersteuning planken



DF1SUPA

Aluminium support

Applicable to suspended

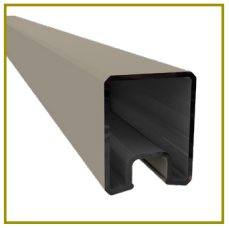


DF1UA42

Aluminium support

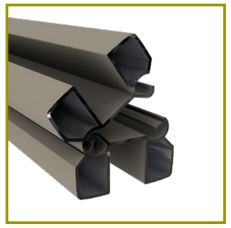
Applicable for placement of concrete slab

Optional



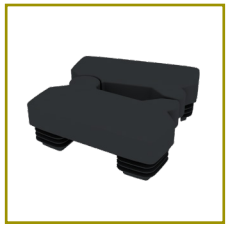
DF1UA28

Aluminium top profile



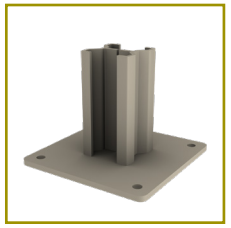
DF1PA41

Aluminium hinge post



DF1CA4.1

Plastic cap



DFPHA15

Internal post holder aluminium post painted

Optional

DFRT10X6

Cellular rubber band

DF1PA41 + DF1CA4.1: Only needed when making an angle of 60° to 169°

DF1UA28 + DFRT10X6: finishing end post

DFPHA15: Only applicable for installation on solid ground (The concrete slab must have a minimum thickness of 8 cm).

Preparation vertical placement

Determining length of posts

Length of board

=

Desired height of garden fence

−

Top profile height

U-profile	Height (mm)
Ref. DF1UA2833	15

−

Bottom profile height

Type	Height (mm)
Support blocks**	Above ground level = 65 Even the ground level = 0
Concrete slab*	Number of mm above ground +15
Solid surface*	15

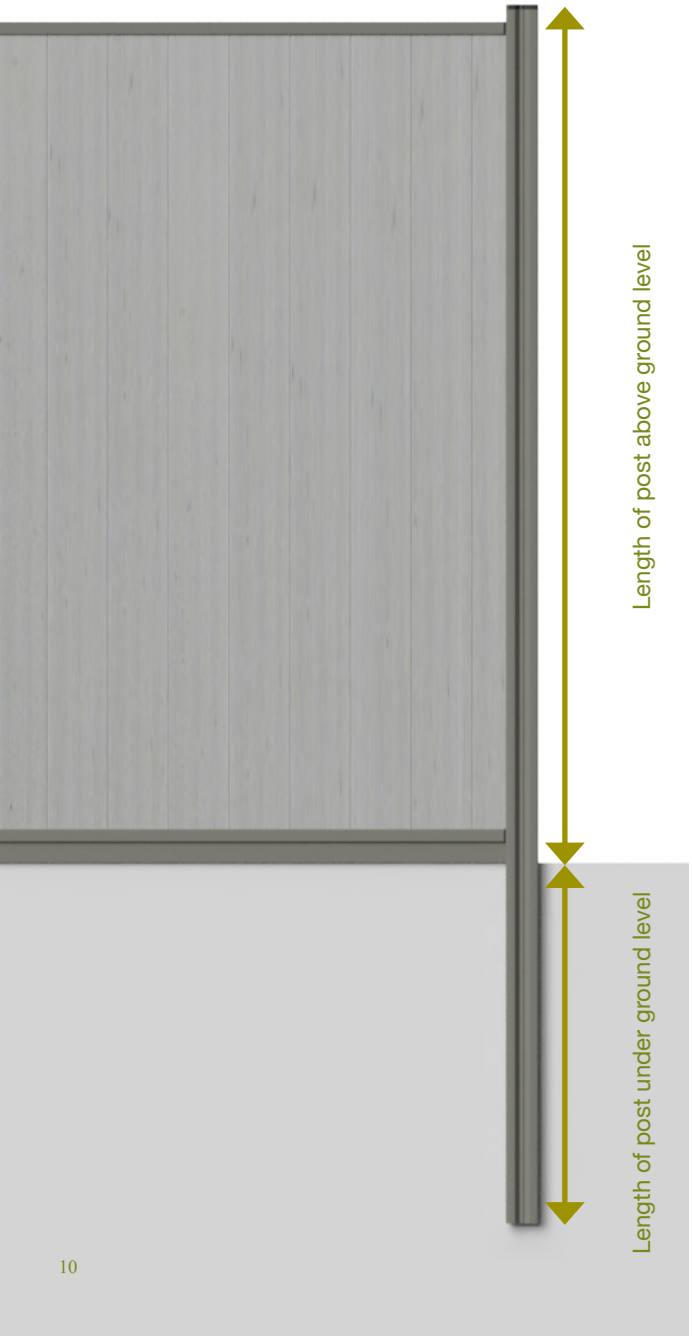
*Obligatory use of **DF1UA2833** + **DF1SUPT**

Obligatory use of **DF1UA2833 + **DF1A5025** + **DF1SUPT**

If garden fence will be floating above the ground, subtract this distance

Preparation vertical placement

Determining length of posts



Length of post above ground level

Height garden fence +

Expansion joint

Tongue and groove board	Number of mm
Ref. DF1B150	50
Ref. DF5BA200	30
Ref. DF6BP250	30

+

Length of post under ground level

Length of post above ground level (mm)	Length (mm)
>= 1500	900
>= 1200 & < 1500	700
< 1200	500

Preparation vertical placement

Distance between posts

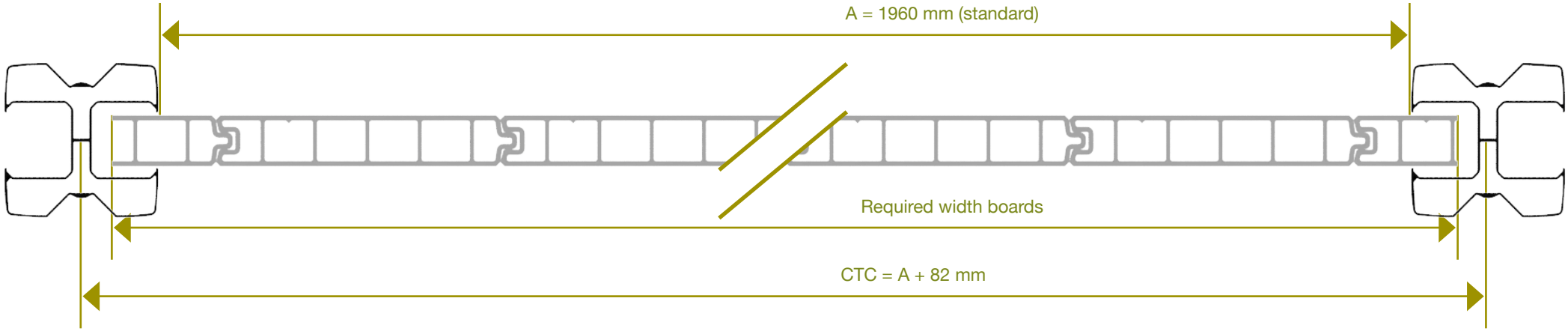
Required width boards

Tongue and groove board	Total width (mm)
Ref. DF1B150	Distance between posts (A) + 30
Ref. DF5BA200	Distance between posts (A) + 40
Ref. DF6BP250	Distance between posts (A) + 40

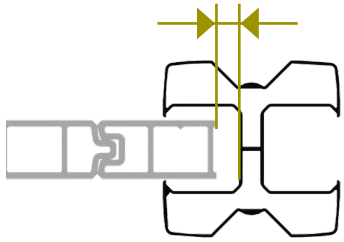
Example of standard dimensions distance between posts (A) 1960 mm and DF1B150:

Required width boards = distance between posts (A) + 30 mm
= 1960 + 30 mm
= **1990 mm**

Center to center distance posts (CTC) = distance between posts (A) + 82 mm
= 1960 mm + 82 mm
= **2042 mm**



