

Van der Valk Horti Systems

DEVELOPER AND PRODUCER OF VENTILATION AND SCREENING SYSTEMS FOR GREENHOUSES

General Installation manual Lower screen – Triple Plus profile





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DEVELOPER AND PRODUCER OF VENTILATION AND SCREENING SYSTEMS FOR GREENHOUSES

Manual based on the date below

- Use only with materials of Van der Valk Systemen.
- Dimensions in mm.
- Drive supplier Lock or Ridder.
- Position of motor to be determined by installer.
- Drawings based on 38mm profile with 2 pull wires per truss.
- Manual is, in consultation, also suitable for 22mm profile with 3 pull wires per truss.
- Hang down: other options possible
- For 3 pull wires see pages: 03B, 06E, 08B, 17B, 18C

This manual is not project specific.

This manual is not legally binding.

No right may be derived from this installation manual.

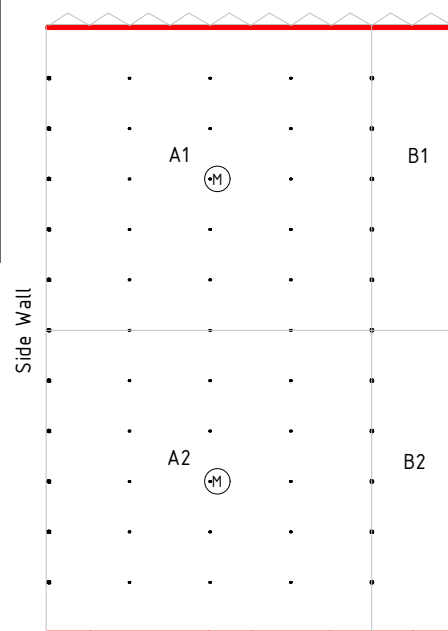
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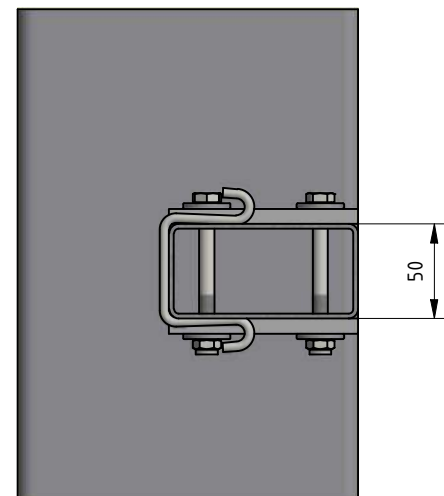
45.81.89

Gable Wall



Mounting wire brackets

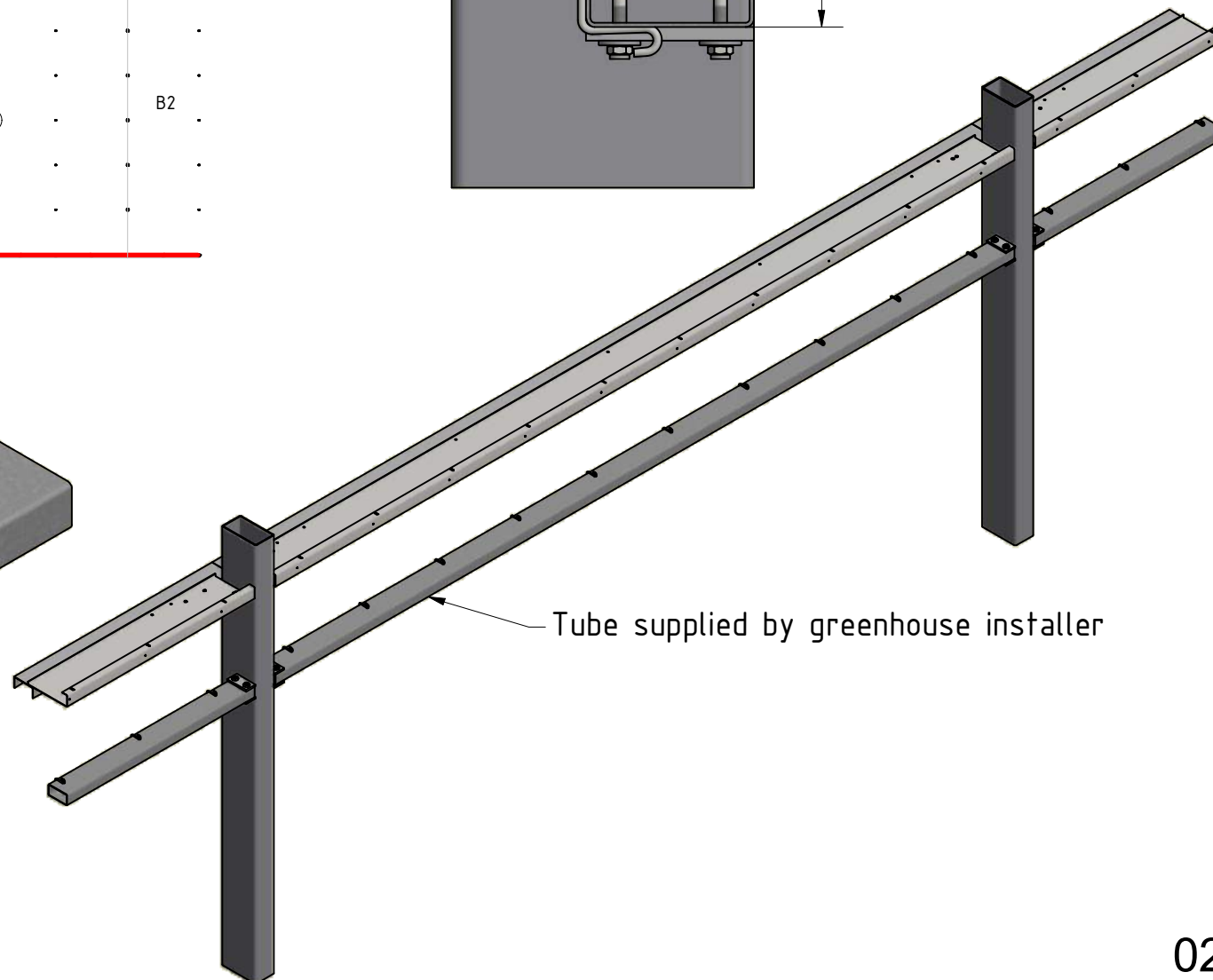
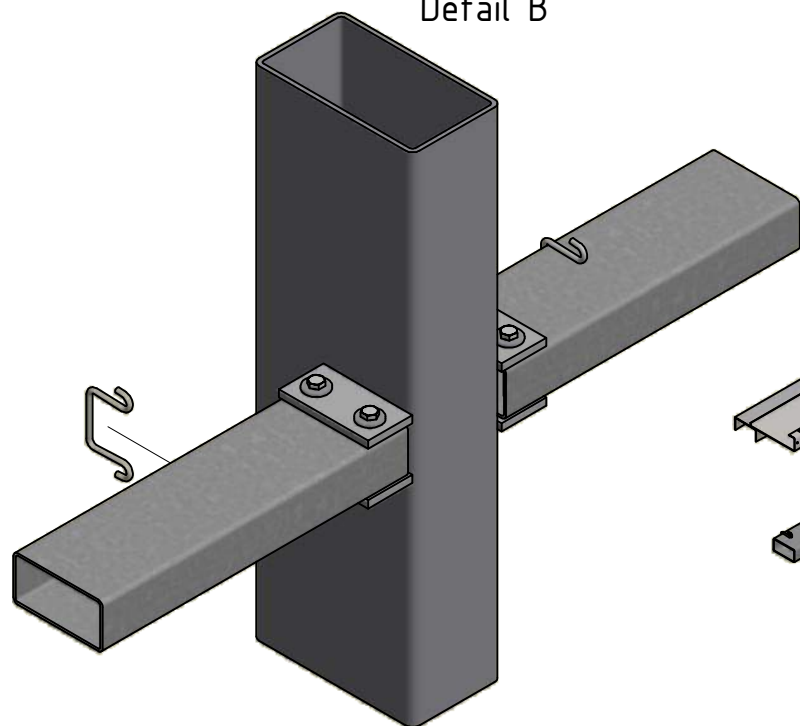
View A

