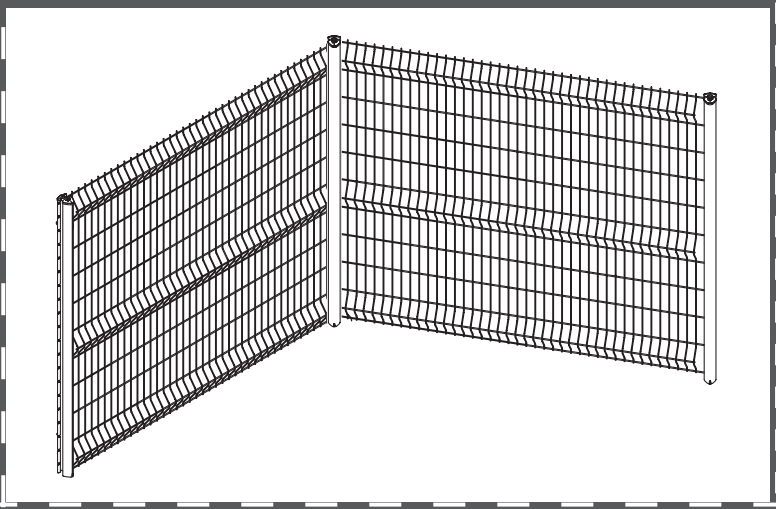
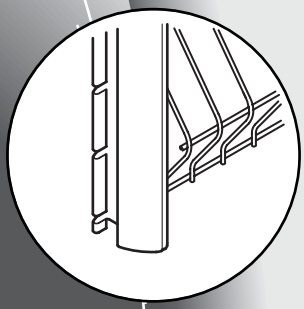
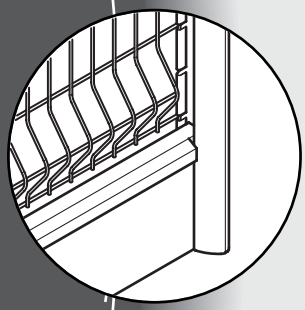
AXIS® DESIGN SYSTEM

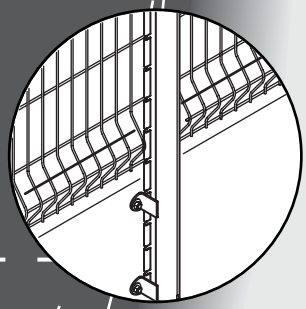
WITH AXIS® AND AXOR® POSTS

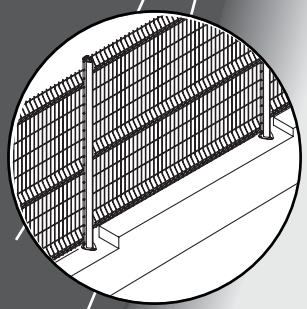


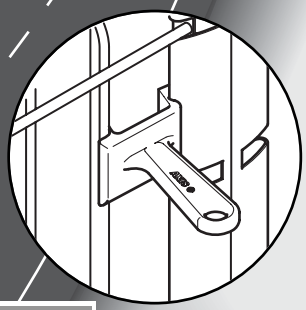
Technical Handbook











DIRICKX

HAUTE CLOTURE FRANÇAISE

F

CONTENTS

DIRICKX

HAUTE CLOTURE FRANÇAISE

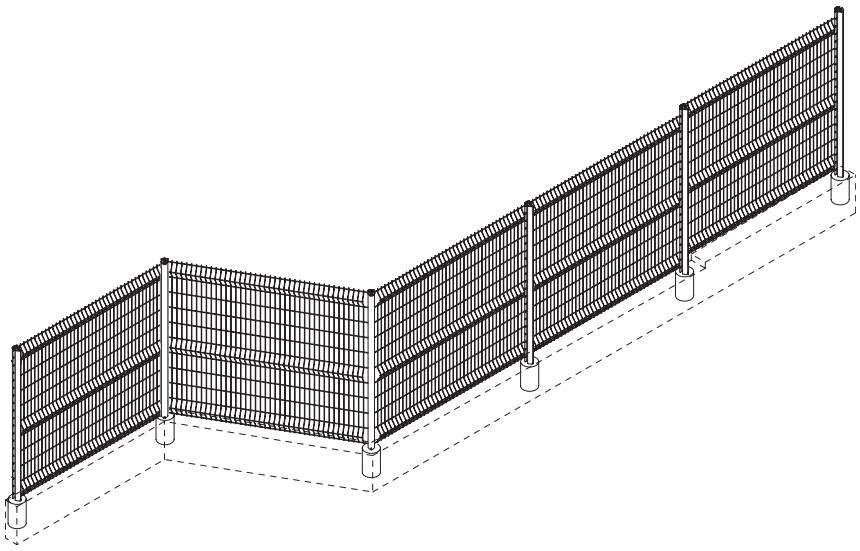
1 Description Delivery

1-1 Recommendations for handling and storage

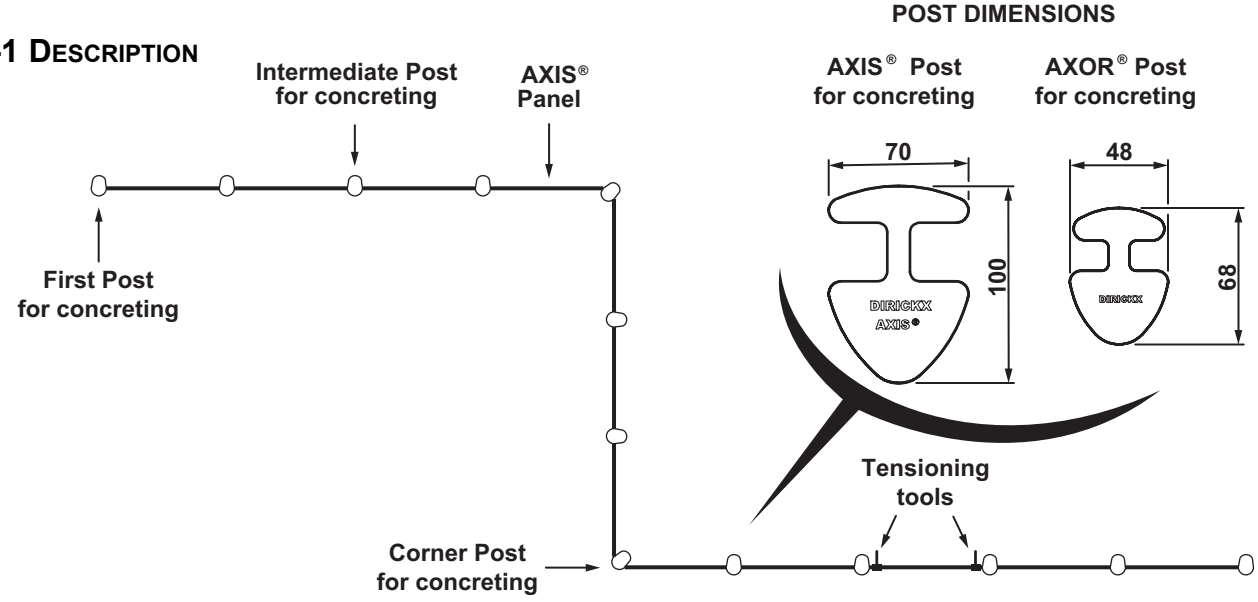
- Keep the packing on the palette before use in order to avoid any damage to the product and any aesthetic damage (to the coatings).

- At least 2 people are needed for setting the fence.

1-2 Setting AXIS® Design or AXOR® posts to be concreted in the ground or a low wall