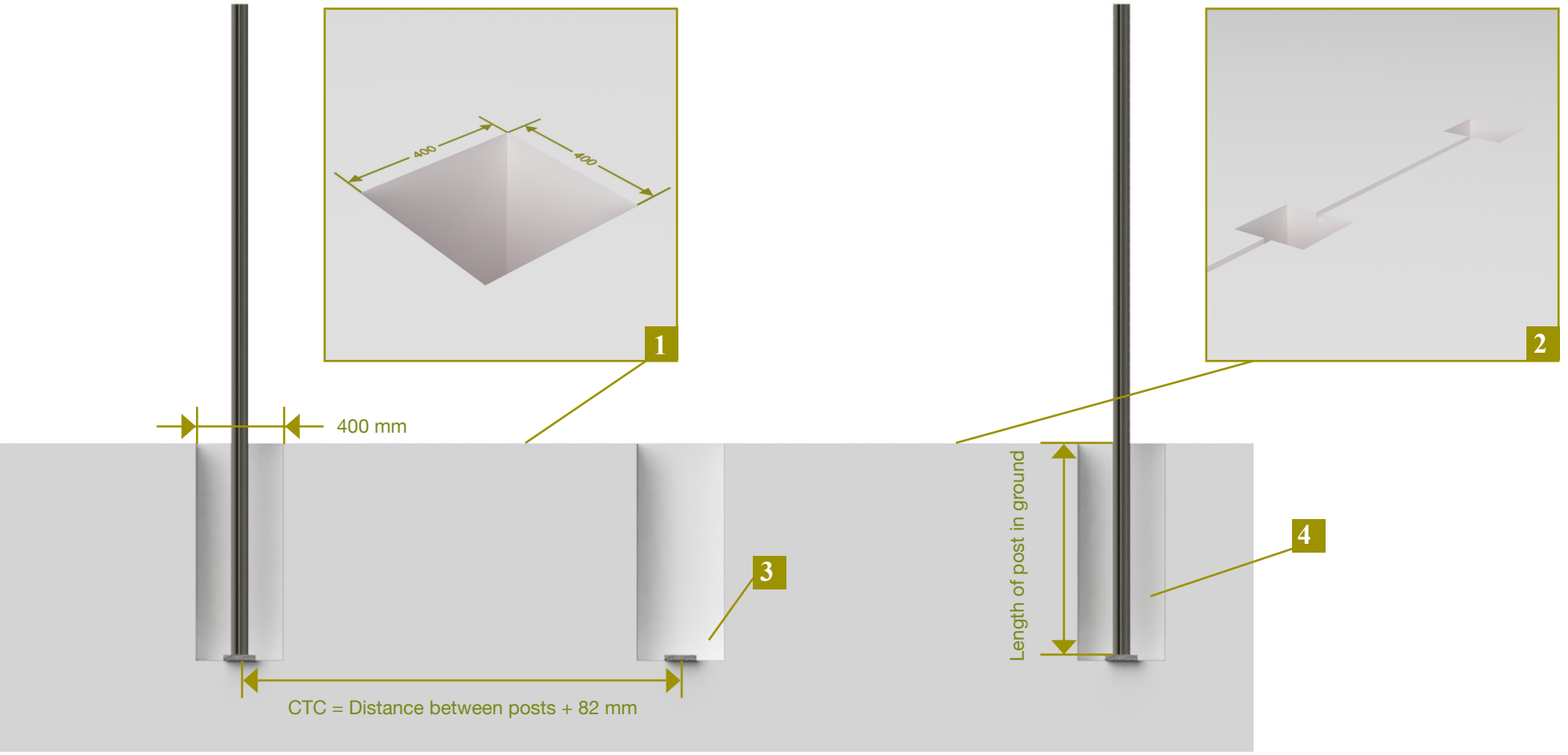
Expansion joint



Tongue and groove board	Expansion joint
Ref. DF1B150	20 mm
Ref. DF5BA200	15 mm
Ref. DF6BP250	15 mm

Placement of the posts

In the ground with concrete



1 Dig wells of 400 x 400 mm with spacing (CTC) as a function of pile spacing.

2 Optionally, you can dig a groove between the holes to insert a concrete slab or the bottom profile.

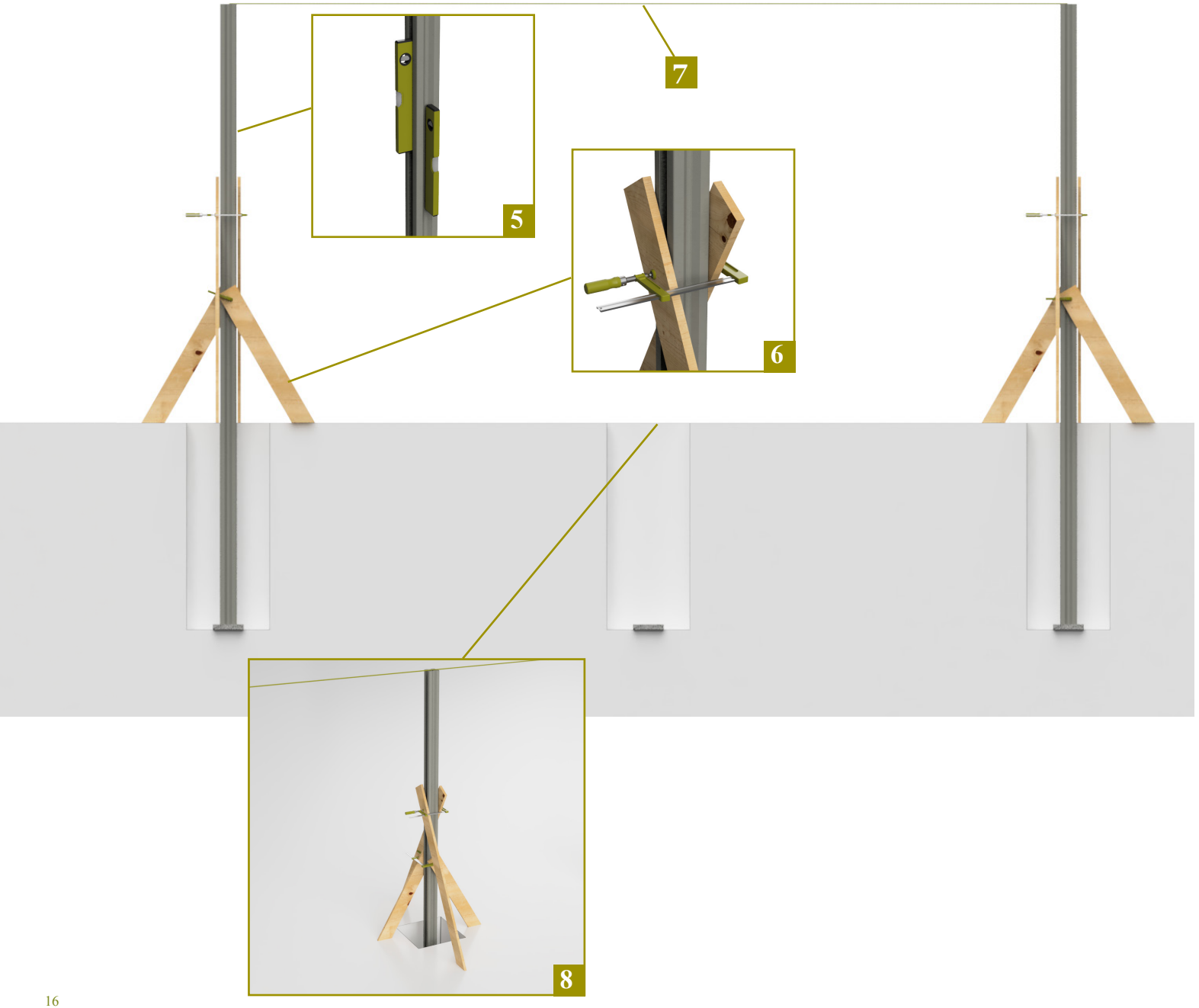
3 It is recommended to place a tile or stone at the bottom of the pit to prevent the post from sinking while the concrete is curing.

4 Check that the well has the correct depth. The depth should be equal to the length of the post that is to be driven into the ground.

If tile or stone is used, add its thickness to the length of the post in the ground to obtain the correct depth for the wells.

Placement of the posts

In the ground with concrete



Start by placing the first and last post in a row.