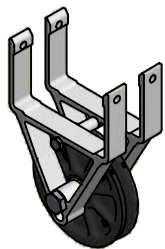


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Detail B





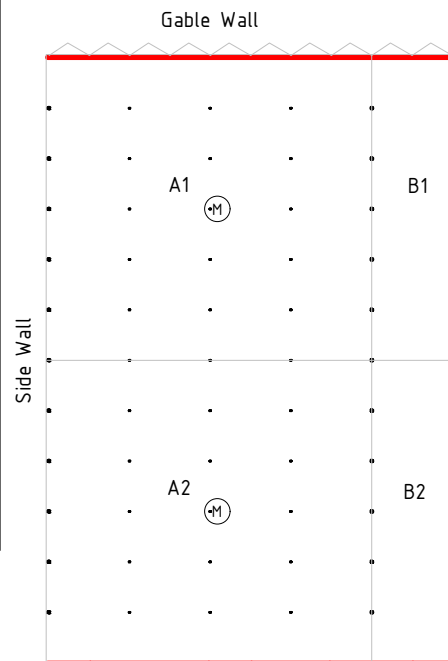
Height [mm] →
Width [mm] →
44.710.---



Rollis with + 15 mm
55.3.---

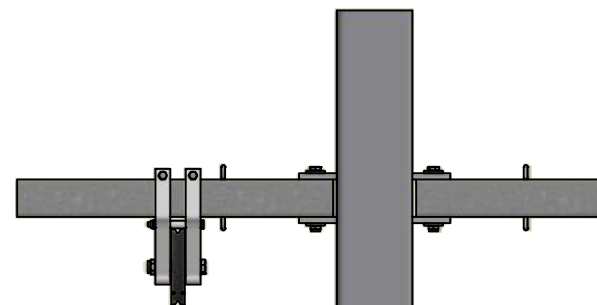


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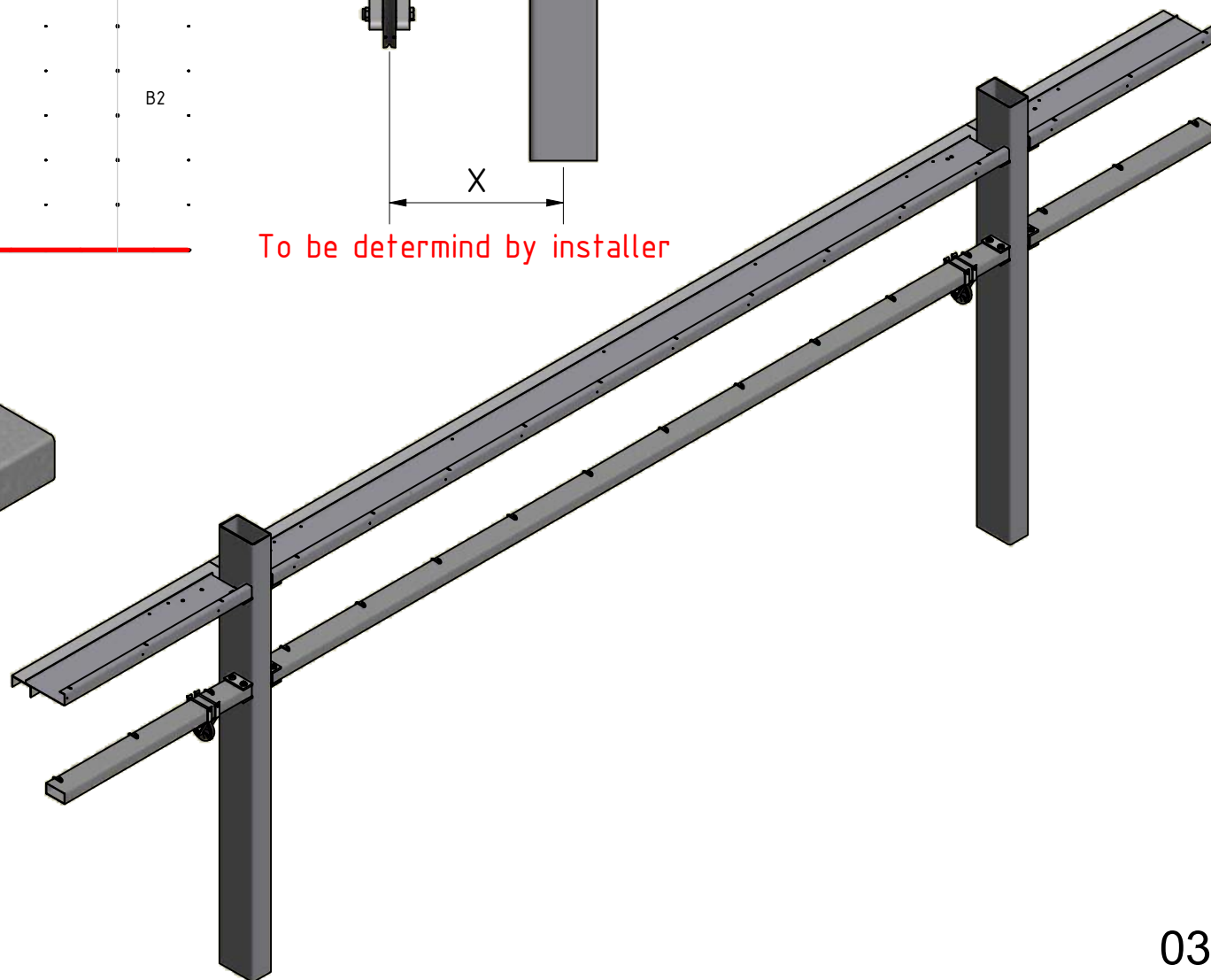
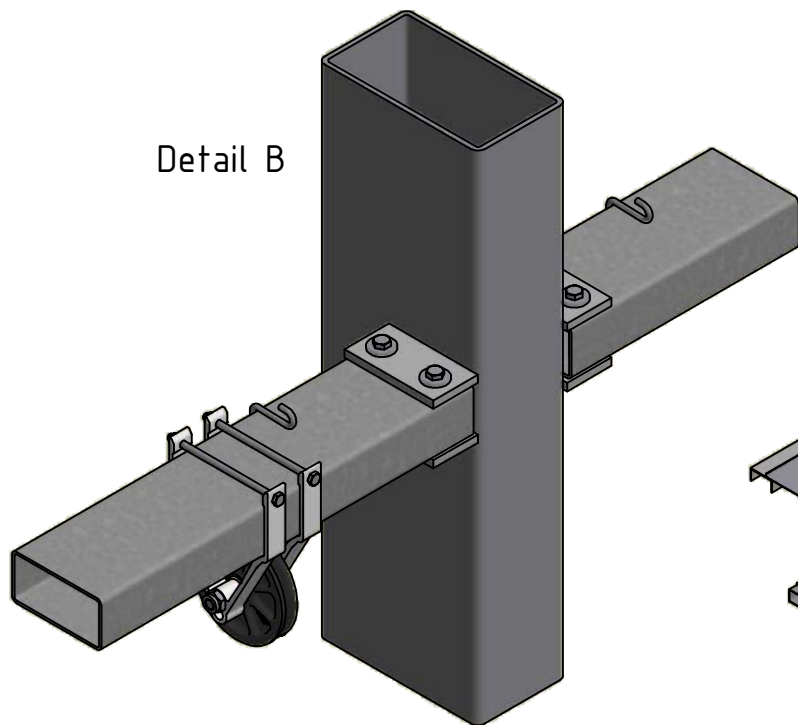
Mounting reversing wheels

View A



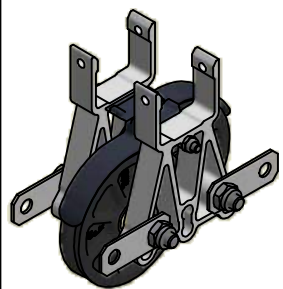
To be determined by installer

Detail B



VAN DER VALK





Trellis height
Trellis width
44.740.-

M6x..