1-2-1 Description

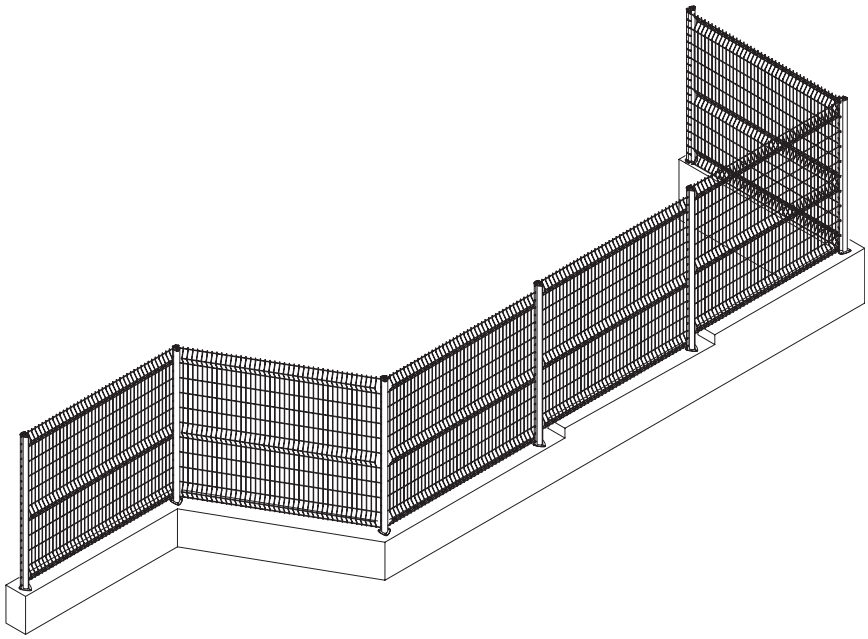


1-2-2 Components delivered according to order

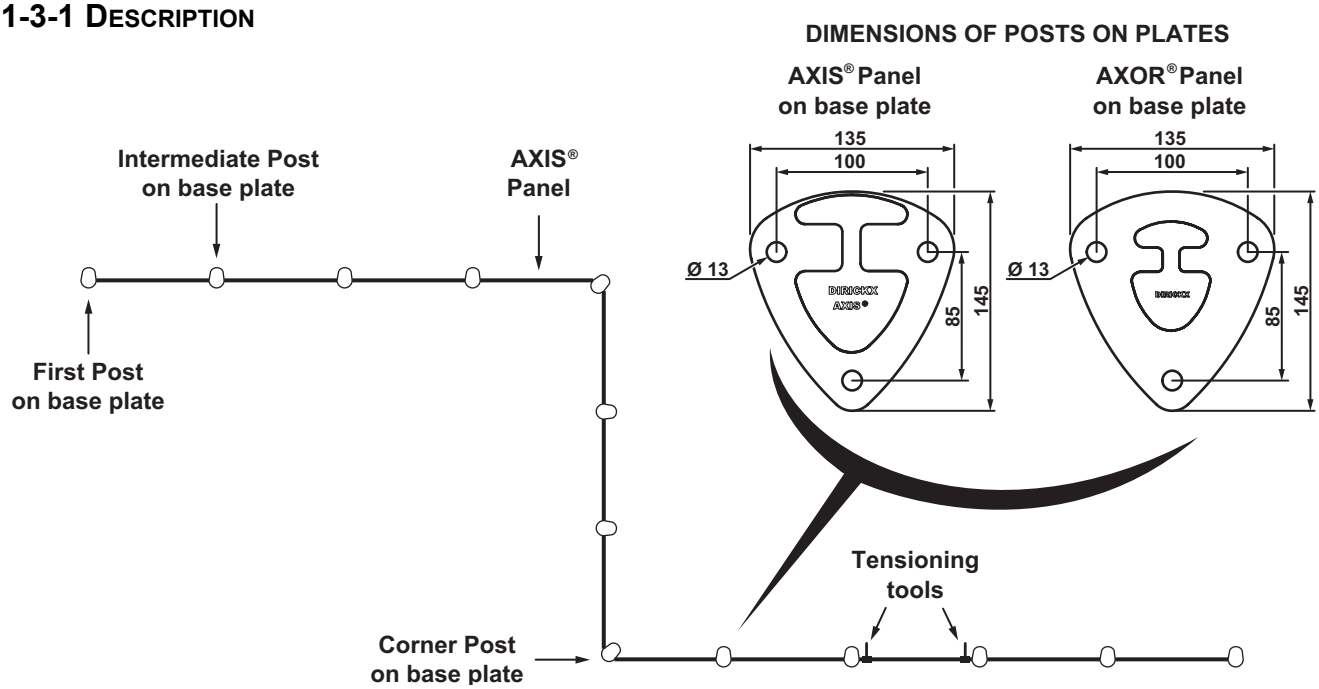
- AXIS® Design or AXOR® Post(s) to be sealed (see pages 20 and 22) delivered on palette.
- AXIS® DR, D, PR, P or S Panels (see pages 22 and 23) delivered on palette.
- Packet(s) of tensioning tools delivered in a cardboard box.

1
Description
Delivery

1-3 Setting AXIS® Design or AXOR® posts on base plates fixed in the ground or on a low wall



1-3-1 DESCRIPTION

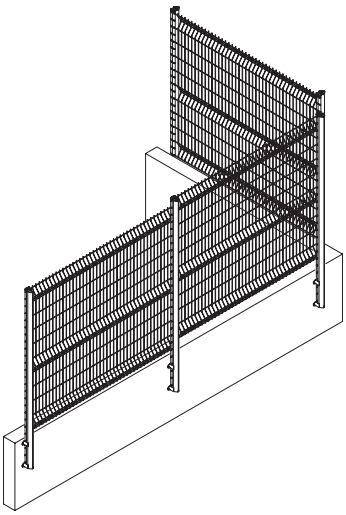


1-3-2 COMPONENTS DELIVERED ACCORDING TO ORDER

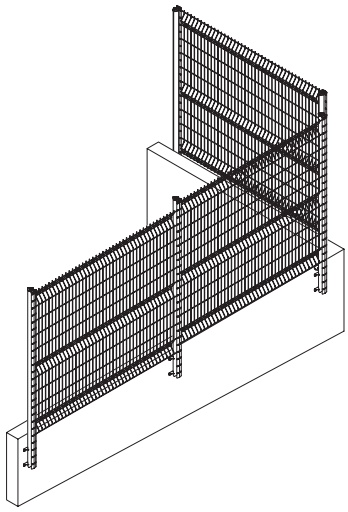
- AXIS® Design or AXOR® Post(s) on bases plates (see pages 20 and 22) delivered on palette.
- AXIS® DR, D, PR, P or S Panel(s) (see pages 22 and 23) delivered on palette.
- Packet(s) of tensioning tools delivered in a cardboard box.