5 Check that the posts are straight.

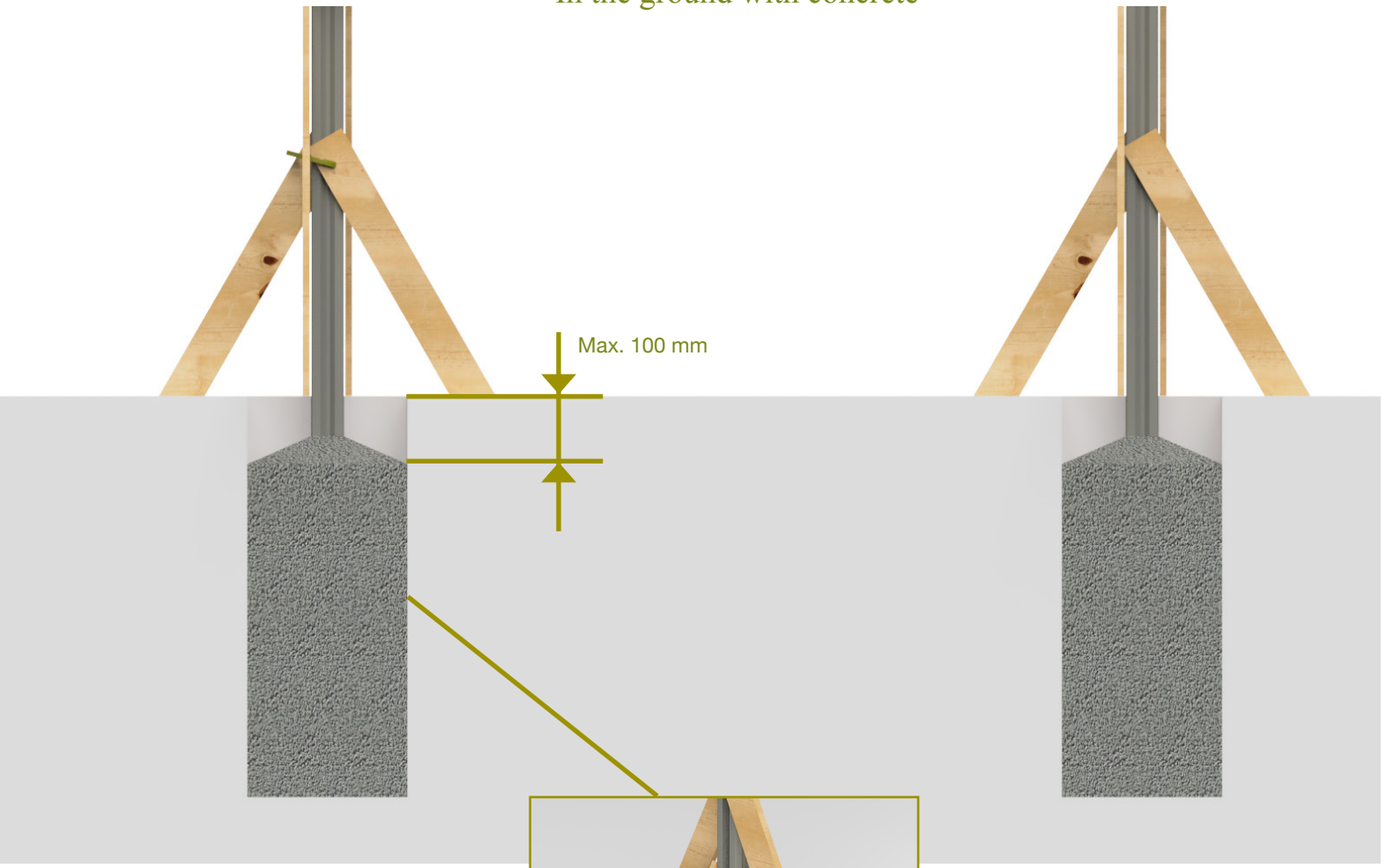
6 Then temporarily secure the posts.

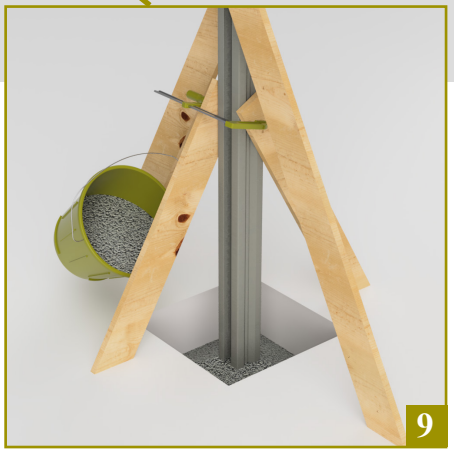
7 Then stretch a cord between the top of both posts. This ensures that all posts are in line and that they are the same height.

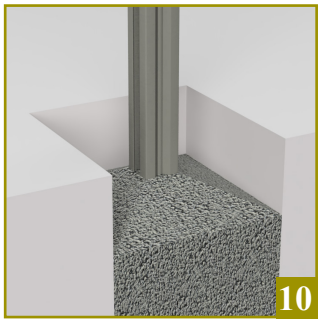
8 Then place the intermediate posts. Check that the posts are straight and then secure them temporarily as well.

Placement of the posts

In the ground with concrete




9


10

11


12

9 Then fill the wells at least 2/3 full with (quick) concrete and up to a maximum of 100 mm below the top of the well.

After pouring the (quick) concrete, check that the posts are still straight. Keep in mind if you use a support block (DF1SUPA) for mounting that there is no concrete in the way to mount the block.

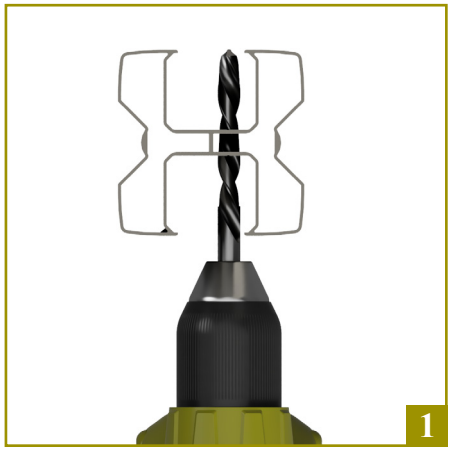
10 It is advisable to finish the edges at an angle so that no water can remain between the concrete and the post to prevent the concrete from cracking afterwards.

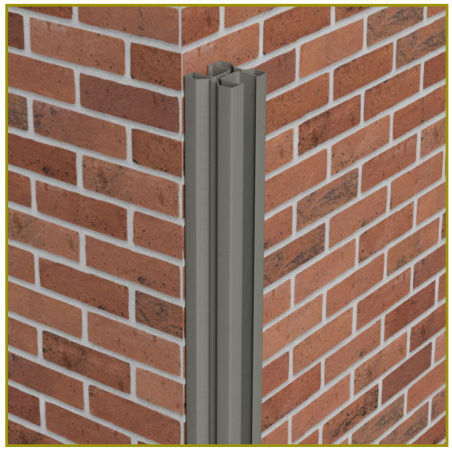
11 Wait min. 24 hours before placing the plank. When using rapid concrete, be sure to consult the packaging.

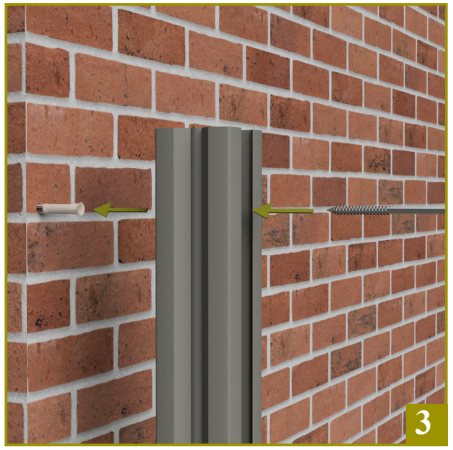
12 You get the following result.

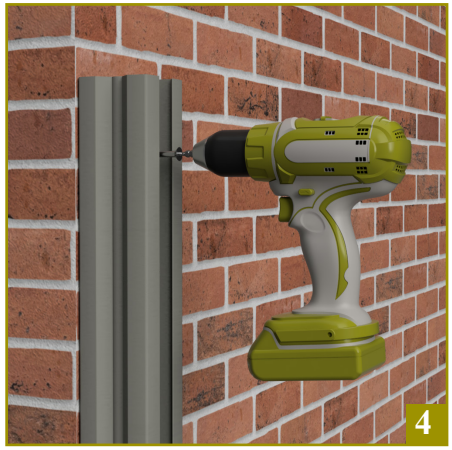
Placement of the posts

Against the wall









Drill at least three holes in the post for the screws. Make sure these are evenly distributed along the length of the post.

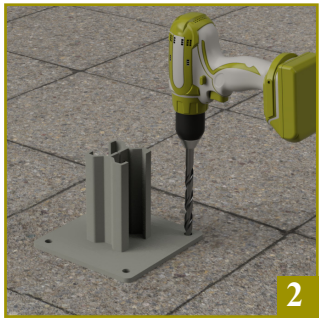
1 Do not drill the holes straight through the centre of the post, but slightly to the left and right in the grooves provided.