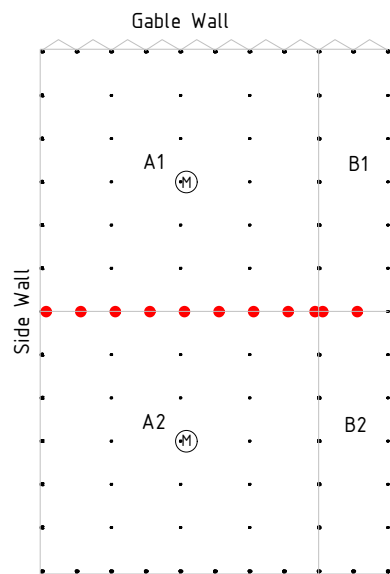


(L=trellis width + 15 mm)
55.30.-

M6



55.30.00



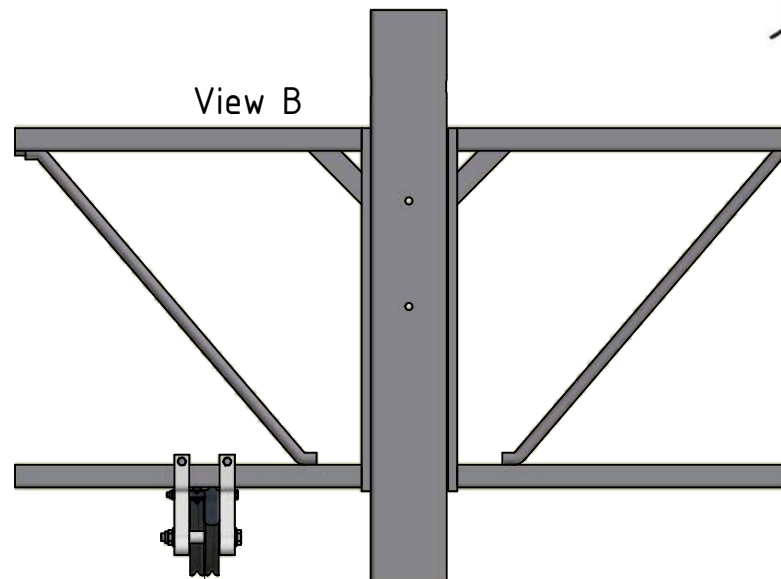
Reversing wheel

VAN DER VALK



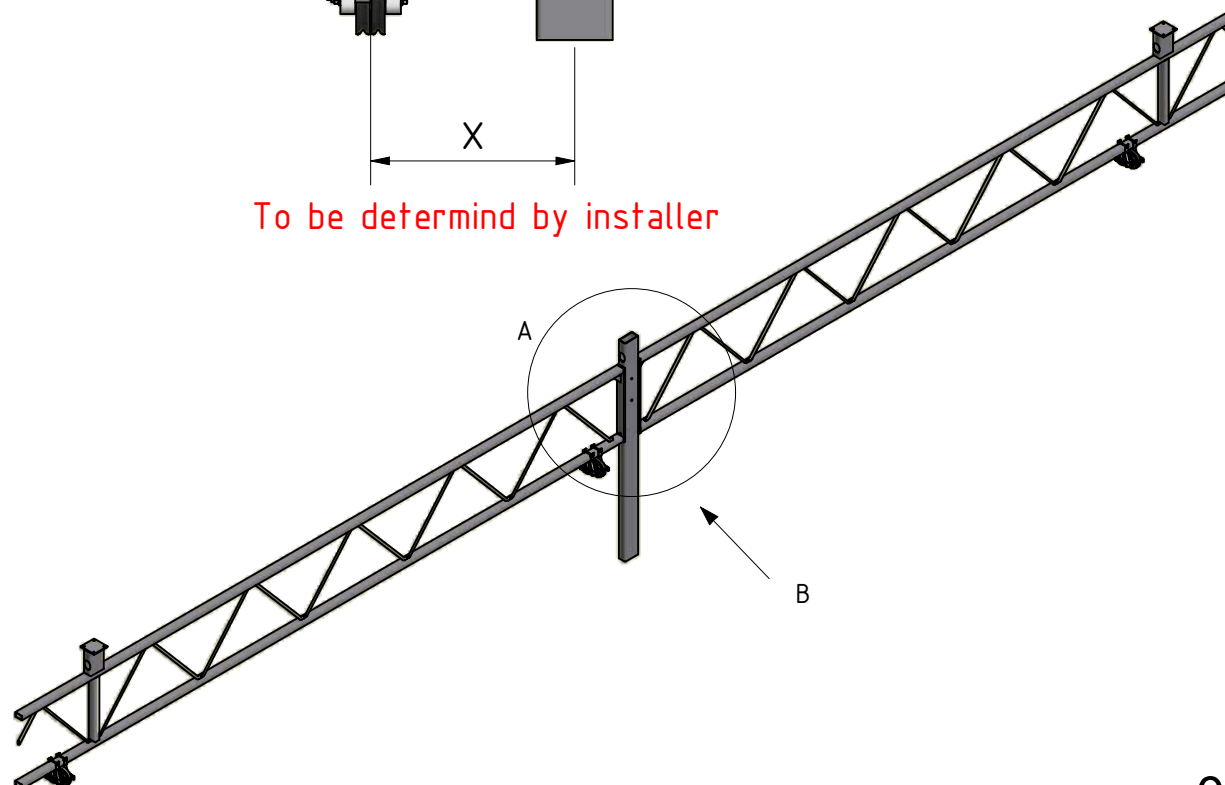
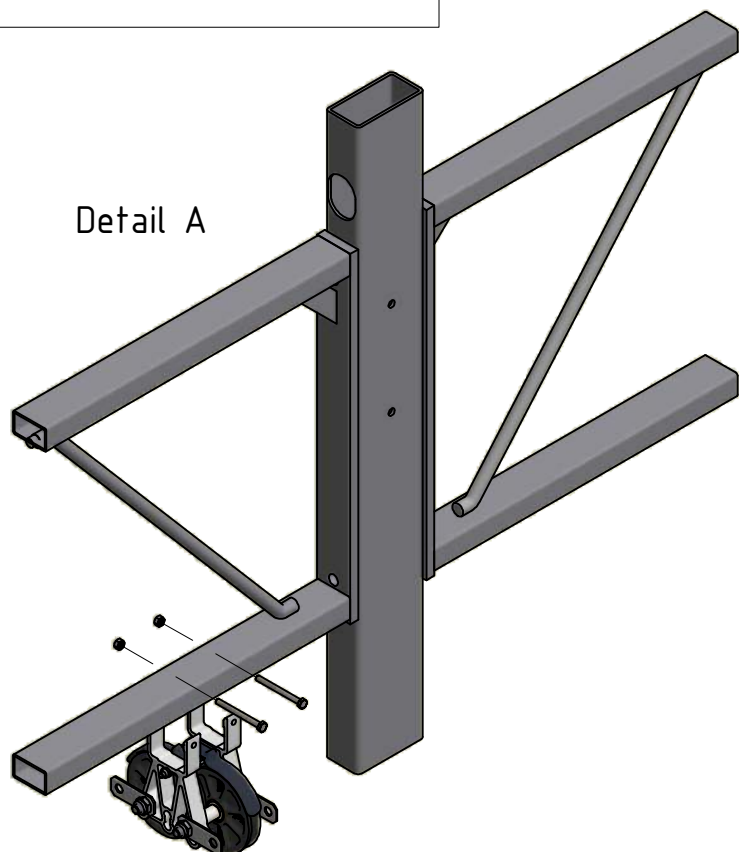
HORTI SYSTEMS