1 Description Delivery

1-4 Setting AXIS® Design posts on wall brackets

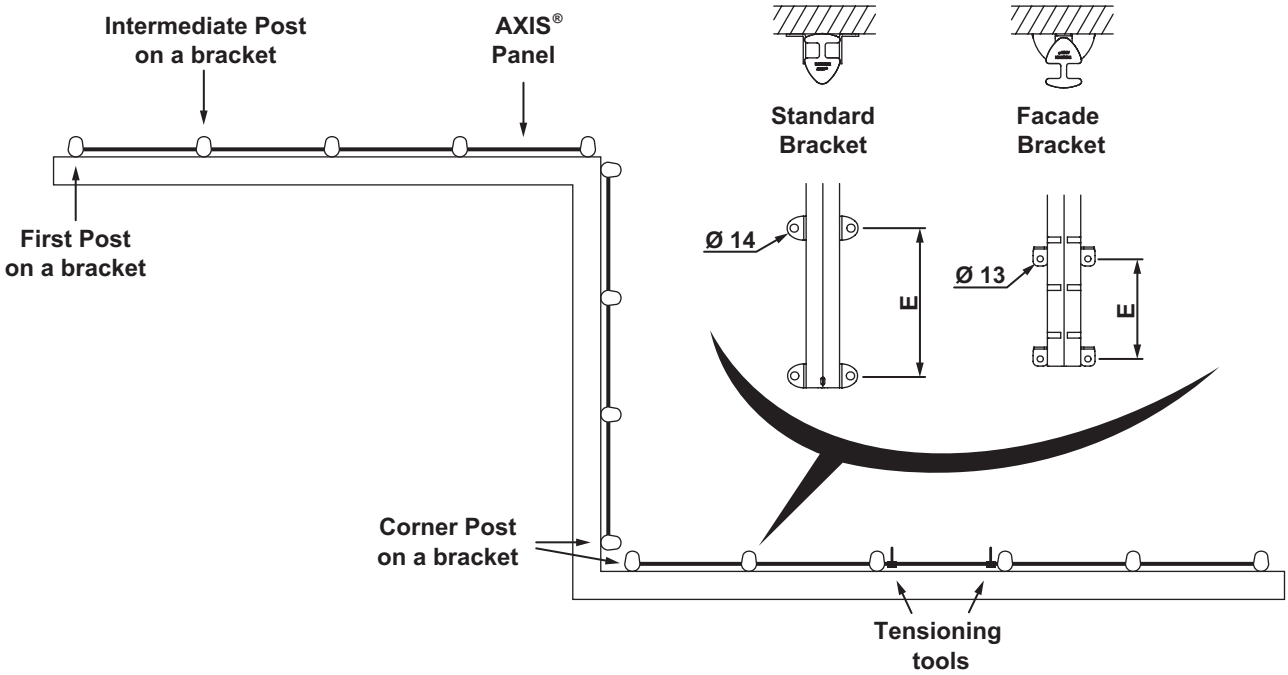


STANDARD BRACKET



FACADE BRACKET

1-4-1 DESCRIPTION



1-4-2 COMPONENTS DELIVERED ACCORDING TO ORDER

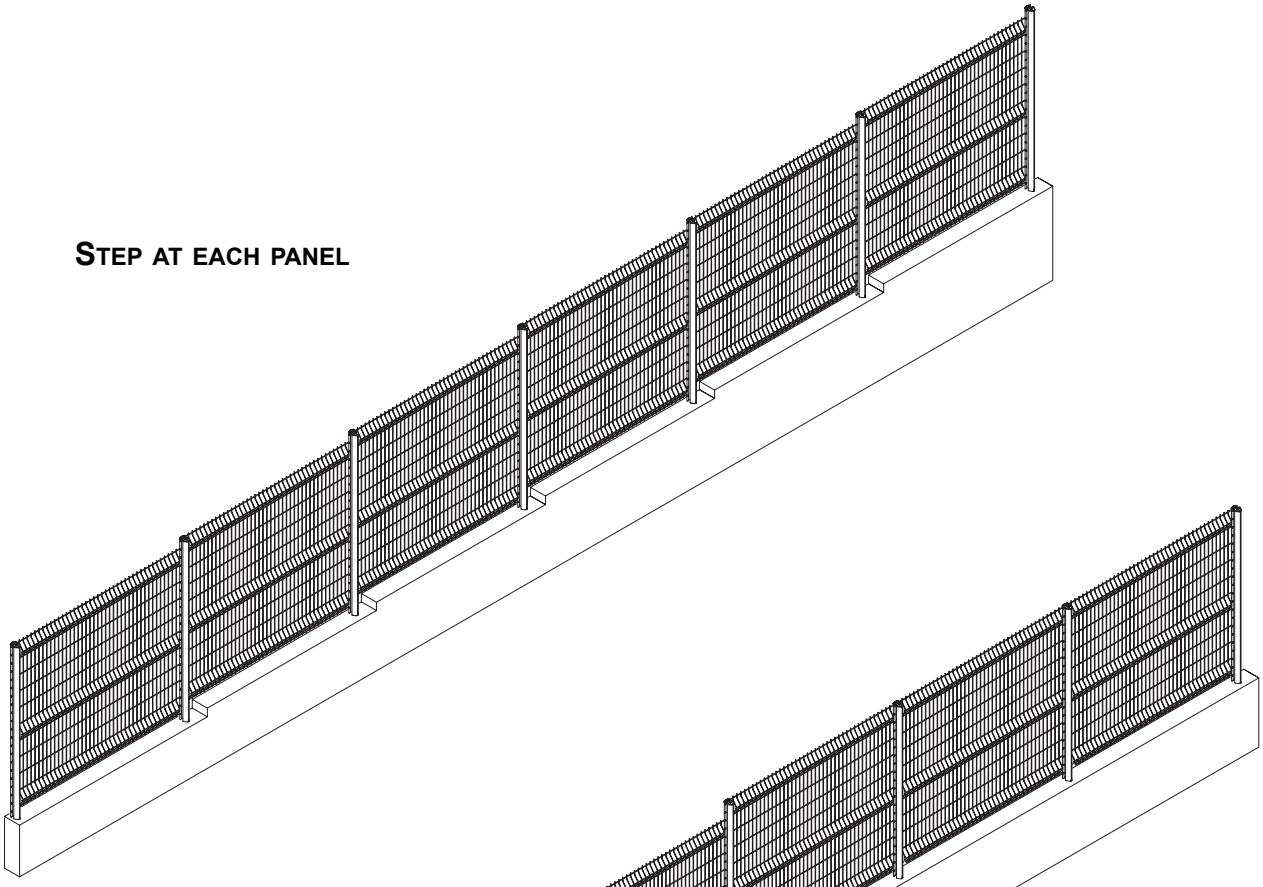
- AXIS® Design bracket Post(s) (see page 21) delivered on palette.
- AXIS® DR, D, PR, P or S Panel(s) (see pages 22 and 23) delivered on palette.
- Packet(s) of tensioning tools delivered in a cardboard box.

2
Ground constraints

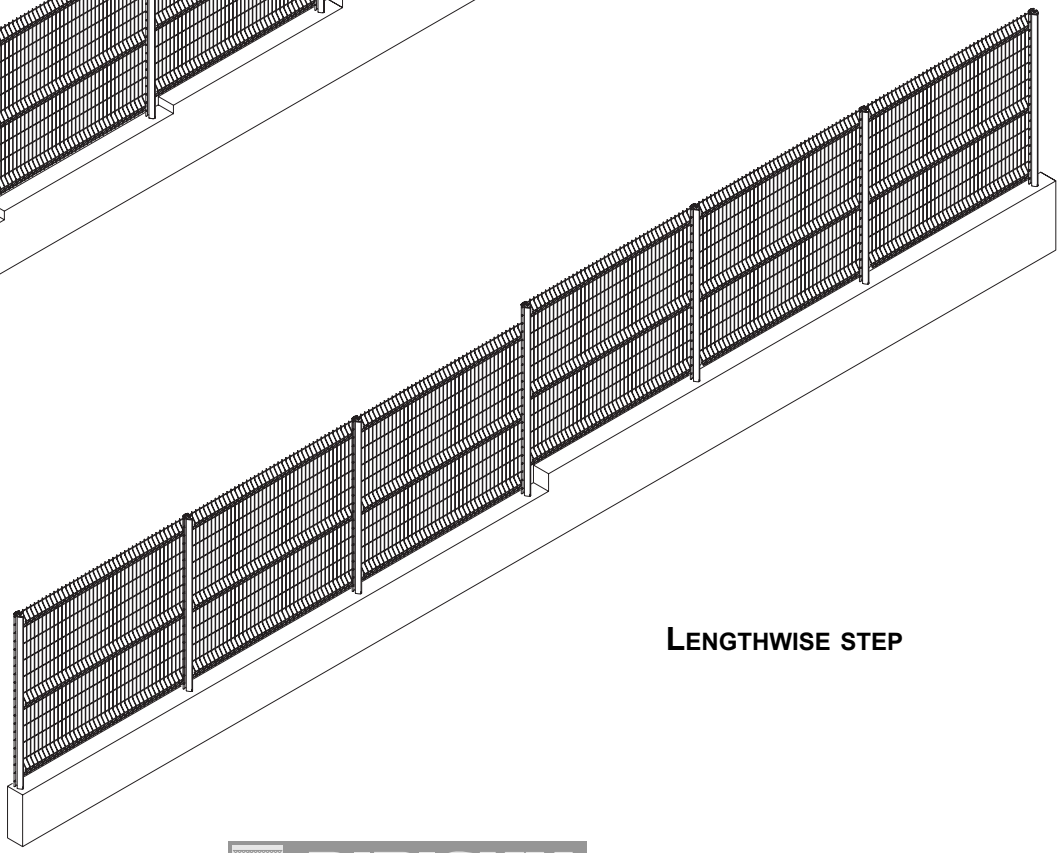
MAKE A STUDY OF THE LIE OF THE LAND BEFORE SETTING:

- **if the terrain is sloping, allow for steps by offsetting each panel by 1 or 2 notches, or create lengthwise steps (where steps are made the posts must be more securely sealed).**
- **in the corners, turn the posts to the required angle.**
- **if extension arms are to be used, remove the caps and check whether or not posts have to be doubled in the corners, by referring to the "AXIS® Design extension arms" notice.**
- **the panel spikes can be directed downwards or upwards depending on the degree of security chosen.**

STEP AT EACH PANEL



LENGTHWISE STEP



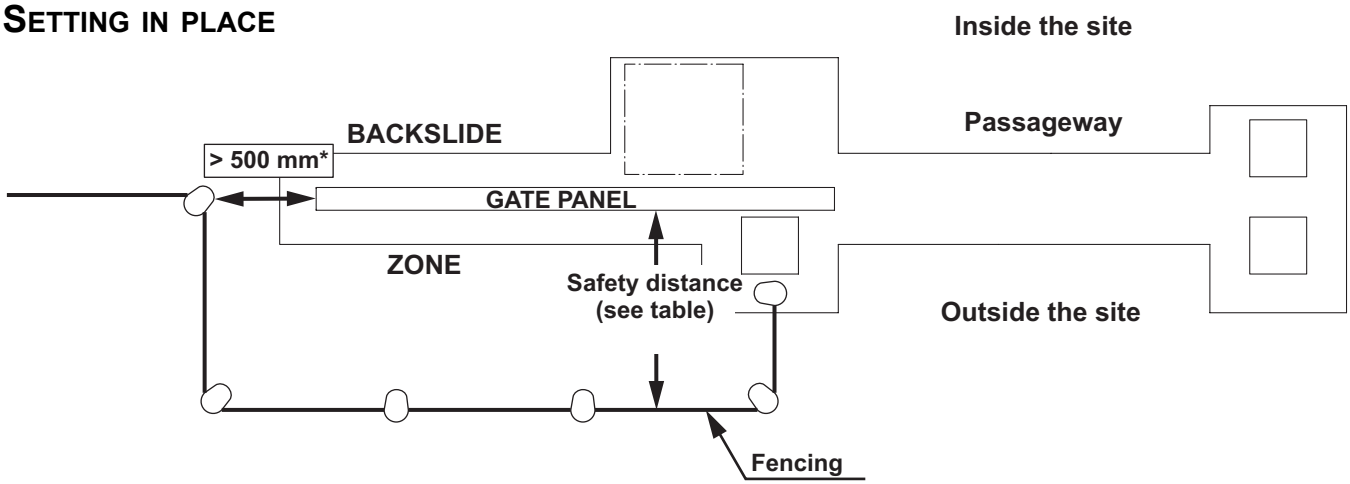
2
Ground constraints

FOR FENCING NEAR A GATE OR AN ACCESS:

The backslide zone of tracked sliding and cantilevered sliding gates must be protected according to the **NF EN 12635** standard (Gates equipping industrial and commercial sites and garages - Installation and utilisation). This standard stipulates that it is obligatory to provide protection against risks of crushing, shearing and dragging.
Thus, the fence must be set in position at a safe distance from the moving gate panel (see diagram below).

This safe distance takes into account the exposed parts of the human body according to the **NF EN 294** standard (safety distances to avoid the upper members reaching dangerous areas) and the mesh dimension of the installed fences along the length of the gate (see table below).