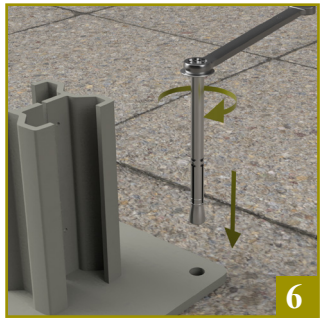
2 Then drill holes in the wall at the corresponding height as the holes in the post.

3-5 Fix the post to the wall with screws and dowels. Make sure the screws are at least 120 mm long.

Placement of the posts

On a solid surface





1 Place the internal post holders at the desired location with the correct centre to centre distance (CTC).

2 Mark out the holes with a 13mm drill bit.

3 Then remove the post holder and drill with the required diameter through the substrate **(4)** deep enough according to the chosen fasteners.

5 Check that the post holder is level in both directions, if this is not the case, the post holder can be raised on the lowest side using glazing blocks / expansion plates / thickness blocks in plastic.

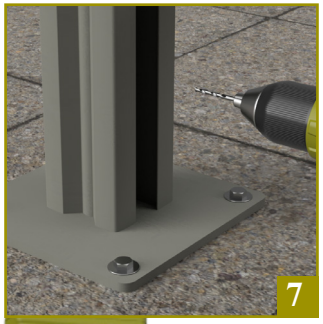
6 Use chemical anchors or wedge bolts to secure the post base with a minimum length of 100 mm and a thread diameter of 12 mm.

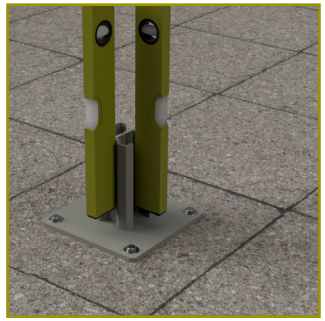
When using chemical anchors, consult accompanying instructions. Shorten the post to size and place it on the post holder.

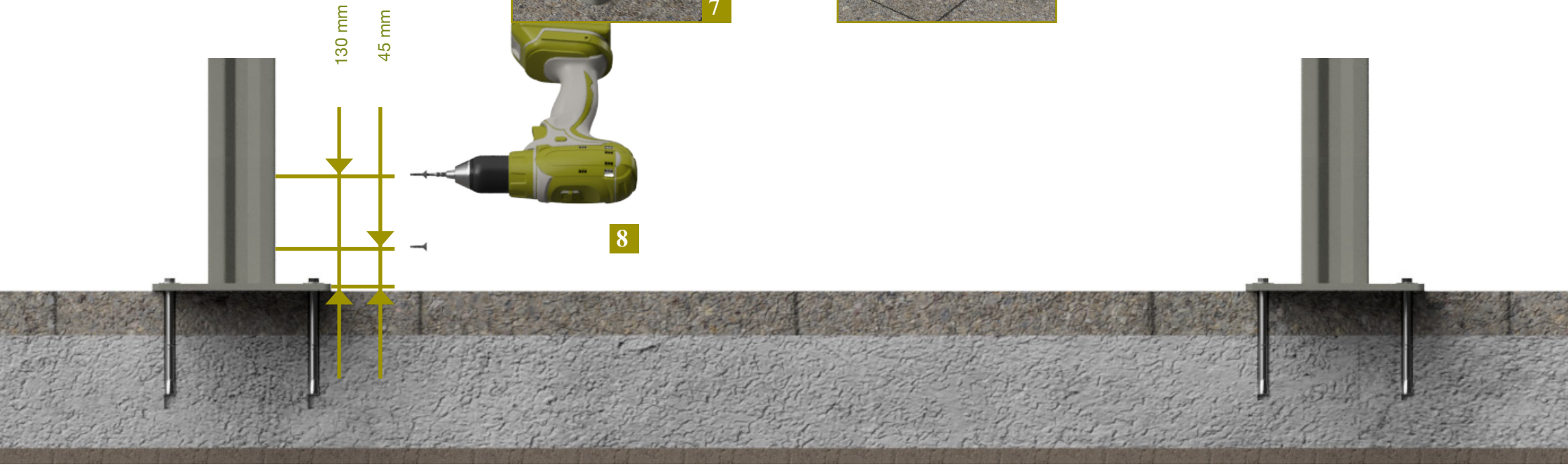
In wind-prone areas, it is recommended to secure the posts in the ground.

Placement of the posts

On a solid surface







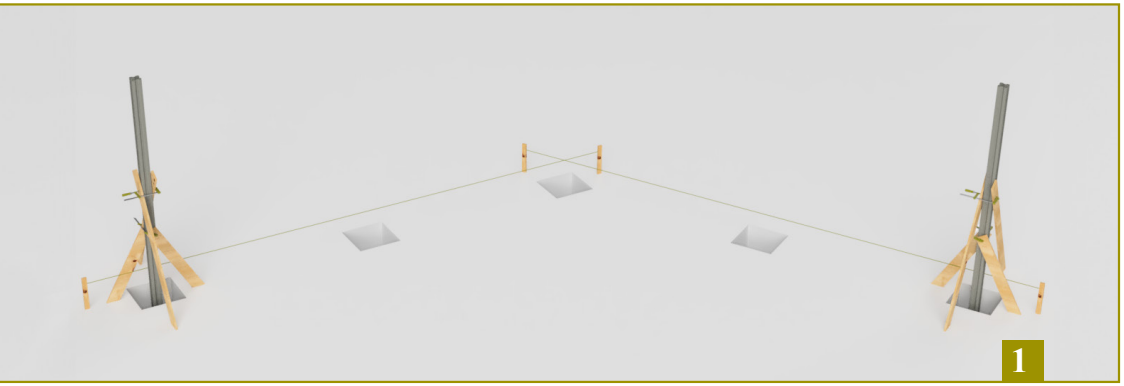
7 Pre-drill (drill diameter 3 to 3.5 mm depending on the screw diameter to be used) at the bottom of the post 45 mm as well as at 130 mm height.

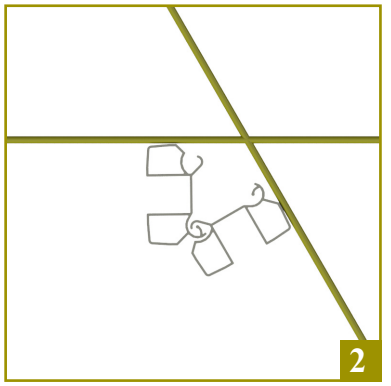
Attention, if a support block is placed, there will therefore not be a screw at 45 mm height but it will have to be placed above the block.

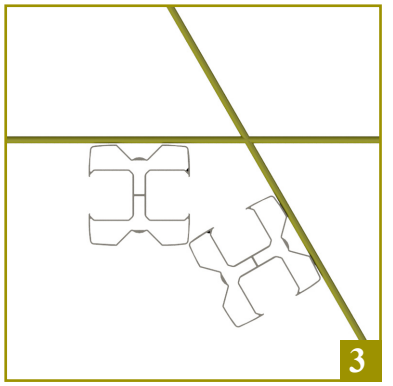
8 Now attach the post to the post holder with at least two self-drilling screws (minimum diameter 5 mm).

In wind-prone areas, it is recommended to secure the posts in the ground.

Creating a corner in the line-up







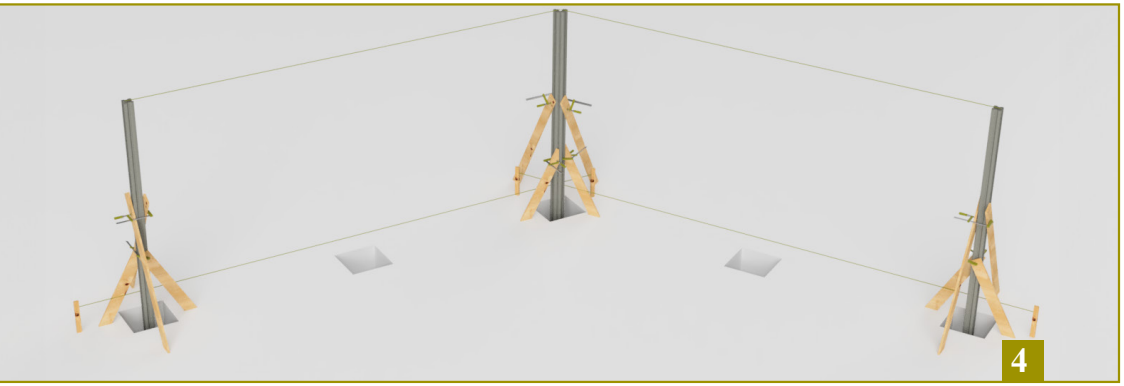
An obtuse angle can be achieved using a hinge post (DF1PA41) or two standard posts (DF1PA82).