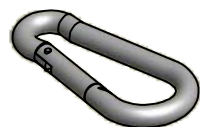
View B



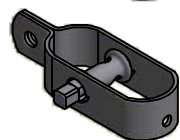
To be determined by installer

Detail A





48.80.40



48.80.12



48.80.30



48.80.37



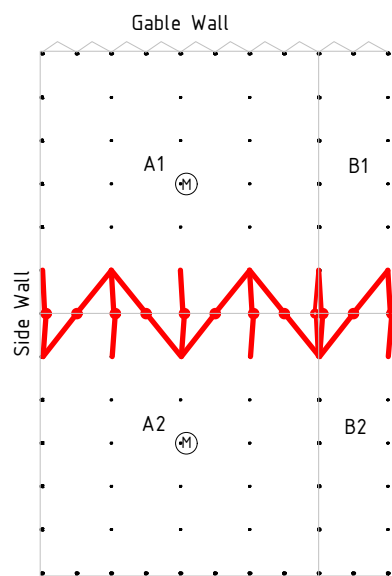
48.10.17

Bracing reversing wheels

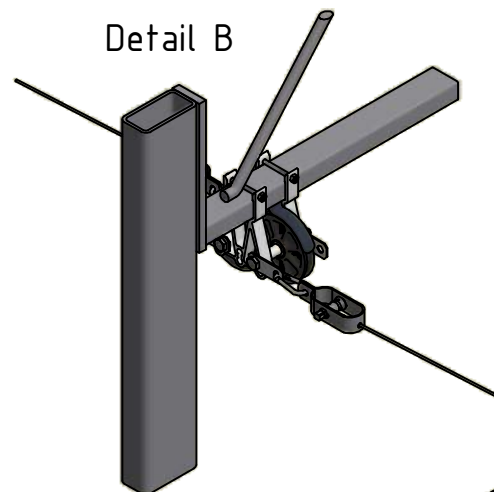
VAN DER VALK



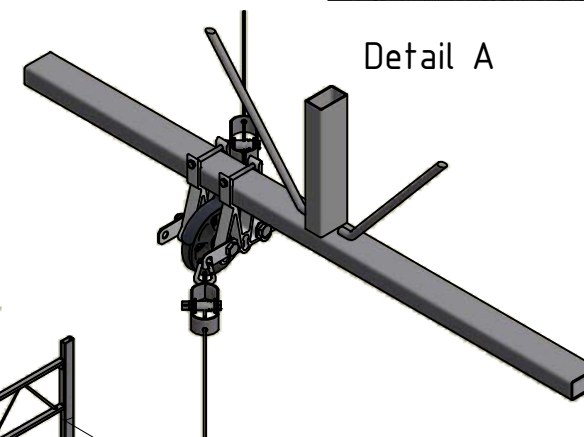
HORTI SYSTEMS



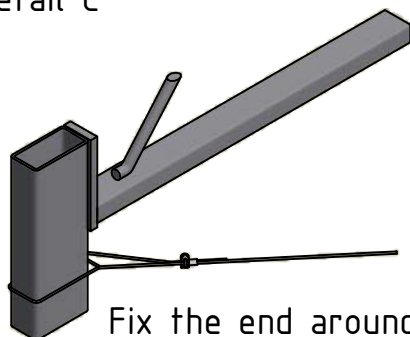
Detail B



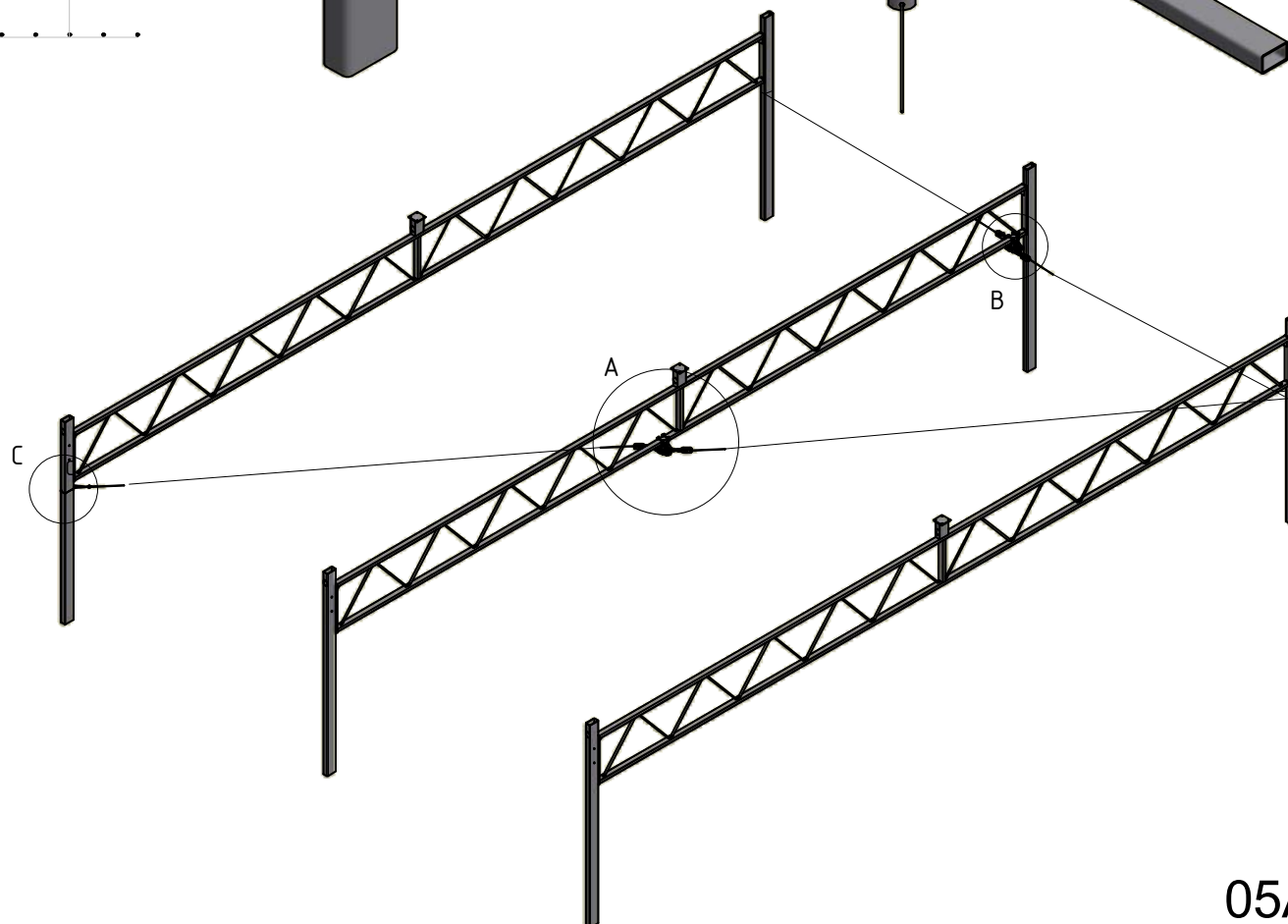
Detail A



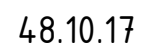
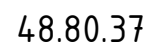
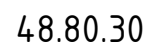
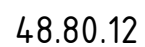
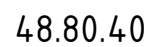
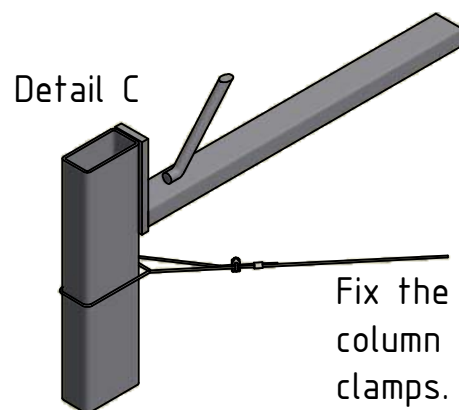
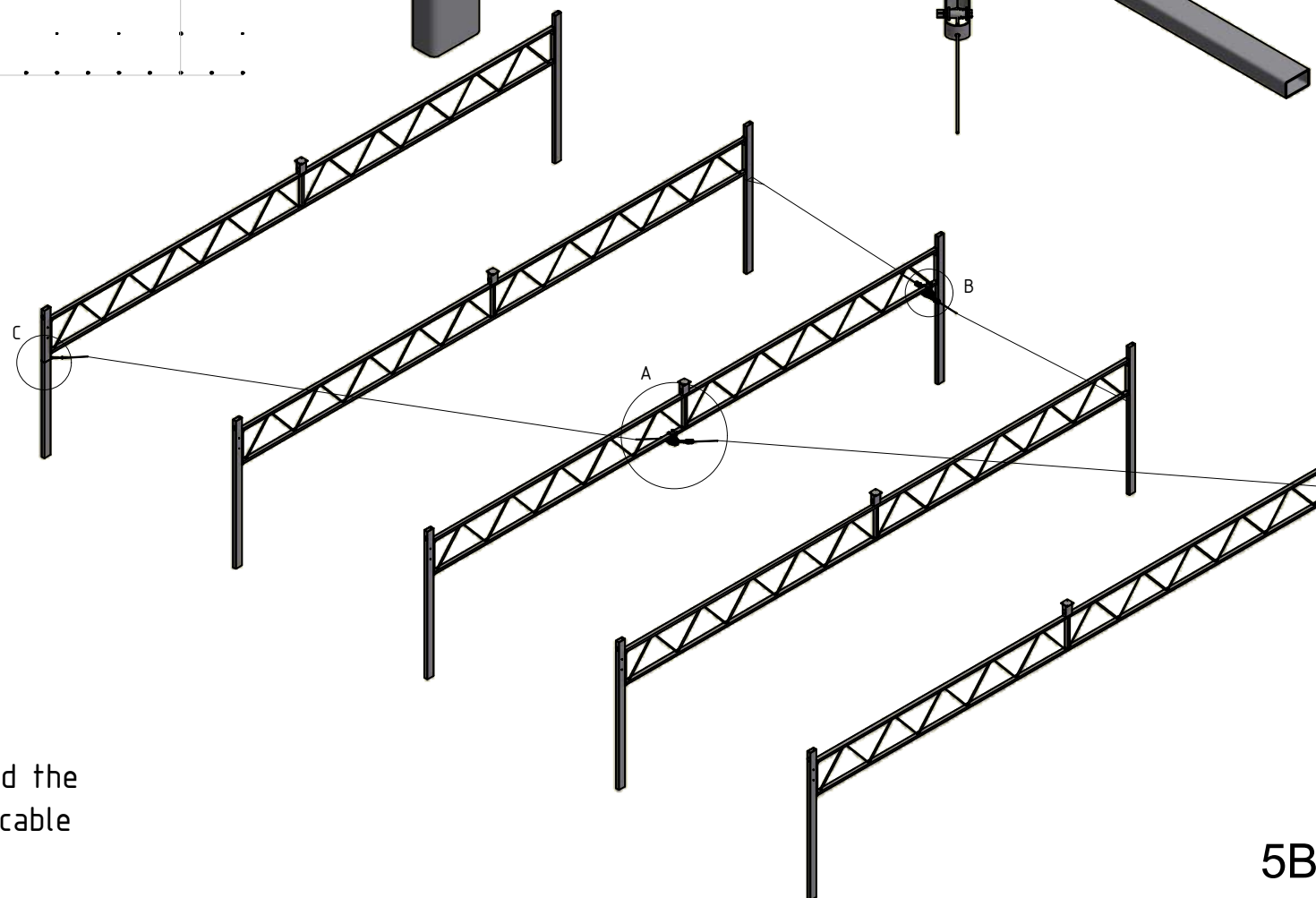
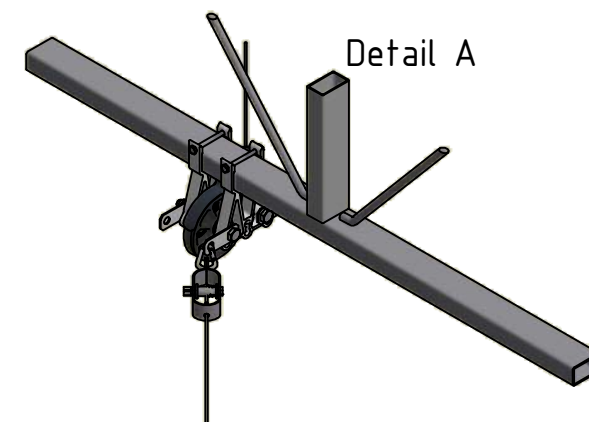
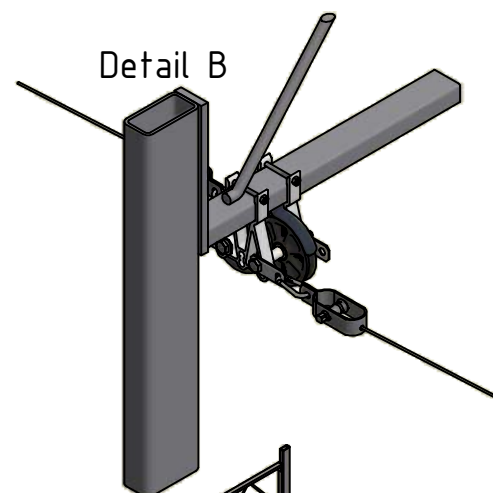
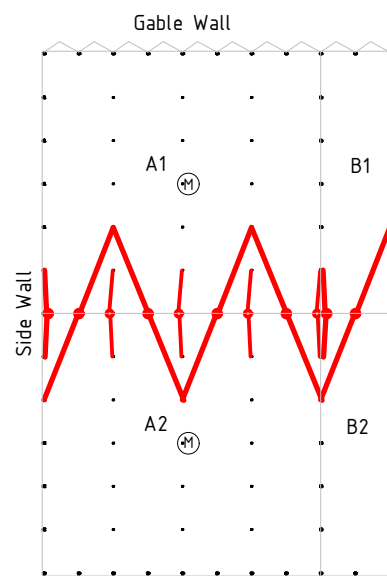
Detail C



Fix the end around the column using the cable clamps.



05A

**VAN DER VALK**

Fix the end around the column using the cable clamps.