SETTING IN PLACE



*** DISTANCE TO BE RESPECTED TO AVOID RISK OF BEING CAUGHT INSIDE.**

	BACKSLIDE FENCING	
SAFE DISTANCE	**MESH DIMENSION**	**PRODUCT EXAMPLES**
≥120 mm	from 20 to 30 mm	ARAVIS**
≥200 mm	from 30 to 40 mm	Square mesh**
≥850 mm	> 40 mm	AXIS®

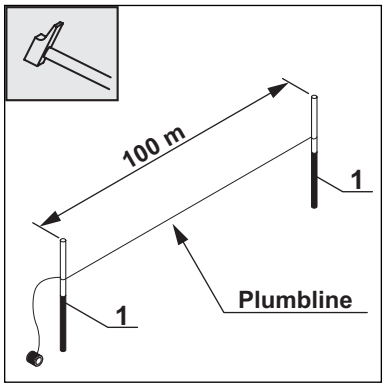
**** SMALL MESH CAN BE SUPERIMPOSED WITH THE AXIS® PANELS.**

3
Setting for concreting

AXIS® Design or AXOR® posts in the ground or on a low wall

3-1 Preparation - Civil engineering

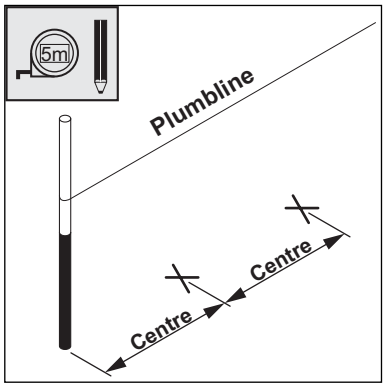
1



Put the pegs in place (**Ref. 1**) every 100 m.

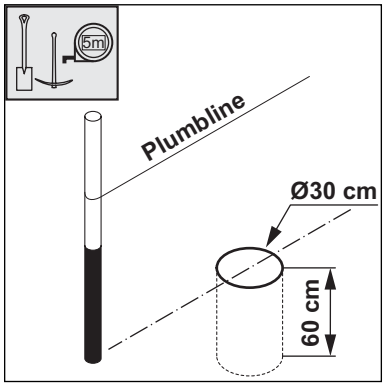
Stretch a line.

2



Mark out the post centres.

3



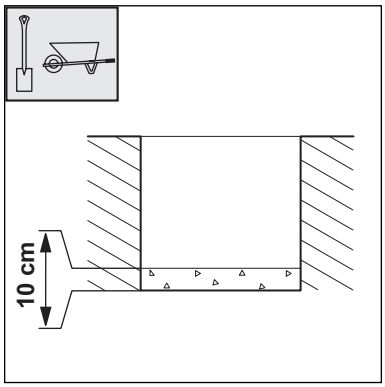
Dig holes of ø30 cm and depth 60 cm minimum.

Mounting with posts	Panels	Centre
AXIS® Design	AXIS® HN < 2,43 m	2,536 m
	AXIS® HN ≥ 2,43 m	2,371 m
AXOR®	AXIS®	2,510 m

⚠ **THE CONCRETE FOR FILLING THE HOLES IS TO BE COMPOSED OF 250 KG OF CEMENT / M³ (~ 40 LITRES PER HOLE).**

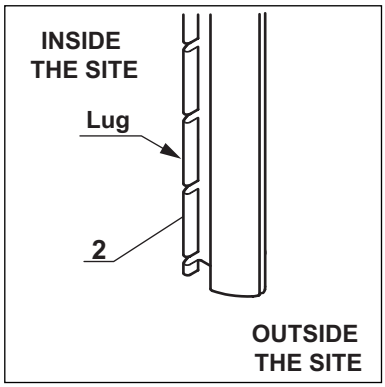
3-2 Installation

1



Pour 10 cm of concrete into the bottom of the hole.

2

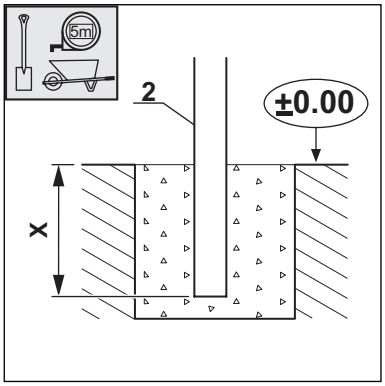


Check the mounting direction of the post (**Ref. 2**): the lug is to be on the side inside the site.

3
Setting for concreting

AXIS® Design or AXOR® posts in the ground or on a low wall

3

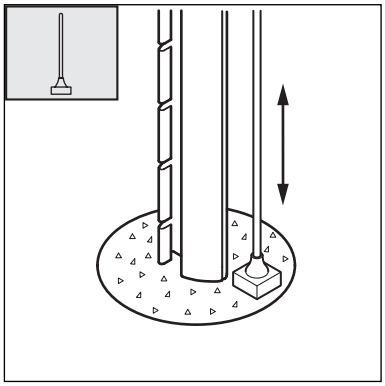


Set the first post (**Ref. 2**).

Pour the concrete to fill the hole.

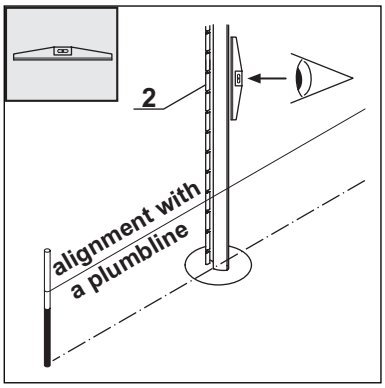
X = Sealing length (**see page 20**).

4



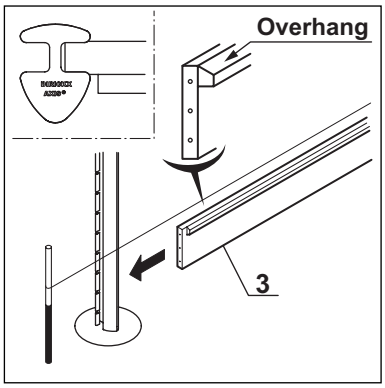
Ram it down.

5



Check the alignment of the post (**Ref. 2**).

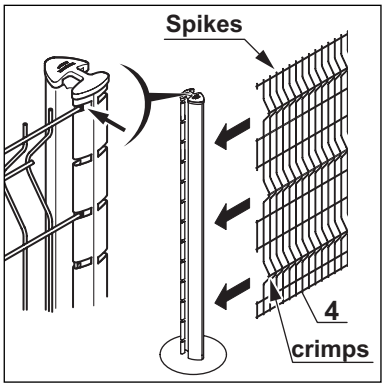
6



If a kick board is to be set:

Fix the kick board (**Ref. 3**) in the groove in the post (overhang on the external side).

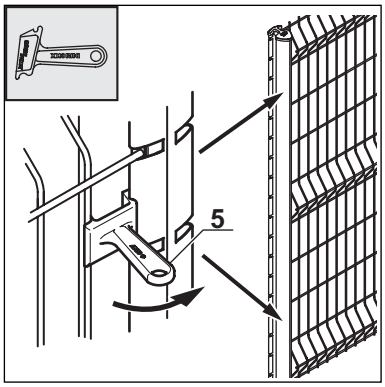
7



Attach the first panel (**Ref. 4**) (spikes upwards or downwards, crimps on the side facing the outside of the site) in the lugs of the post and pull to the bottom of the groove.

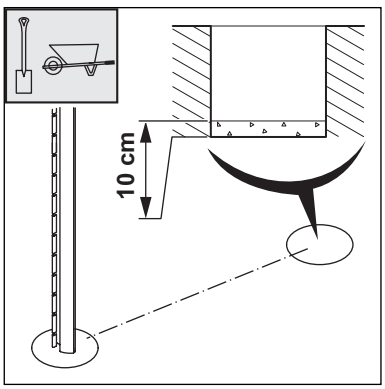
Keep the panel aligned throughout the whole operation.

8



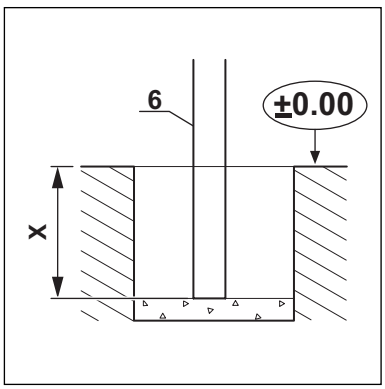
Set 2 tensioning tools in position (**Ref. 5**).

9



Pour 10 cm of concrete into the bottom of the second hole.

10



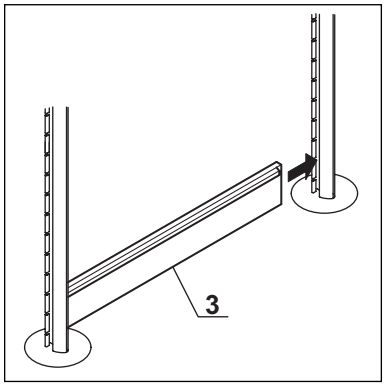
Set the second post (**Ref. 6**).

X = Sealing length (**see page 20**).

3
Setting for concreting

AXIS® Design or AXOR® posts in the ground or on a low wall

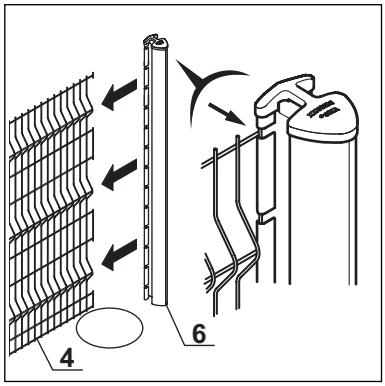
11



If a kick board is to be set:

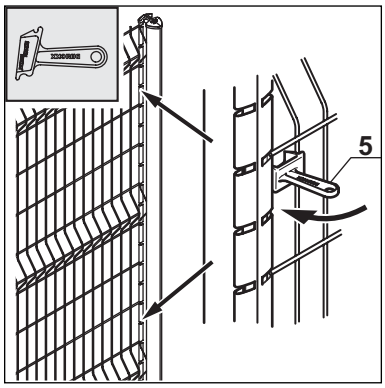
Fix the kick board (**Ref. 3**) in the groove of the second post.