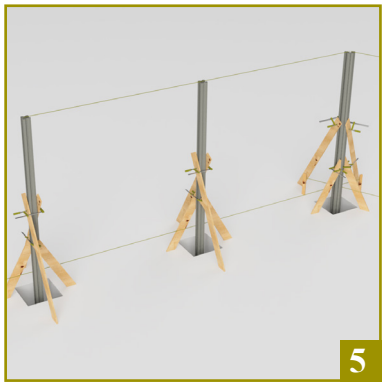
1 To start, the wells for all the piles are dug. Place the first and last posts in the row and temporarily secure them. Then, at ground level, tension a wire from each end post to the corner.

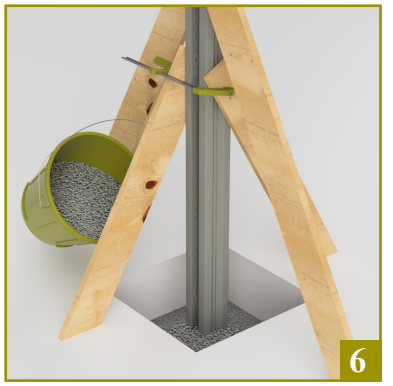
Make sure these wires come up to the posts and are parallel to the screen to be installed. At the intersection of the two wires, you can now place the corner post (hinge post **(2)** or standard post **(3)**).

Check the alignment with the two end posts.

Creating a corner in the line-up







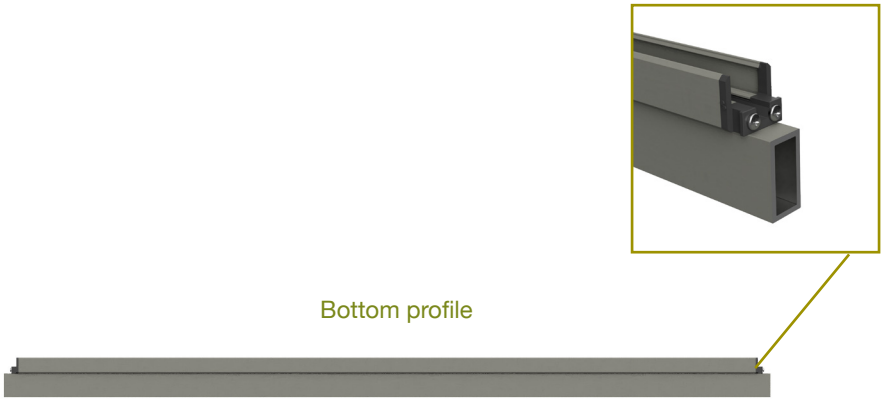
4 Temporarily secure the corner post. Stretch a wire between the tops of the three posts. This ensures that all posts are in line and that they are the same height.

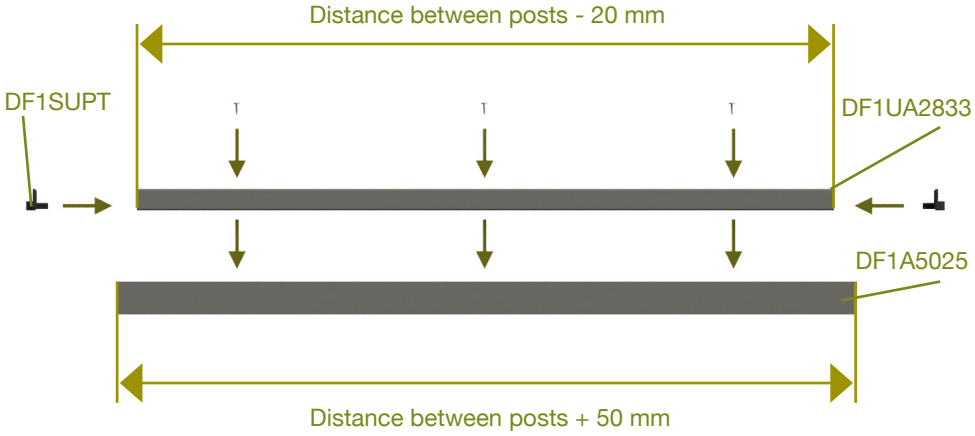
5 Place the remaining posts and temporarily secure these too.

6 Now secure all posts with (quick) concrete.

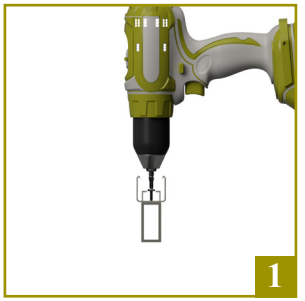
7 Wait min. 24 hours before placing the plank. When using rapid concrete, be sure to consult the packaging.

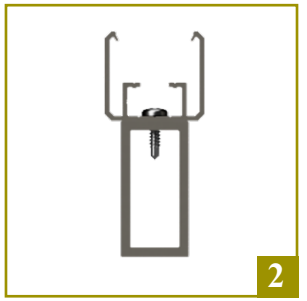
Preparation of bottom profile

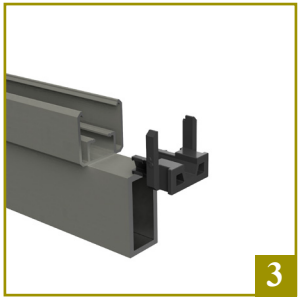


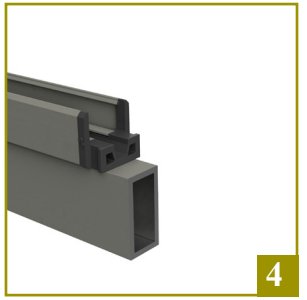


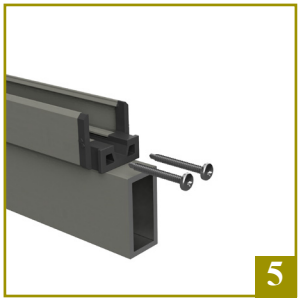
Tubular profile only applicable when using support blocks and/or post holder

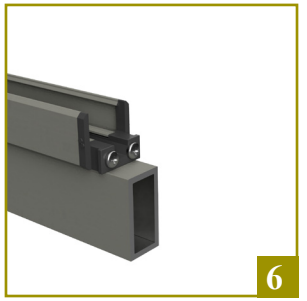












For vertical installation, the bottom profile consists of a top profile *(ref. DF1UA2833)* that is shortened so that its length is 20 mm shorter than the distance between the posts (standard 1960 mm).

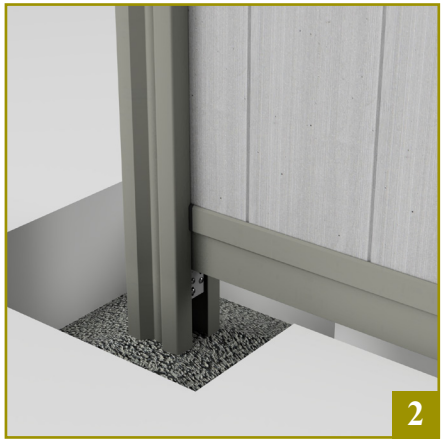
This top profile is mounted **(1-2)** with three screws (diameter 3 mm and length 10 mm) on a box section *(ref. DF1A5025)* with equal space left on both sides.

The length of this box section should be 50 mm greater than the distance between the posts (standard 1960 mm).

3-6 An end piece *(ref. DF1SUPT)* is placed on the ends of the top profile. This end piece is fastened with two screws.

Support options

Possibility 1: The boards rest directly on the substrate. This can only be done if the surface is solid (terrace tiles or concrete floor). If the boards are not placed on a solid surface, this may result in subsidence of the boards. It is therefore necessary with this option to work with a solid substrate.

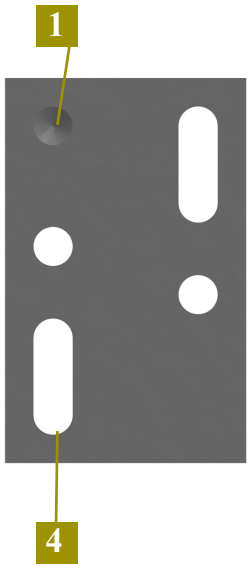


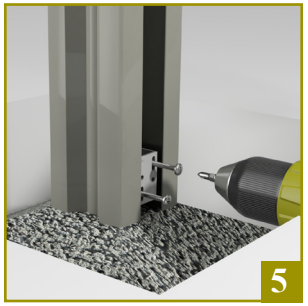
Possibility 2: The boards are supported on a bottom profile and support blocks. The garden screen is in “suspended“ position.