48.80.40



48.80.12



48.80.30



48.80.37



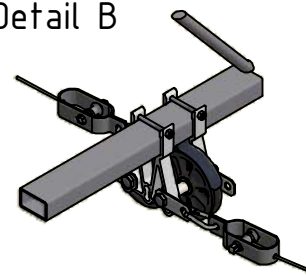
48.10.17

Bracing reversing wheels

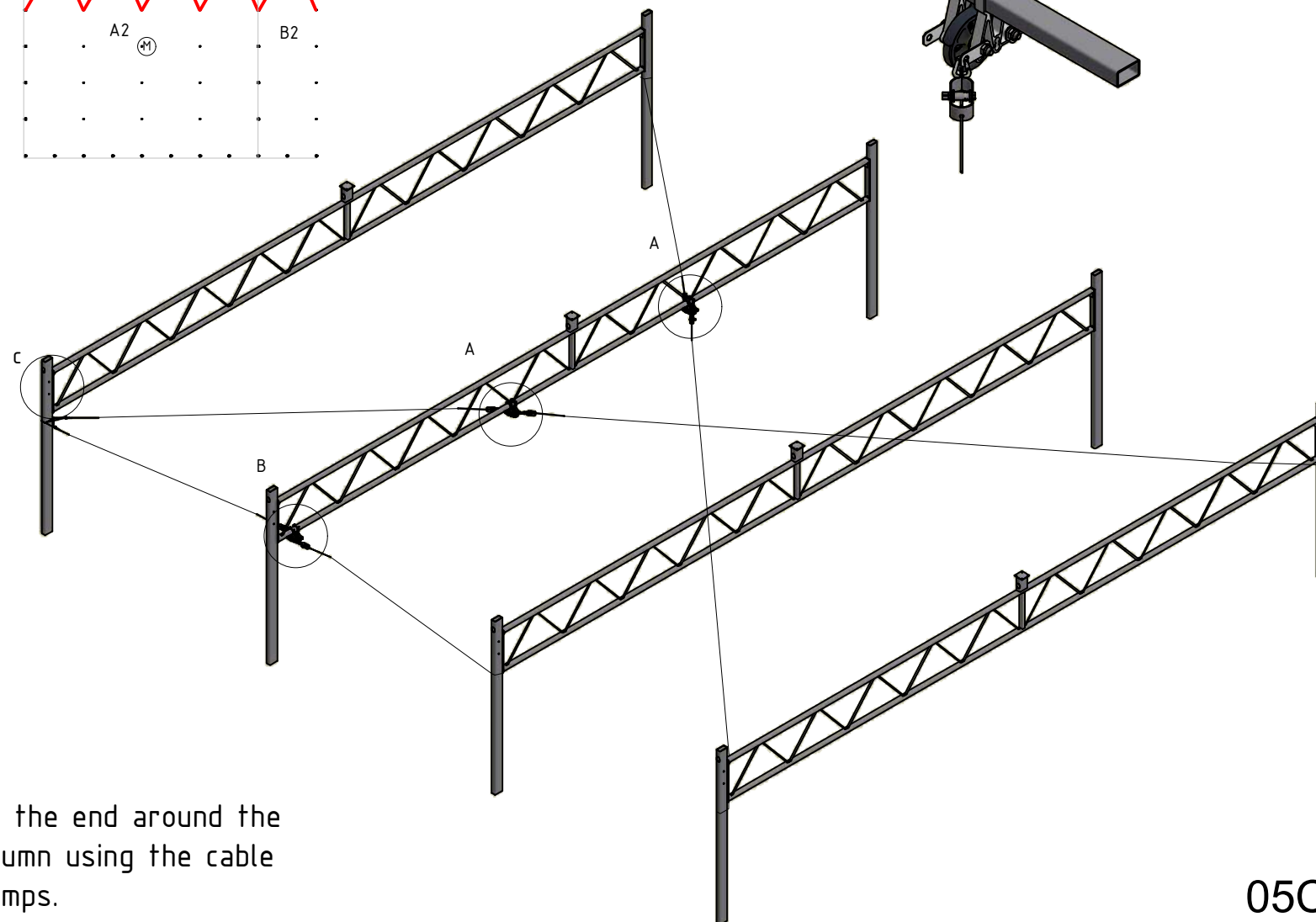
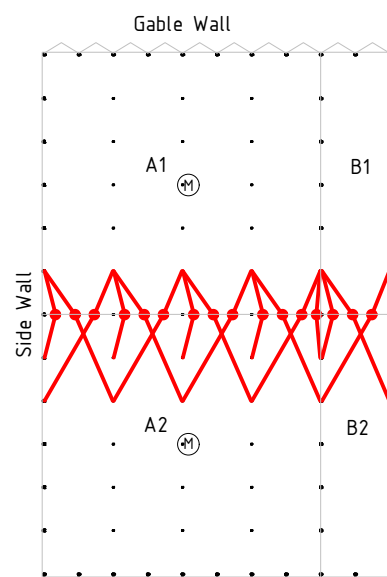
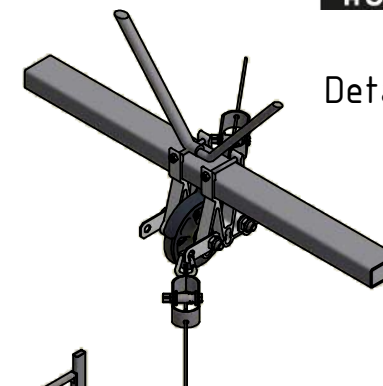
VAN DER VALK



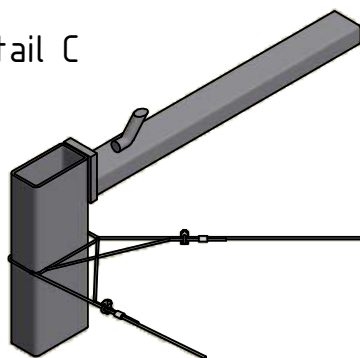
Detail B



Detail A



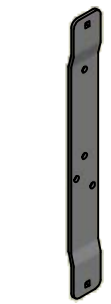
Detail C



Fix the end around the column using the cable clamps.

Bracing reversing wheels - Side Wall

VAN DER VALK



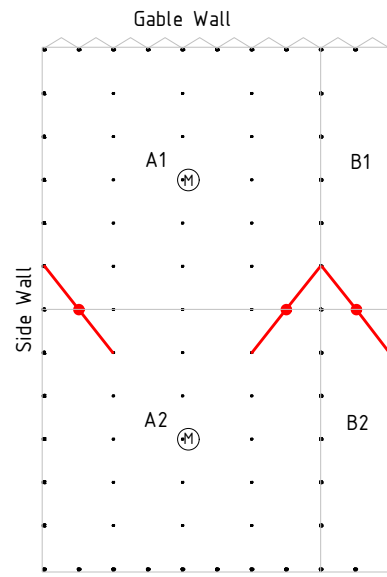
44.82.10.--- (L [mm])



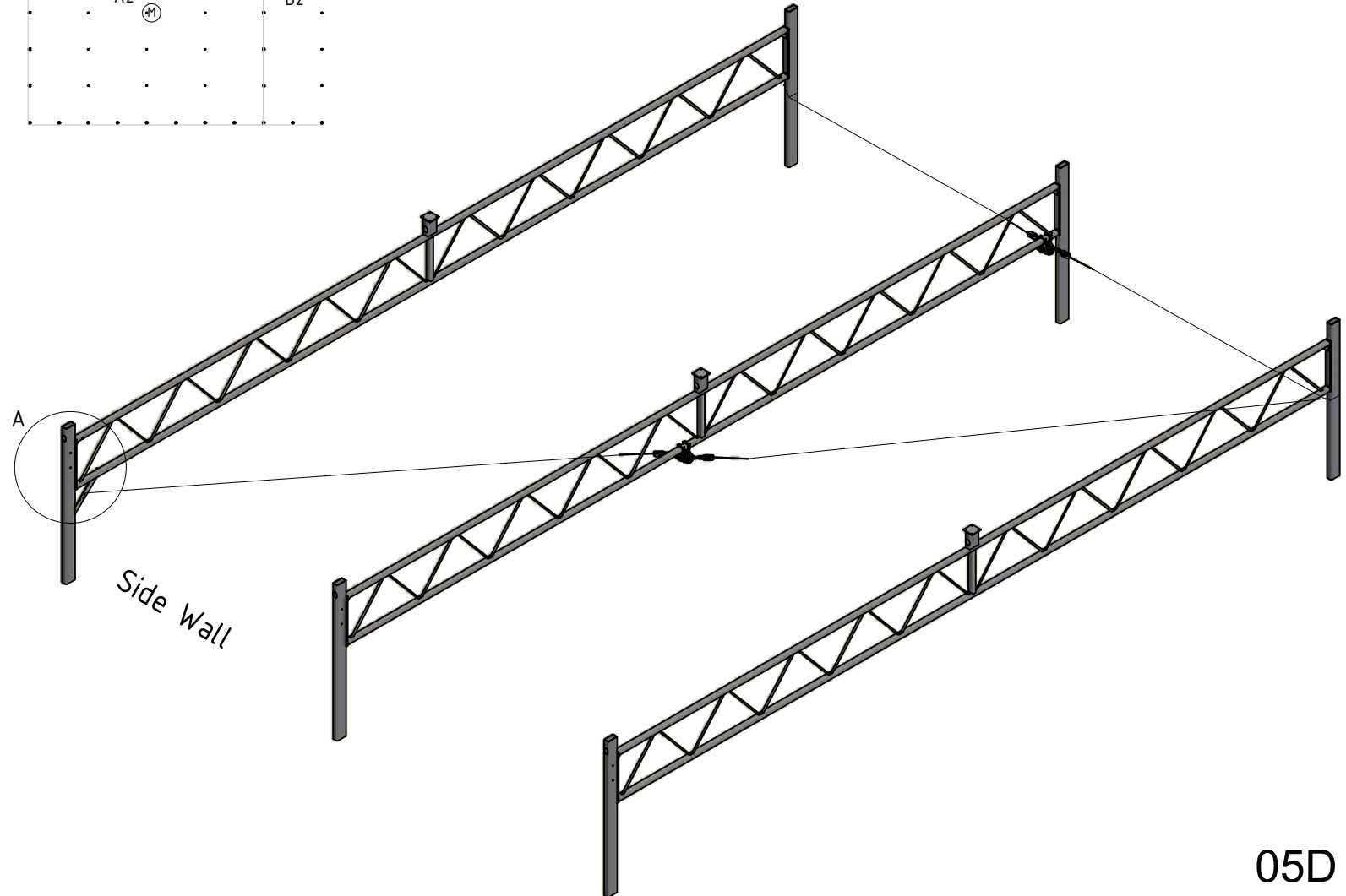
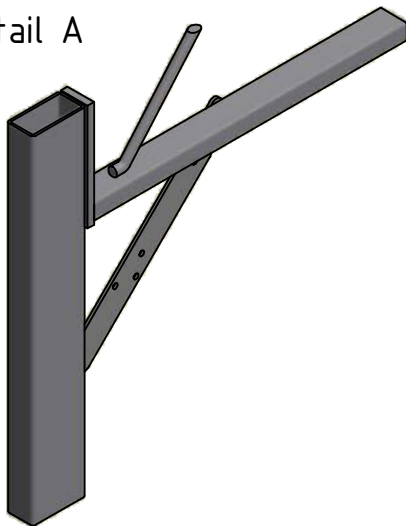
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48.10.17