12



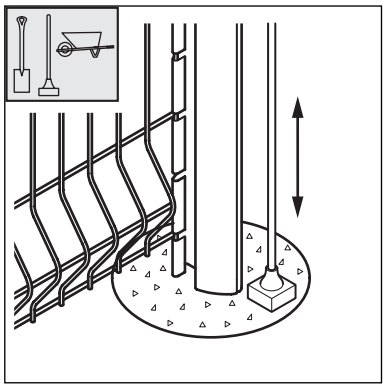
Attach the second post (**Ref. 6**) onto the panel (**Ref. 4**).

13



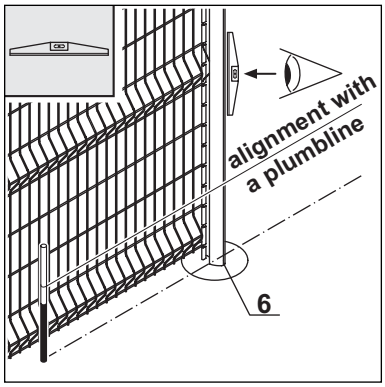
Set 2 tensioning tools in position (**Ref. 5**).

14



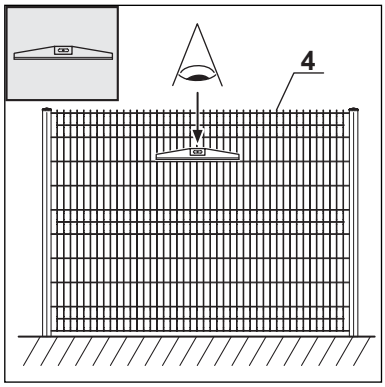
Pour the concrete and **ram it down.**

15



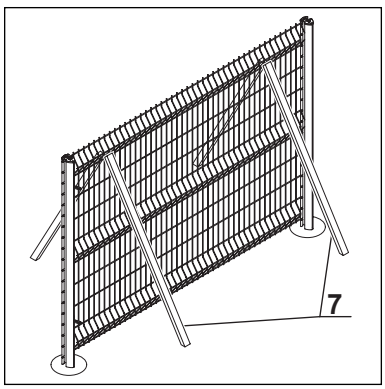
Check the alignment of the post (**Ref. 6**).

16



Check the panel is level (**Ref. 4**).

17

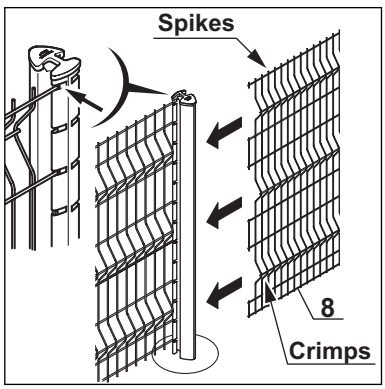


Set stays* in position (**Ref. 7**) on either side of the panel in place.

Respect the setting time: 3 hrs minimum.

*stay: wooden strut or prop.

18



Attach the second panel (**Ref. 8**) (spikes upwards or downwards, crimps on the side facing the outside of the site) in the lugs of the post and pull to the bottom of the groove.

Keep the panel aligned throughout the whole operation.

3
Setting for concreting

AXIS® Design or AXOR® posts in the ground or on a low wall

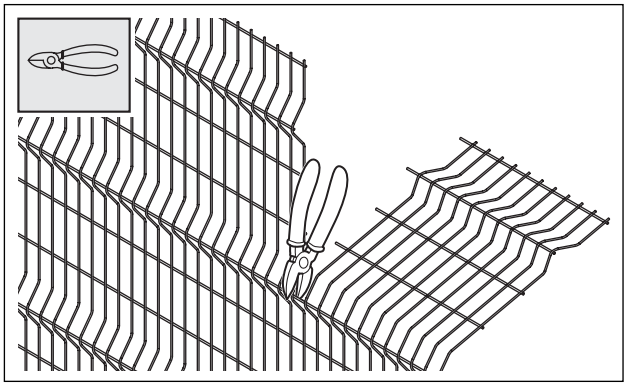
Repeat stages **8 to 18** to continue setting the fence.

Clean the base of the post while moving forward, using **a flexible brush** and a little water.

Remove the tensioning tools and the stays when the concrete has set (that is, after a minimum of 3 hrs).

NB: The tensioning tools and the stays can be re-used.

AT THE END OF THE FENCE, IF THE PANEL IS TOO LONG, CUT THE WIDTH FOLLOWING A VERTICAL WIRE.
THE LAST CENTRE BETWEEN THE POSTS MUST BE ADJUSTED ACCORDING TO THE WIDTH CUT OFF.



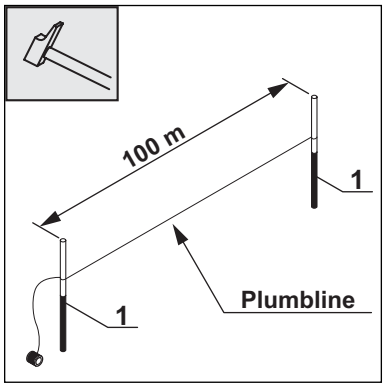
4
Installation on base plates

AXIS® Design or AXOR® posts at ground level or on a low wall

4-1 Preparation - Civil engineering

4-1-1 Ground mounting

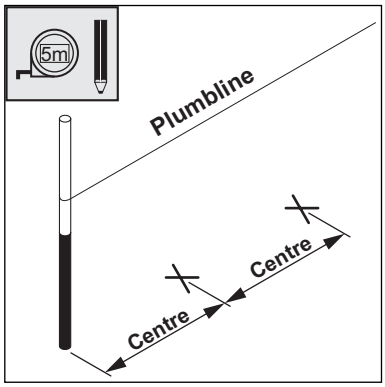
1



Put the pegs in place (**Ref. 1**) every 100 m.

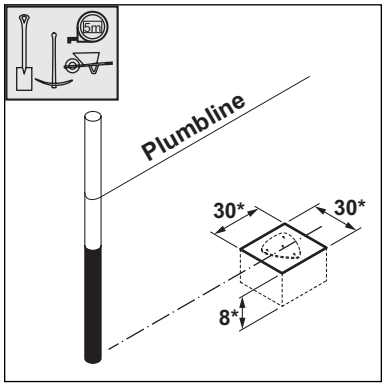
Stretch a line.

2



Mark out the post centres.

3



Make concrete blocks and provide an extra 3 cm around the block.

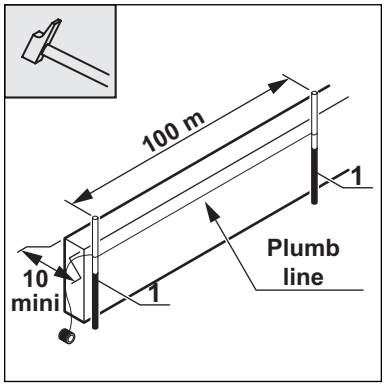
Mounting with posts	Panels	Centre
AXIS® Design	AXIS® HN < 2,43 m	2,536 m
	AXIS® HN ≥ 2,43 m	2,371 m
AXOR®	AXIS®	2,510 m

⚠ ***These dimensions are given for information only. The plates are fixed in the ground by 3 concrete bolts Ø12 mm (contact bolt suppliers to define specifications corresponding to terrain and/or concrete type).**

⚠ **Concrete for filling the holes is to be composed of 250 kg of cement / M^3.**

4-1-2 Mounting on a low wall

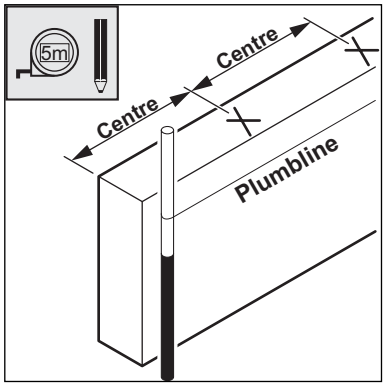
1



Put the pegs in place (**Ref. 1**) every 100 m.

Stretch a line.

2



Mark out the post centres.

⚠ **Ensure that the width of the low wall is adequate for fixing the posts with the bolts (contact bolt suppliers to define specifications corresponding to wall type).**

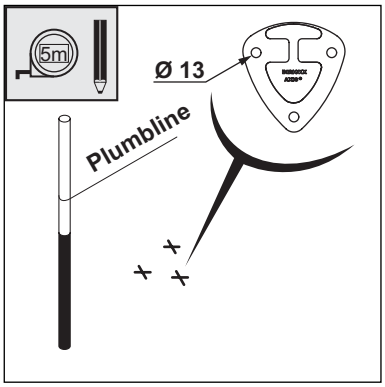
Mounting with posts	Panels	Centre
AXIS® Design	AXIS® HN < 2,43 m	2,536 m
	AXIS® HN ≥ 2,43 m	2,371 m
AXOR®	AXIS®	2,510 m

4
Installation on base plates

AXIS® Design or AXOR® posts at ground level or on a low wall

4-2 Installation

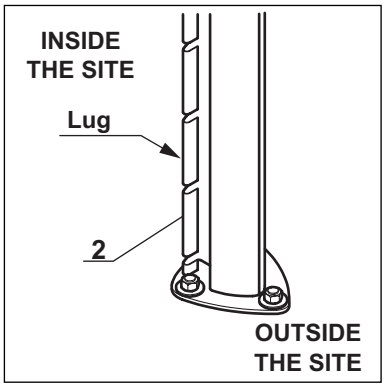
1



Mark and drill the 3 positions.