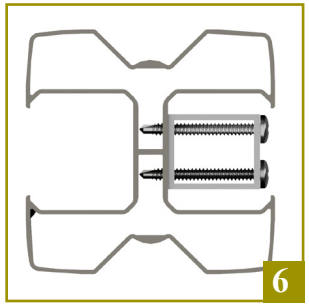
Possibility 3: The boards are supported on a concrete base plate that will be flush with or above the ground.

Support options

Support blocks (DF1SUPA)







1 Each block has a mark in the top left corner on one side. Make sure it is always in the same position when looking at the block. This will prevent the screws from colliding with each other during assembly.

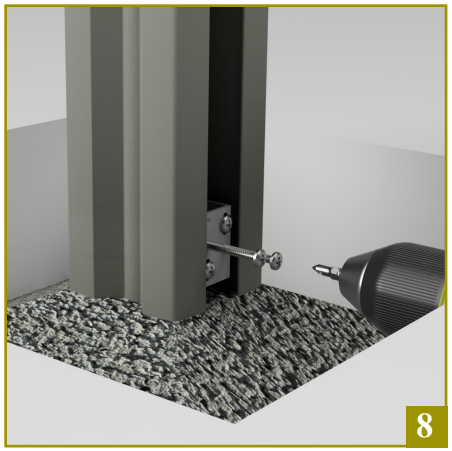
2 Place the support block at the desired height (standard top of the block flush with ground level).

3-4 Drill the holes for the adjusting screws in the middle of the oblong holes of the block. These allow you to adjust the height of the block (you can use the block as a marking tool).

5 Screw the block in place with the screws provided.

6 This is how the screws should be in the post.

Placement bottom profile



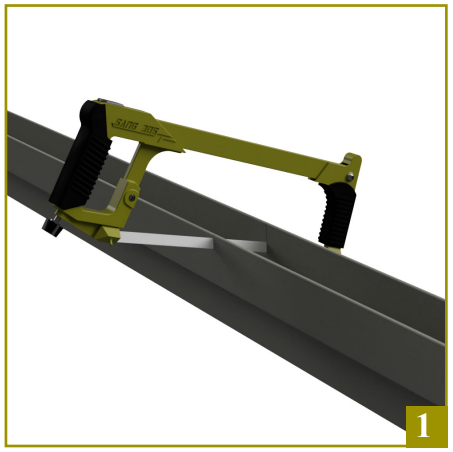
7 Insert the bottom profile and check that it lies flat. If necessary, adjust the height of the block by loosening the adjusting screws and raising or lowering the block. Retighten the adjusting screws when the bottom profile lies flat.

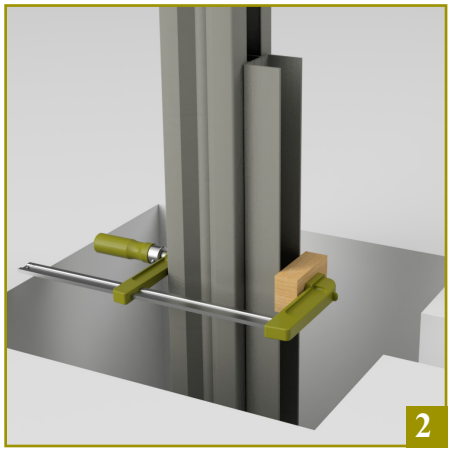
8 Now secure the block with the locking screws. These are self-drilling screws so there is no need to pre-drill a hole. (Do not set your screwdriver to drill mode but to light screw mode)

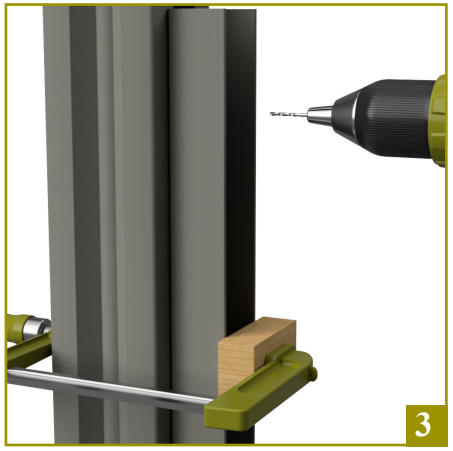
9 The bottom profile is now ready for installation of the boards.

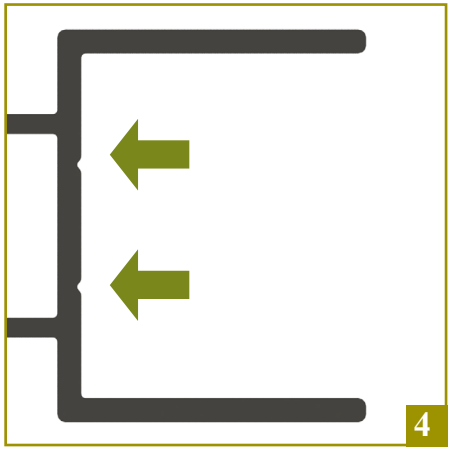
Support options

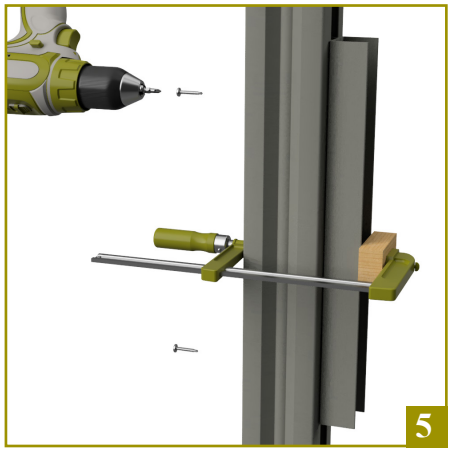
Concrete slab (DF1UA42)

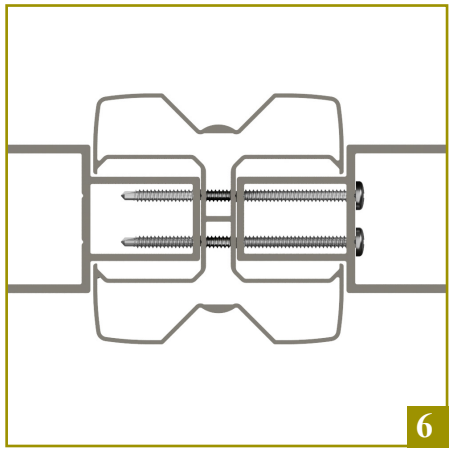


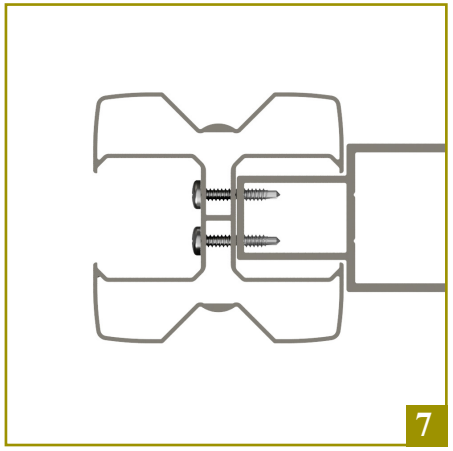


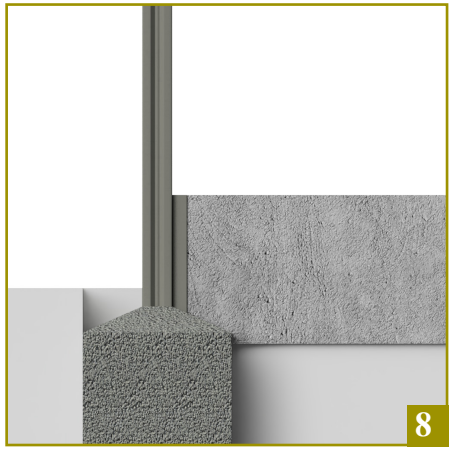












1 Cut the widening profile (DF1UA42) to the same length as the height of the concrete slab.

2 Now place the profile at the desired height. This will depend on how much the concrete slab should be visible above the ground. Then, using a glue clamp and the necessary wood blocks, clamp the profile in place.