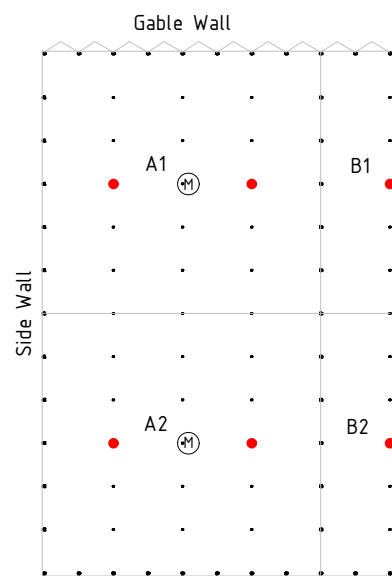


Detail A

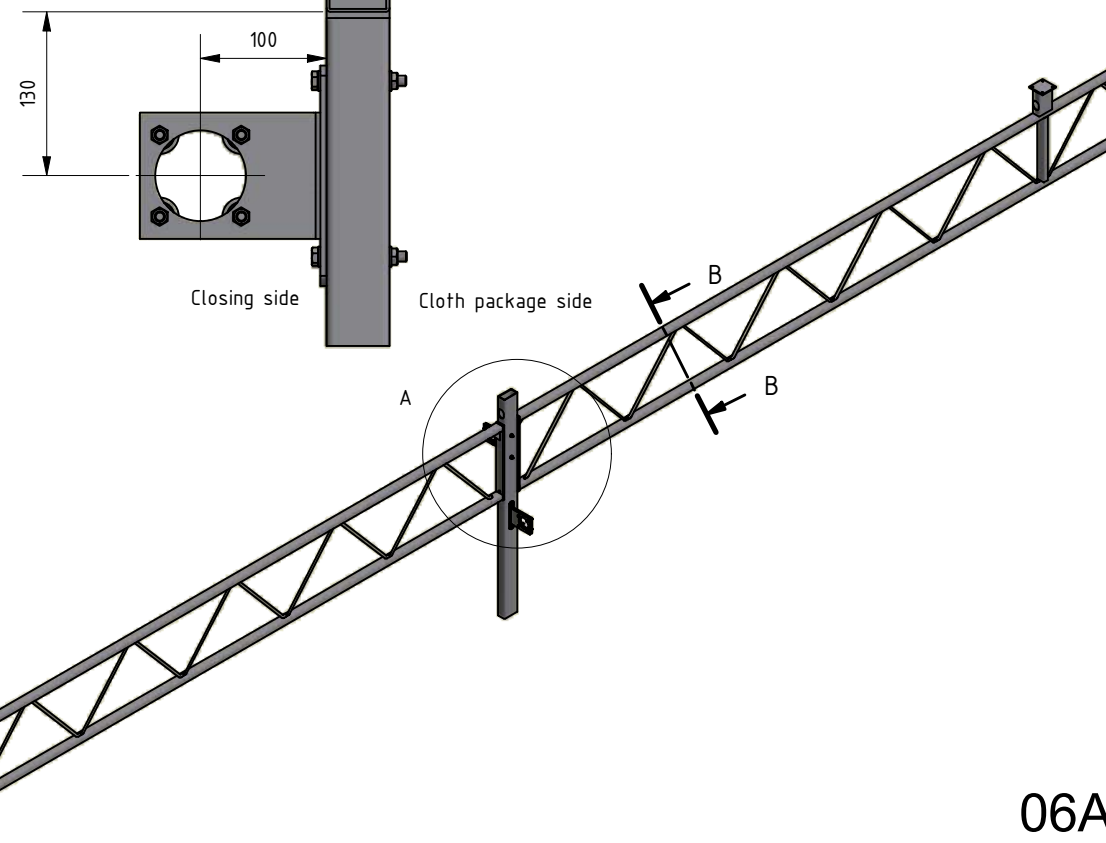


05D

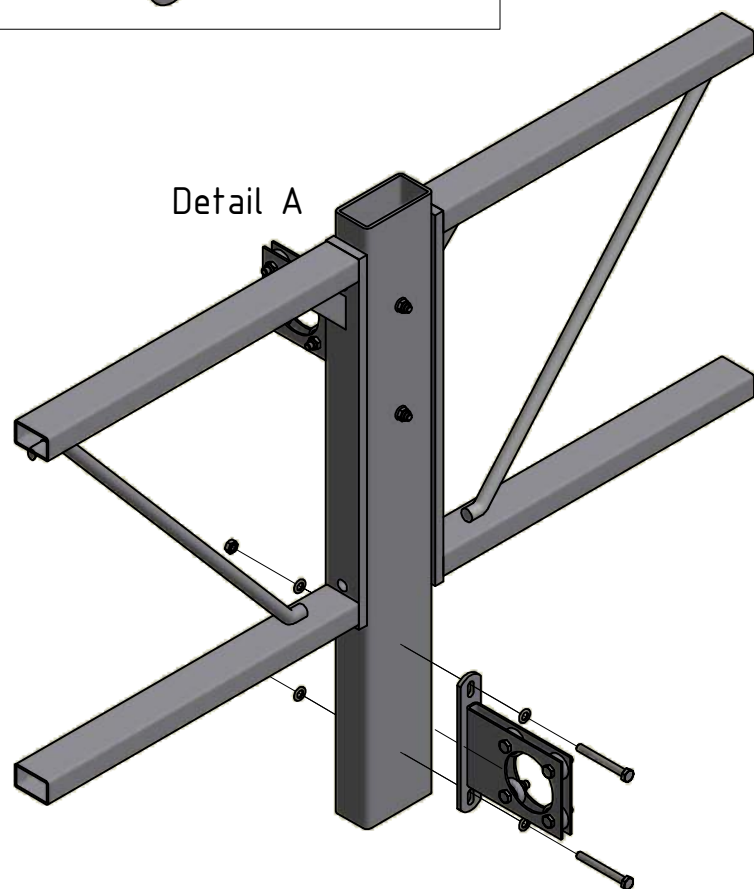
Bearing plate 2" at post



View B



Detail A



44.82.15

(kolom width + 20 mm)