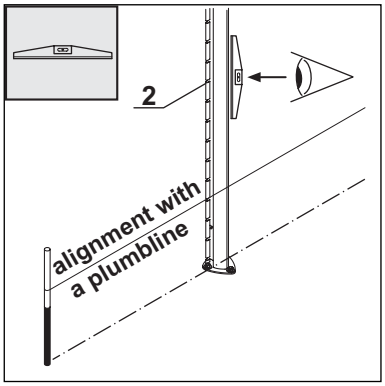
POST DIRECTION

2



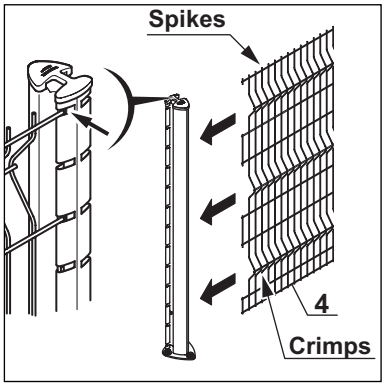
Bolt down the first post (**Ref. 2**): the lug must be on the side facing inside the site.

3



Check the alignment of the post (**Ref. 2**).

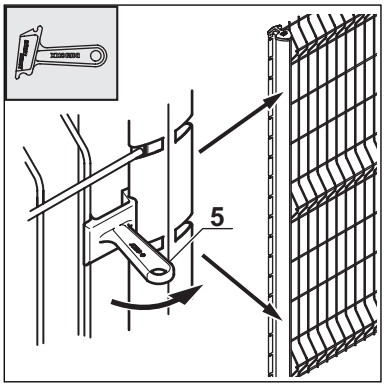
4



Attach the first panel (**Ref. 4**) (spikes upwards or downwards, crimps on the side facing the outside of the site) in the lugs of the post and pull to the bottom of the groove.

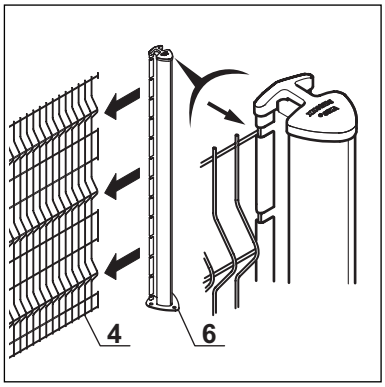
Keep the panel aligned throughout the whole operation.

5



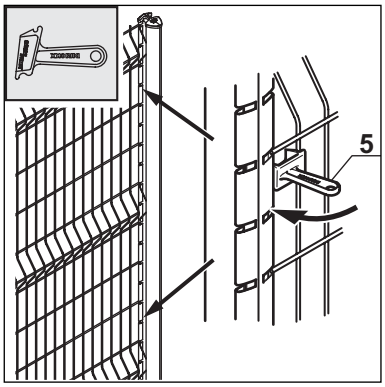
Put 2 tensioning tools in position (**Ref. 5**).

6



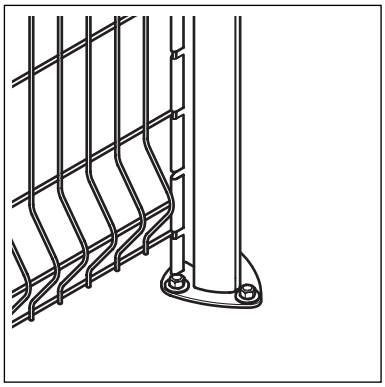
Attach the second post (**Ref. 6**) onto the panel (**Ref. 4**).

7



Put 2 tensioning tools in position (**Ref. 5**).

8

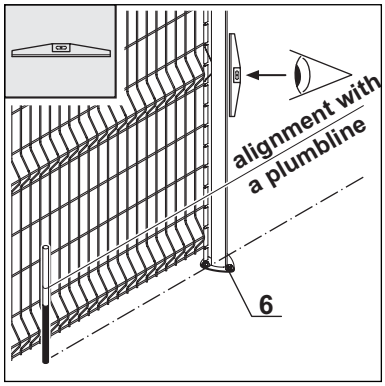


Drill and **Bolt** the second post.

4
Installation on base plates

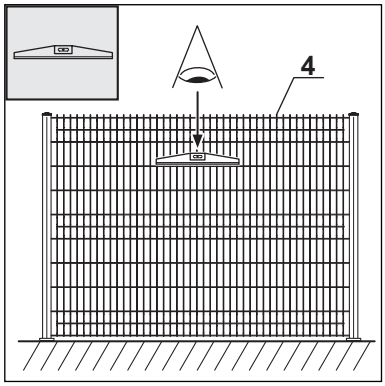
AXIS® Design or AXOR® posts at ground level or on a low wall

9



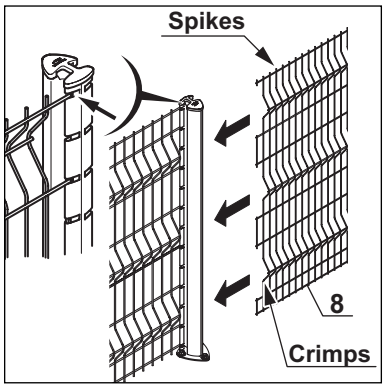
Check the alignment of the post (**Ref. 6**).

10



Check the panel is level (**Ref. 4**).

11



Attach the second panel (**Ref. 8**) (spikes upwards or downwards, crimps on the side facing the outside of the site) in the lugs of the post and pull to the bottom of the groove.

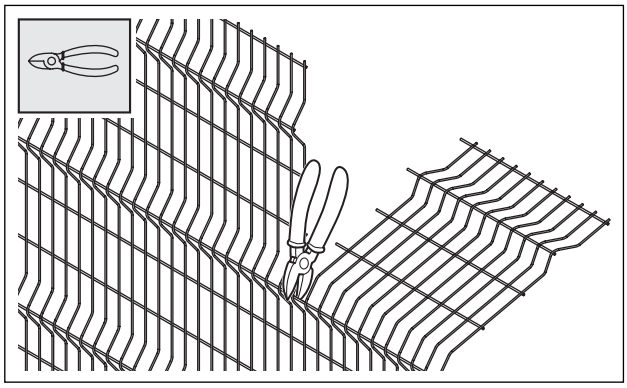
Keep the panel aligned throughout the whole operation.

Repeat stages **5 to 11** to continue setting the fence.

Remove the tensioning tools when the panel has been made stable.

NB: The tensioning tools can be re-used.

AT THE END OF THE FENCE, IF THE PANEL IS TOO LONG, CUT THE WIDTH FOLLOWING A VERTICAL WIRE.
THE LAST CENTRE BETWEEN THE POSTS MUST BE ADJUSTED ACCORDING TO THE WIDTH CUT OFF.



5
Installation using a bracket

AXIS® Design posts on a wall

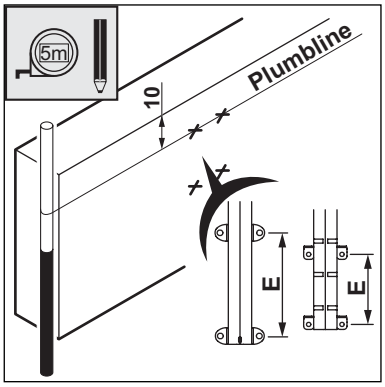
5-1 Preparation - Civil engineering

ENSURE THAT THE WIDTH OF THE WALL IS ADEQUATE FOR FIXING THE POSTS WITH BOLTS.

THE PLATES ARE FIXED ON THE WALL WITH CONCRETE BOLTS Ø12 MM (CONTACT YOUR SUPPLIERS OF BOLTS SO AS TO DEFINE THE SPECIFICATIONS ACCORDING TO TERRAIN AND/OR CONCRETE TYPE.

5-2 Installation

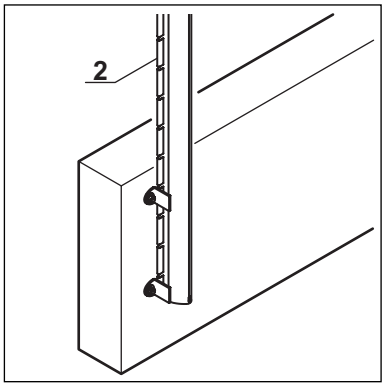
1



Mark and **drill** the position of the 4 drill-holes.

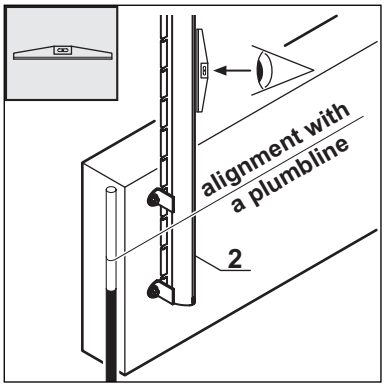
E : Distance between the different brackets according to the nominal height of the fence (see page 21).