3 Pre-drill holes so that the screws are a maximum of 400 mm apart.

4 Do not do this in the centre of the widening profile but in the grooves provided for this purpose.

5 Then screw down the profiles using self-drilling or tapping screws.

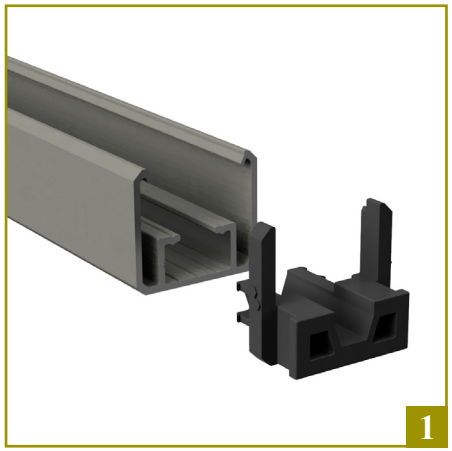
6 Screws with a length of 70 mm should be used when working with a profile on both sides of the post.

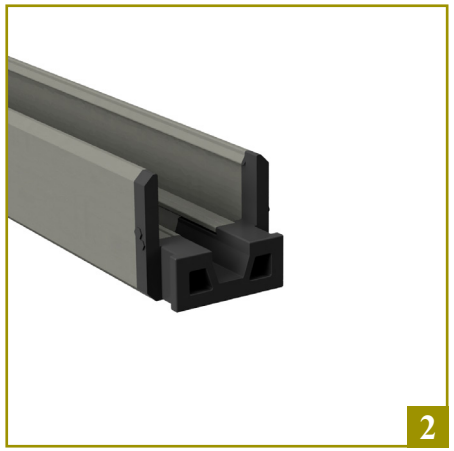
7 Screws with a length of 25 mm are sufficient when installing one profile.

8 Then slide the concrete slab into the widening profiles. Now secure the posts and concrete slab with (quick) concrete.

Support options

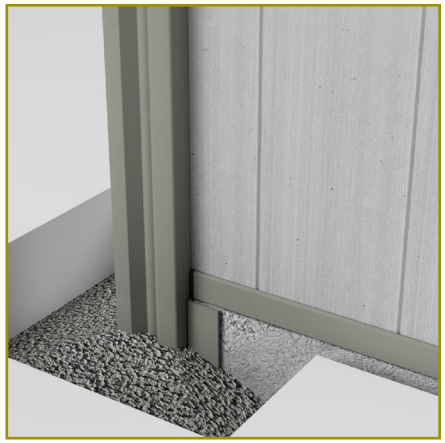
Placement bottom profile (DF1UA2833 + DF1SUPT)





Solid surface

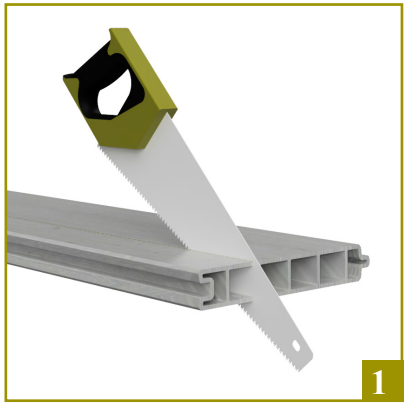
Concrete slab



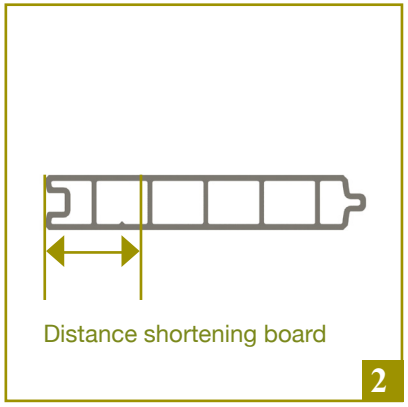
Top profile

Preparation for installing boards

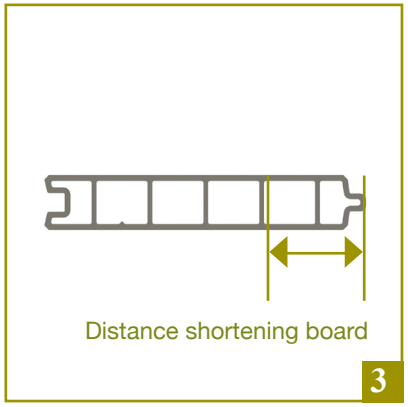
Shortening the boards



1



2



3

$$\text{Distance shortening board} = \frac{(\text{Board width} \times \text{number of boards}) - \text{Required width boards}}{2}$$

Tongue and groove board	Width (mm)	Required width boards (mm)
Ref. DF1B150	150	Distance between posts (A) + 30
Ref. DF5BA200	200	Distance between posts (A) + 30
Ref. DF6BP250	250	Distance between posts (A) + 40

Standard distance between posts = 1960 mm

Example of standard dimensions distance between posts (A) 1960 mm and DF1B150:

Required width boards = distance between posts (A) + 30 mm
= 1960 + 30 mm
= **1990 mm**

$$\text{Distance shortening board} = \frac{(\text{Board width} \times \text{number of boards}) - \text{Required board width}}{2}$$

$$= \frac{(150 \times 14) - 1990}{2}$$

= 55 mm

Example of standard dimensions distance between posts (A) 1960 mm and DF5BA200:

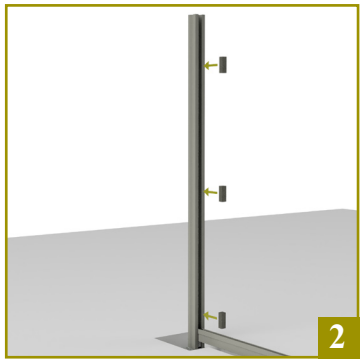
Required width boards = distance between boards (A) + 40 mm
= 1960 + 40 mm
= **2000 mm**

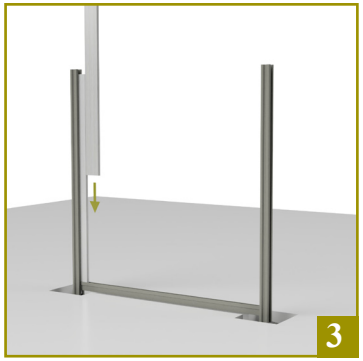
$$\text{Distance shortening board} = \frac{(\text{Board width} \times \text{number of boards}) - \text{Required board width}}{2}$$

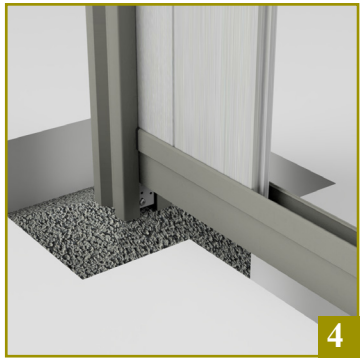
$$= \frac{(200 \times 10) - 2000}{2}$$

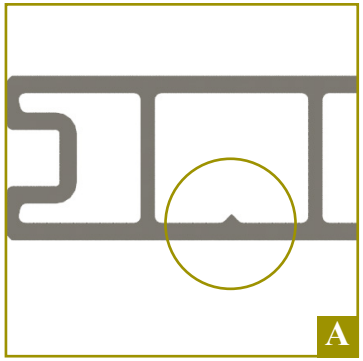
= 0 mm

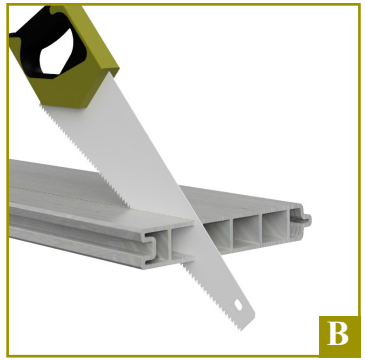
Placement of boards











1-2 Cut six 100 mm pieces of cellular rubber tape *(ref. DFR35X35)*. For each post, apply three pieces evenly spaced in the groove.

3-4 Now place the boards one by one.

5 When two boards remain, first place the last board. Then slide the remaining plank between the other planks.

6 You get the following result.

A If the boards have a mark, it is necessary that the boards are placed in the same way each time. Make sure that the boards are mounted so that the mark - *located on the inside of each board* - is always on the same side (front or back). This is necessary because the boards have been brushed or printed.

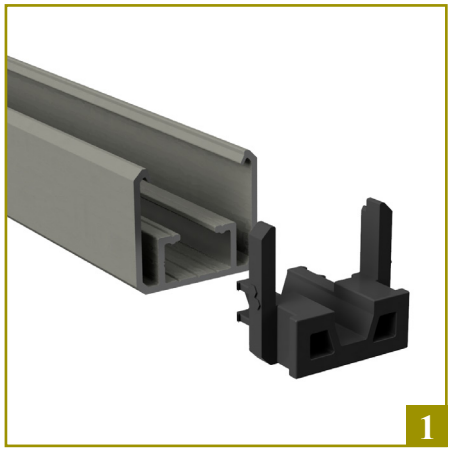
If the boards are not mounted in the correct direction, this may result in a colour difference.