55.40.--

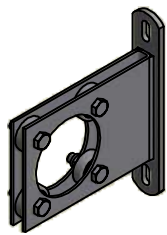
M8x--

M8

55.40.00

M8

53.55.17



44.82.15

M8x--



(kolom width + 20 mm)
55.40.--

M8

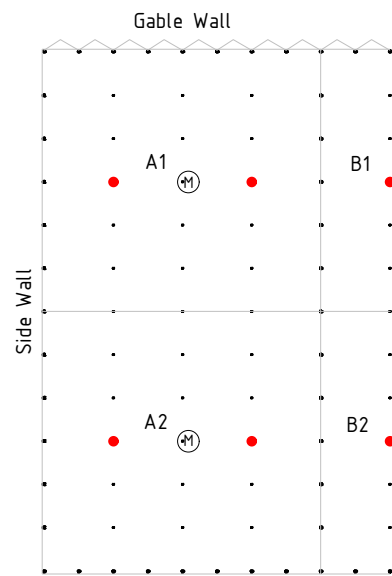


55.40.00

M8

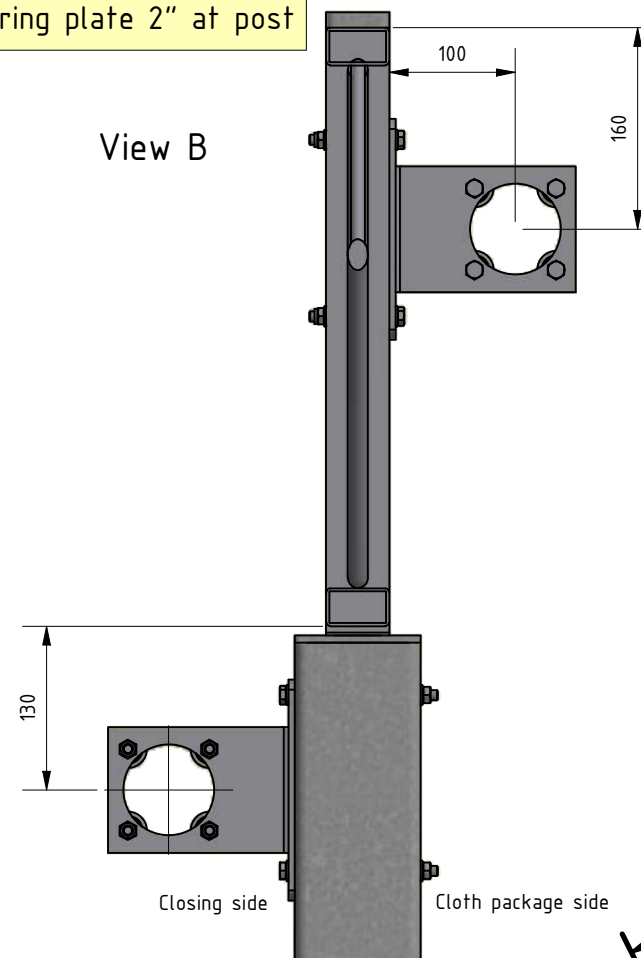


53.55.17

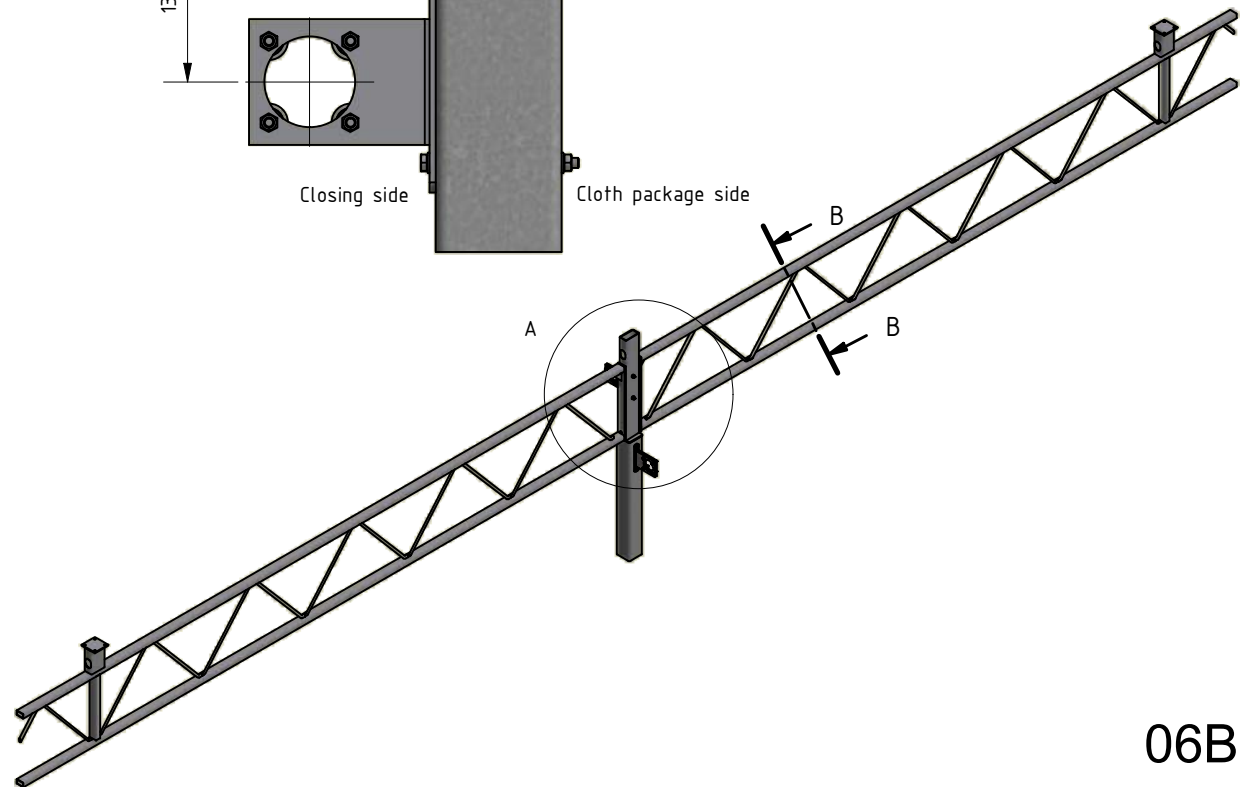
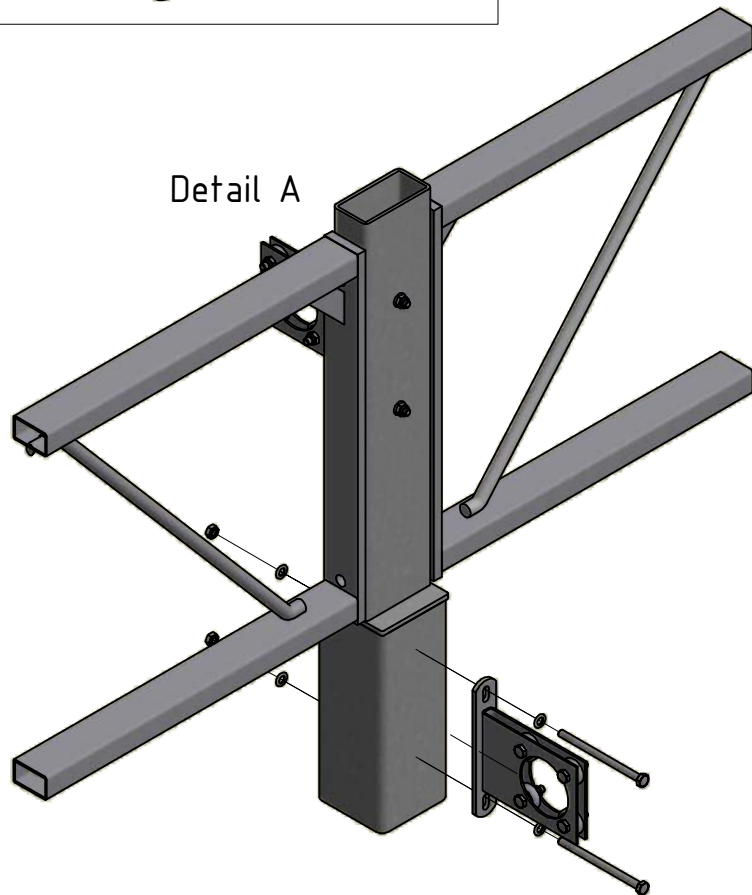


Bearing plate 2" at post

View B



Detail A



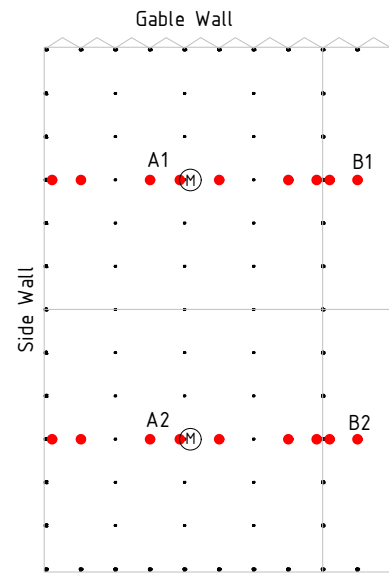
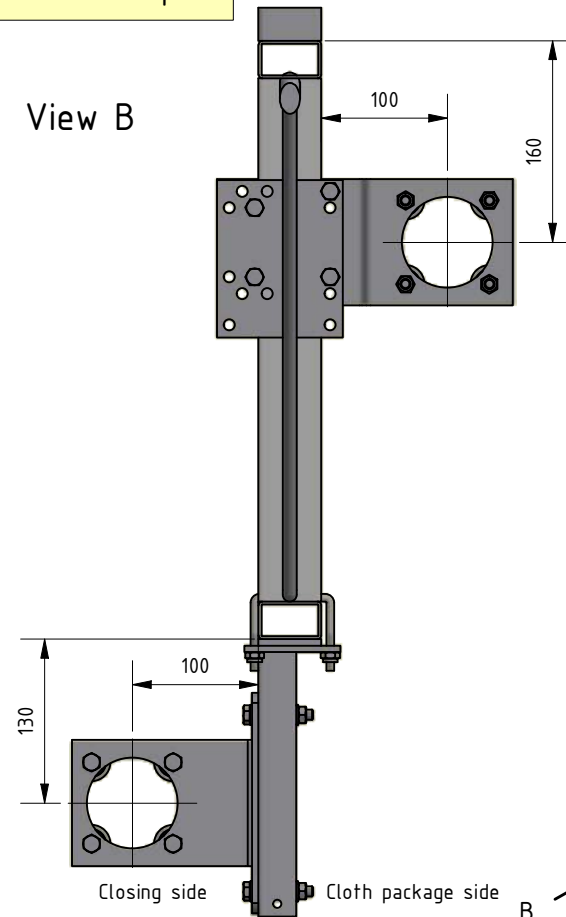
VAN DER VALK