2



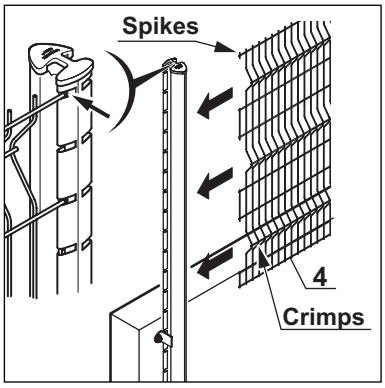
Bolt down the first post (**Ref. 2**).

3



Check the alignment of the post (**Ref. 2**).

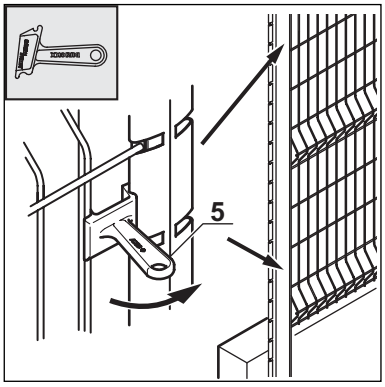
4



Attach the first panel (**Ref. 4**) (spikes upwards or downwards, crimps on the side facing the outside of the site) in the lugs of the post and pull to the bottom of the groove.

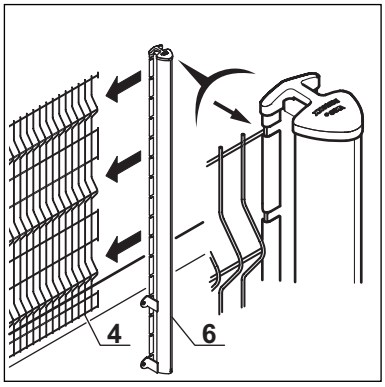
Keep the panel aligned throughout the whole operation.

5



Set 2 tensioning tools in position (**Ref. 5**).

6

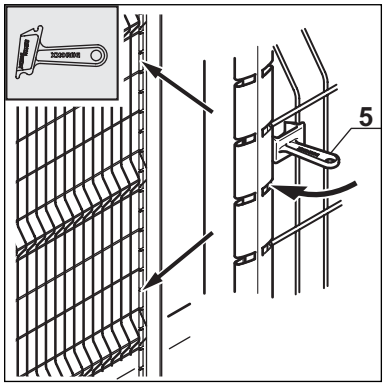


Attach the second post (**Ref. 6**) onto the panel (**Ref. 4**).

5
Installation using a bracket

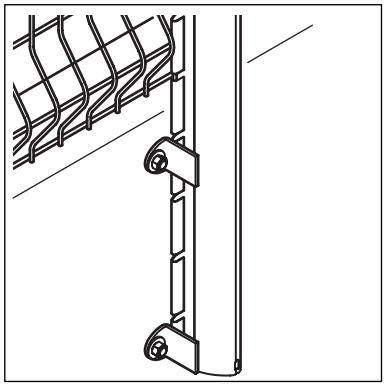
AXIS® Design posts on a wall

7



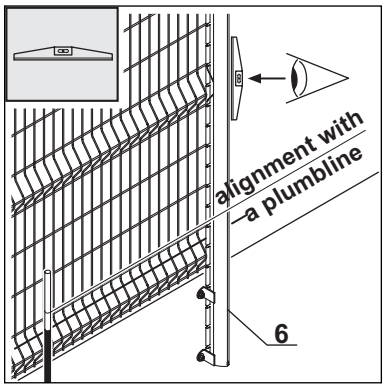
Set 2 tensioning tools in position (**Ref. 5**).

8



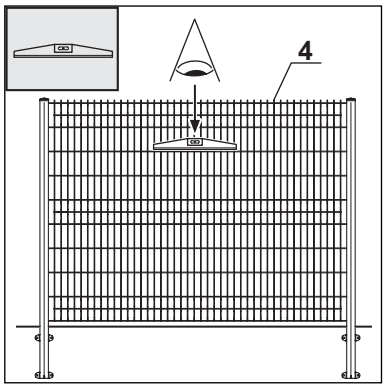
Bolt down the post.

9



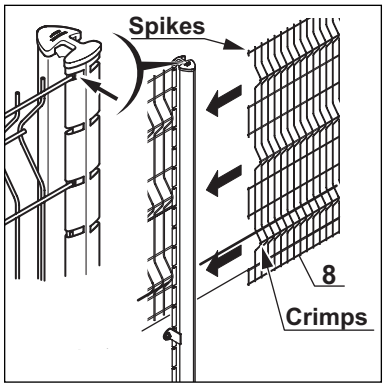
Check the alignment of the post (**Ref. 6**).

10



Check the panel is level.

11



Attach the second panel (**Ref. 8**) (spikes upwards or downwards, crimps on the side facing the outside of the site) in the lugs of the post and pull to the bottom of the groove.

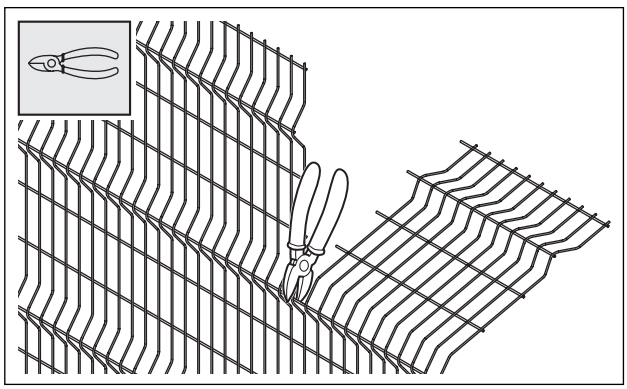
Keep the panel aligned throughout the whole operation.

Repeat stages **5 to 11** to continue setting the fence.

Remove the tensioning tools when each panel has been made stable.

NB: The tensioning tools can be re-used.

AT THE END OF THE FENCE, IF THE PANEL IS TOO LONG, CUT THE WIDTH FOLLOWING A VERTICAL WIRE.
THE LAST CENTRE BETWEEN THE POSTS MUST BE ADJUSTED ACCORDING TO THE WIDTH CUT OFF.



6
Maintenance
Repairs

6-1 Maintenance

CHECK THE CONDITION OF THE PANELS, POSTS AND FITTINGS.

DO NOT USE A HIGH PRESSURE CLEANER, SOLVENTS OR OTHER CHEMICAL PRODUCTS WHICH COULD RISK DAMAGING THE COATING.

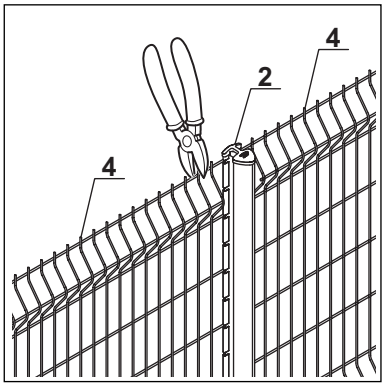
DO NOT USE AN ABRASIVE SPONGE.

6-2 Repairs

If a post is damaged, it can be replaced by a repair post.

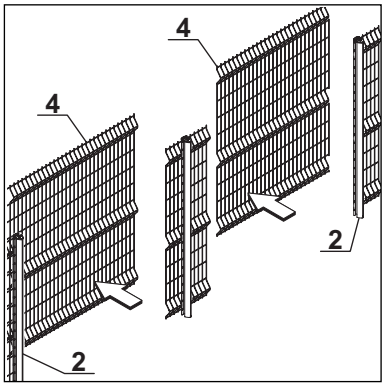
6-2-1 SETTING OF THE AXIS® DESIGN OR AXOR® REPAIR POST FOR CONCRETING

1



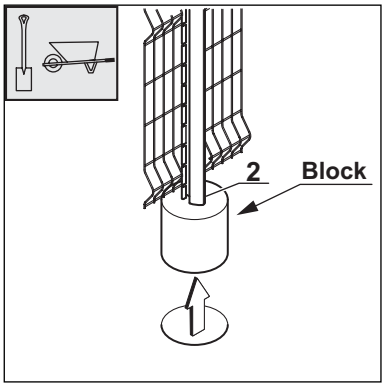
Cut the panels (**Ref. 4**) on either side of the damaged post (**Ref. 2**) along the vertical wire.

2



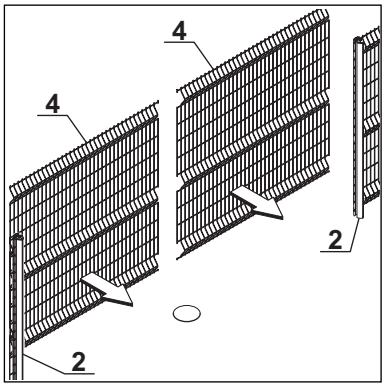
Remove the damaged panels (**Ref. 4**) from the adjacent posts (**Ref. 2**).

3



Remove the damaged post (**Ref. 2**) with its concrete block.

4

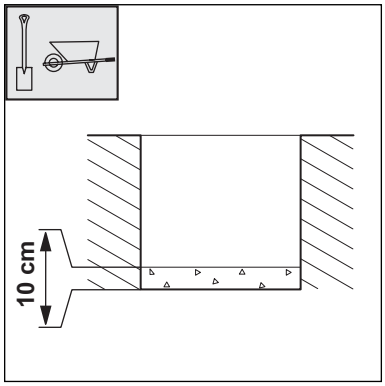


Fix two new panels (**Ref. 4**) in the grooves of the adjacent posts (**Ref. 2**).