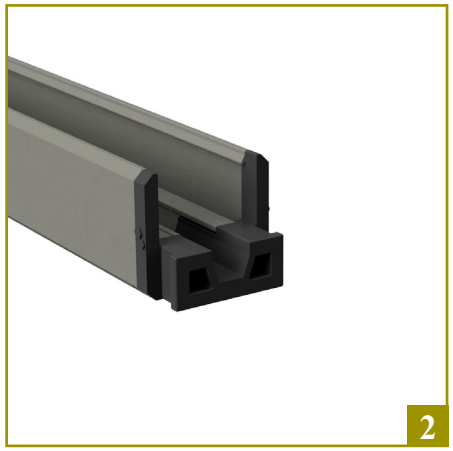
B In a standard vertical installation with wood composite boards *(DF1B150)*, the first and last boards must be sawn down the full length of the board. Please refer to page 40 to calculate how much to saw off.

If installing a garden fence with a smaller distance between the boards, we recommend determining this distance by reducing the standard distance by a multiple of the width of the board to be used (150 mm, 200 mm, 250 mm).

Preparation top profile

Top profile

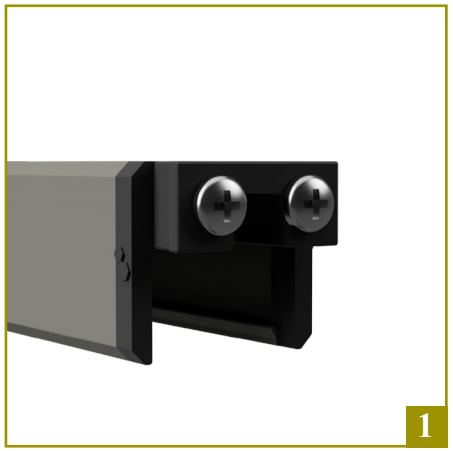


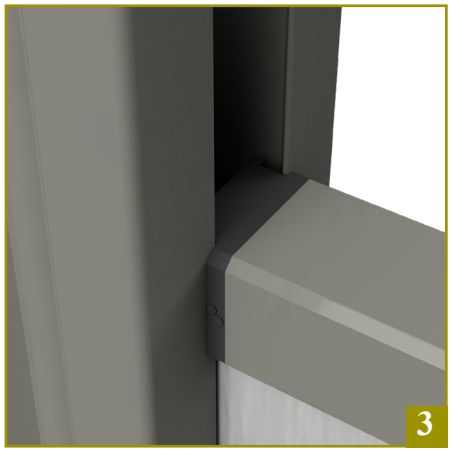


For vertical installation, the top profile (ref. DF1UA2833) must be shortened so that its length is 20 mm shorter than the distance between the posts (standard 1960 mm).

To finish the top profile, end pieces (DF1SUPT) are mounted on the ends of the profile using screws.

Placement top profile

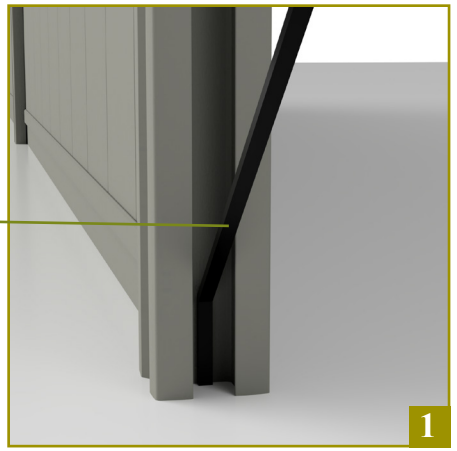


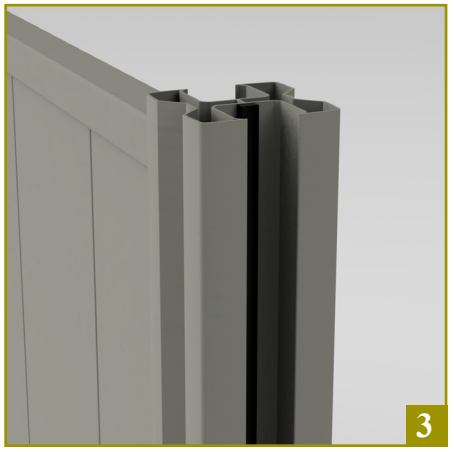


For vertical installation, the U-profile DF1UA2833 and end pieces DF1SUPT are used. The length of this profile without the end pieces is the distance between the posts - 20 mm.

Finishing end post Optional

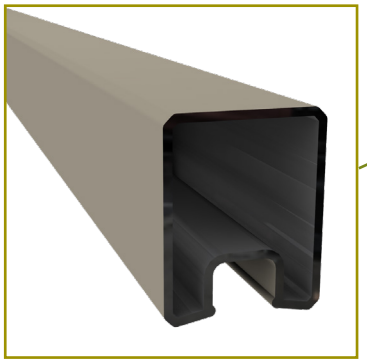
DFRT10X6



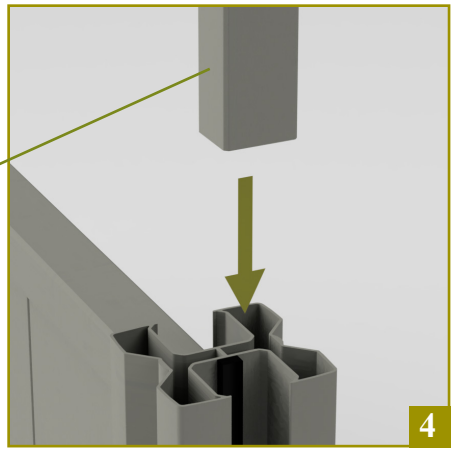


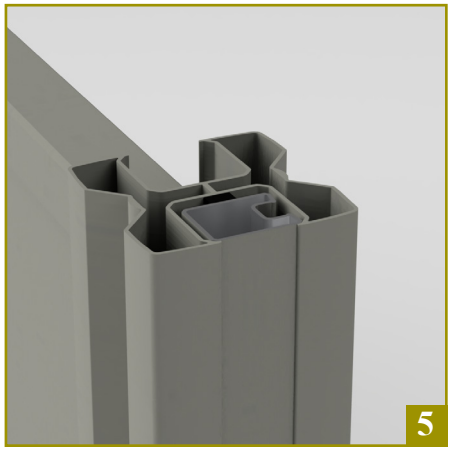
Several methods are available for finishing the end post.

Possibility 1: The simplest is to finish with a standard post (DF1PA82) and leave the groove open.



DF1UA28





Possibility 2: **1-3** Cut the cellular rubber band (DFRT10X6) to length and attach it in the centre of the slot. If necessary, cut off the excess.

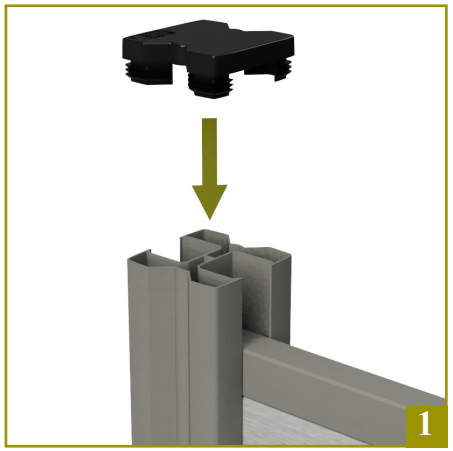
Cut the U-profile (DF1UA28) to the desired length.

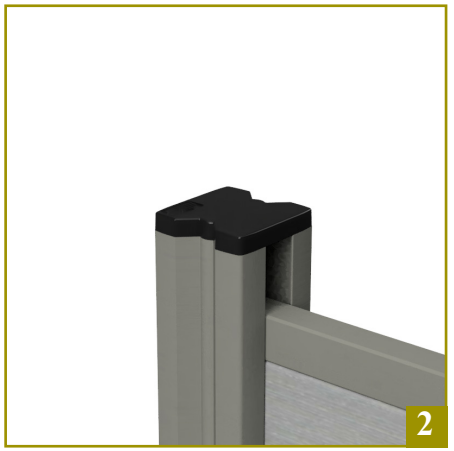
4-5 Then place the U-profile in the slot and push it down so that the ends are flush.

6 The end post is now finished.

The end post can also be finished by securing the U-profile with screws or a polymer sealant.

Placement end cap





Place the cap on the top of the post. Use a rubber mallet for this if necessary.

When using cellular rubber tape, check that there are no excess parts. Remove these if necessary.

Notes

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