Fix tensioning tools to hold the panels at the bottom of the groove in the posts.

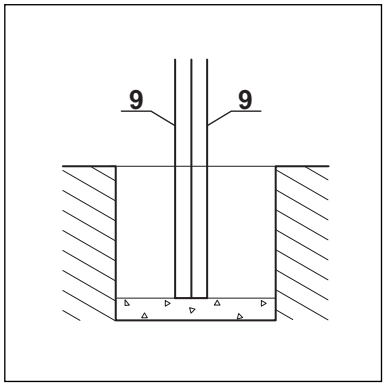
6
Maintenance
Repairs

5



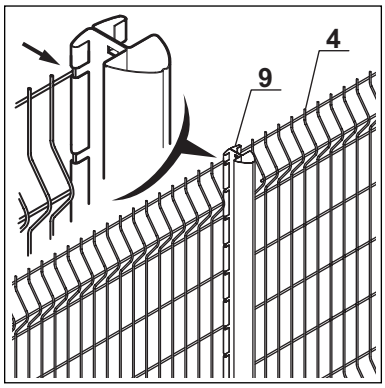
Pour 10 cm of concrete into the bottom of the hole.

6



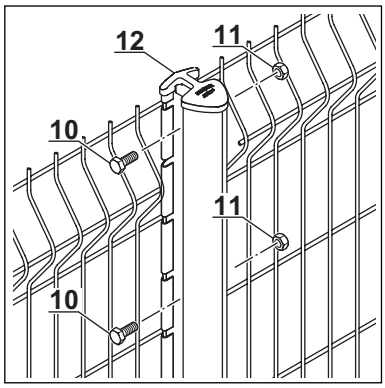
Put the two parts of the repair post (**Ref. 9**) into position (without screws or cover).

7



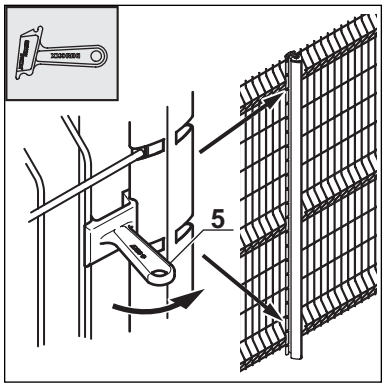
Attach the adjacent panels (**Ref. 4**) in the lugs of the two parts of the repair post (**Ref. 8**).

8



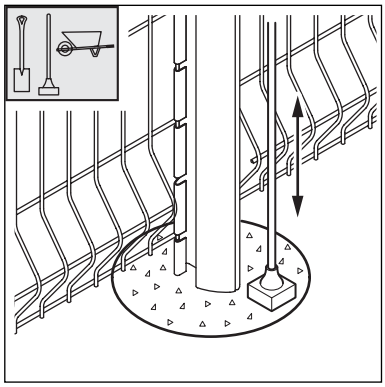
Assemble the two parts with the fastenings provided and put the cap in place (**Ref. 10**), (**Ref. 11, Ref. 12**).

9



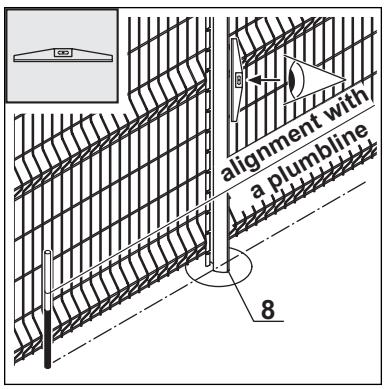
Set the tensioning tools (**Ref. 5**) on either side of the repair post.

10



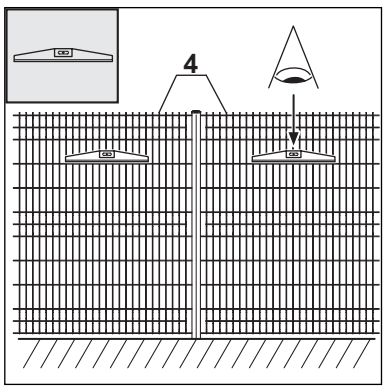
Pour in concrete and ram it down.

11



Check the alignment of the post (**Ref. 8**).

12



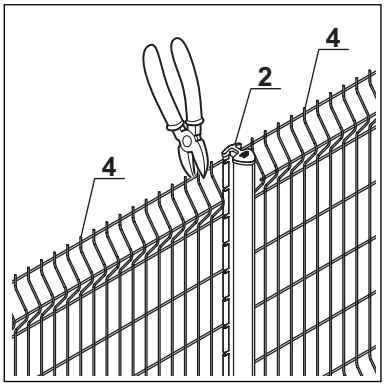
Check the panel is level (**Ref. 4**).

Respect the time needed for setting: 3 hrs minimum.

6
Maintenance
Repairs

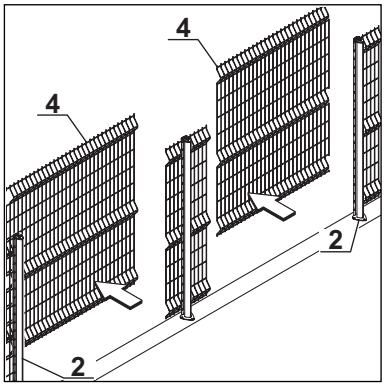
6-2-2 Setting the AXIS® Design repair post welded on a base plate

1



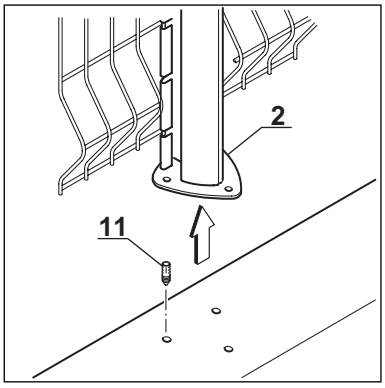
Cut the panels (**Ref. 4**) on either side of the damaged post (**Ref. 2**) along the vertical wire.

2



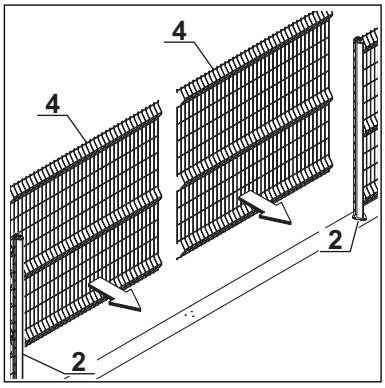
Remove the damaged panels (Ref. 4) from the adjacent posts (**Ref. 2**).

3



Remove the damaged post (**Ref. 2**) and **take out** the pins (**Ref. 11**).

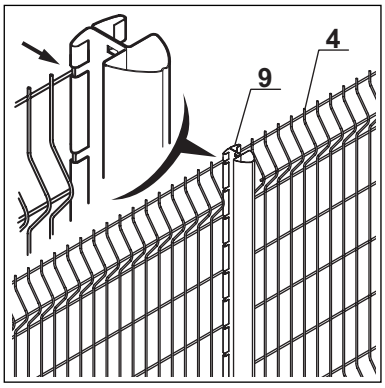
4



Fix two new panels (**Ref. 4**) in the grooves of the adjacent posts (**Ref. 2**).

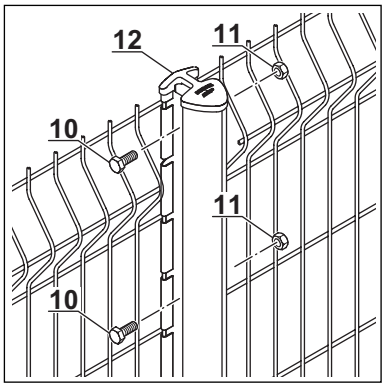
Fix tensioning tools.

5



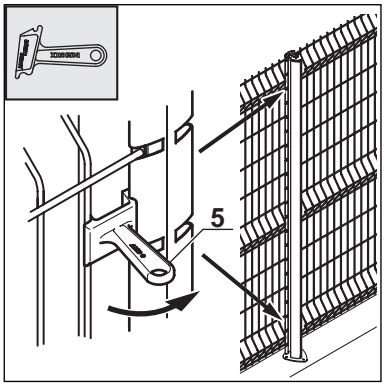
Attach the other end of the repair post (**Ref. 9**) in the lugs of the two parts of the repair post (**Ref. 9**) (without screws or cap).

6



Assemble the two parts with the fastenings provided and put the cap in place (**Ref. 10**), (**Ref. 11, Ref. 12**).

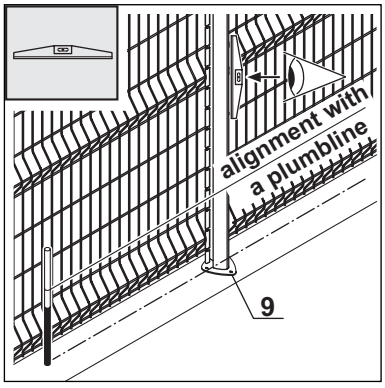
7



Set the tensioning tools (**Ref. 5**) on either side of the repair post.

Bolt the repair post on its plate.

8



Check the alignment of the post (**Ref. 8**).