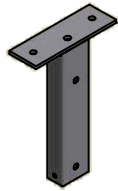
06B

Bearing plate 2" at post

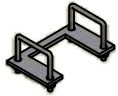
View B



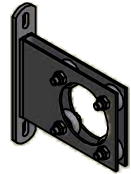
44.82.20



44.82.21



44.82.15



M8x50



55.40.50

M8



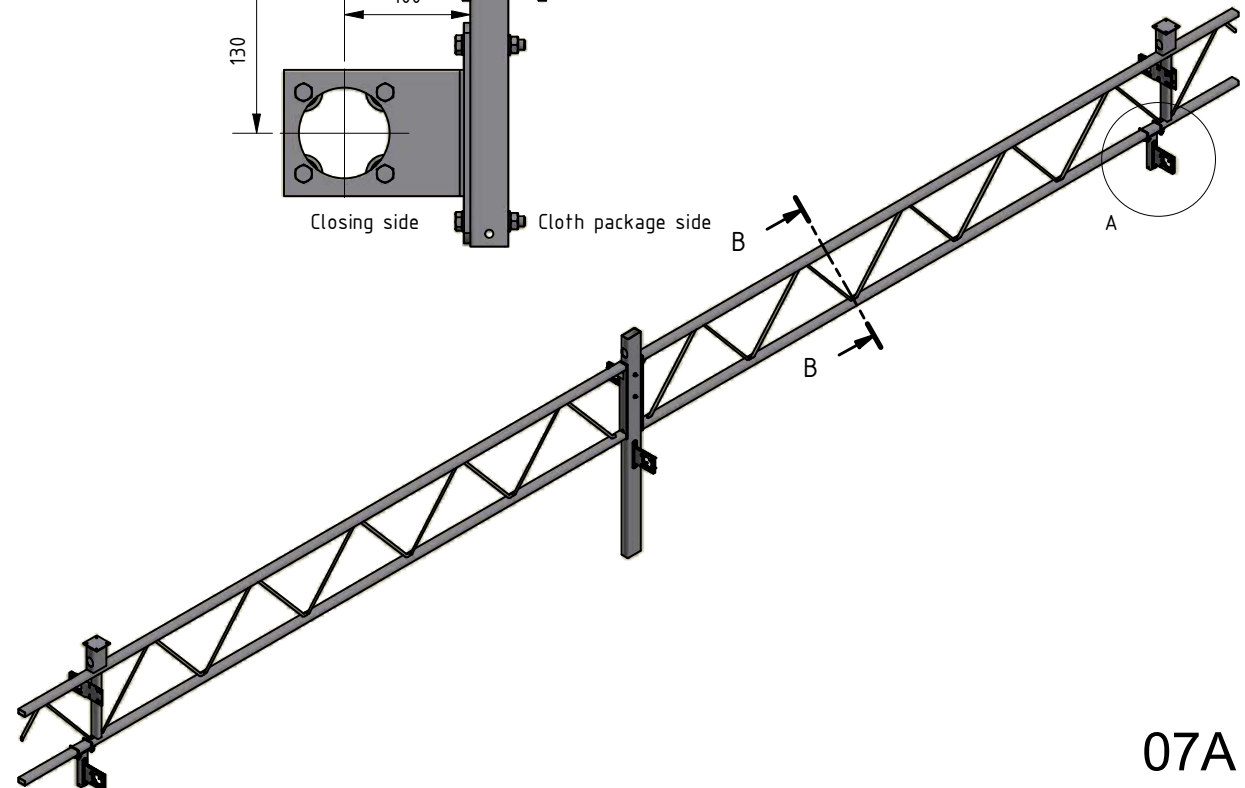
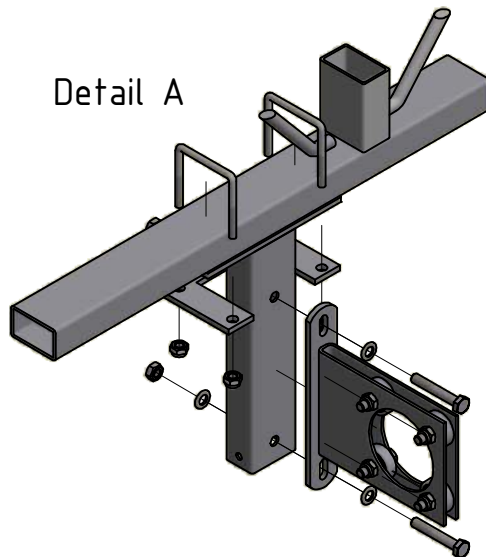
55.40.00

M8



53.55.17

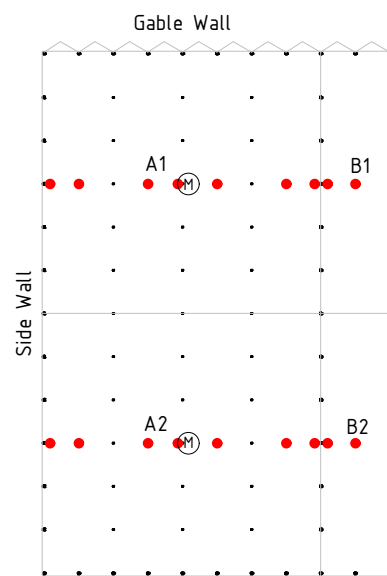
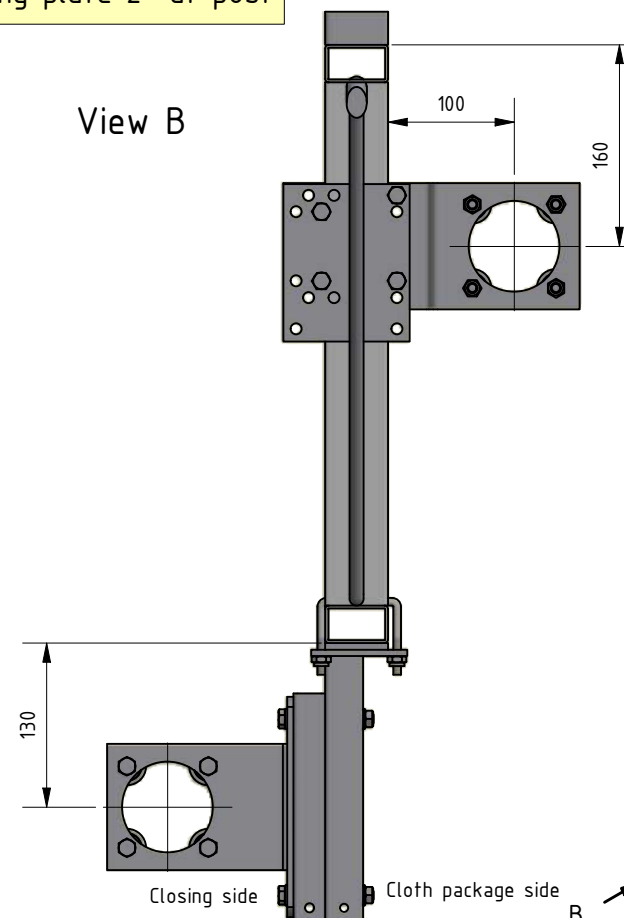
Detail A





Bearing plate 2" at post

View B



44.82.20

44.82.19

44.82.21 50mm

44.82.22 60mm

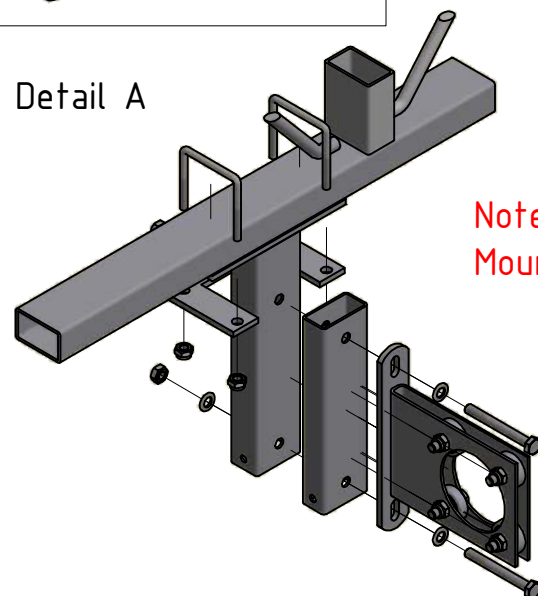
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M8x70 55.40.70

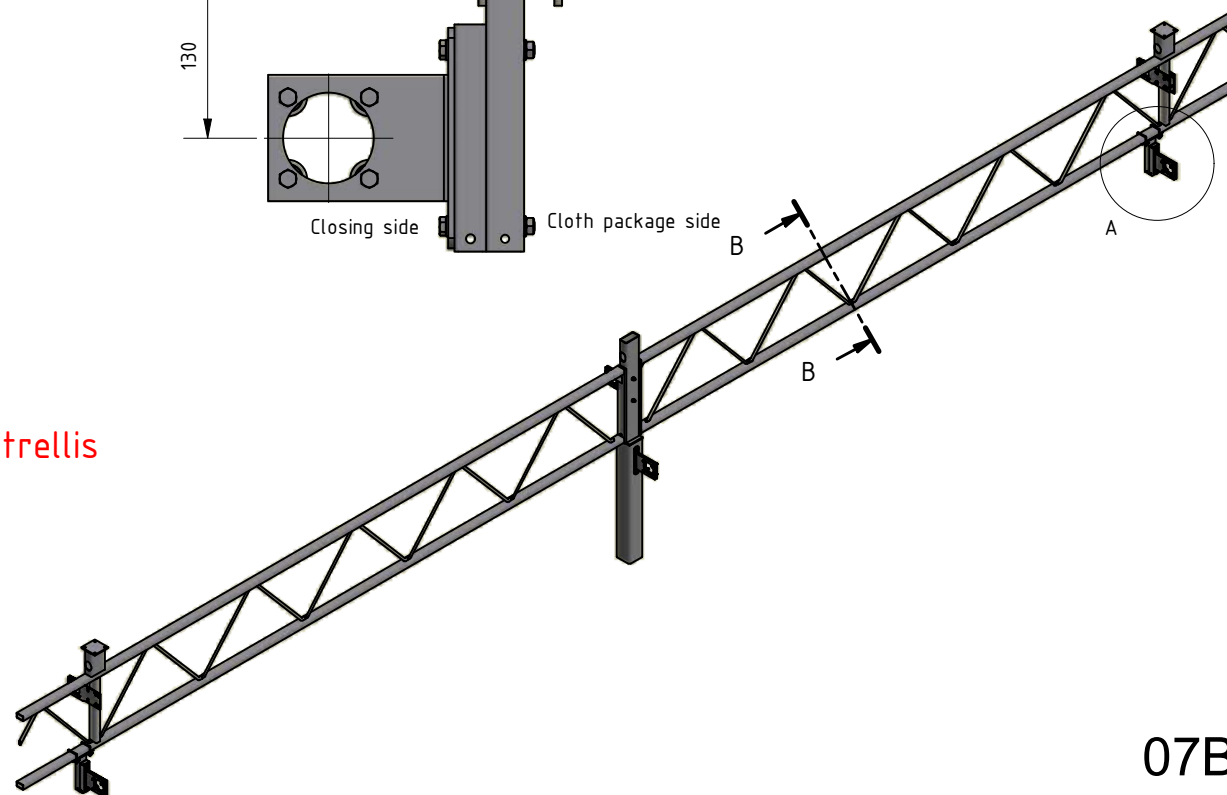
M8 55.40.00

M8 53.55.17

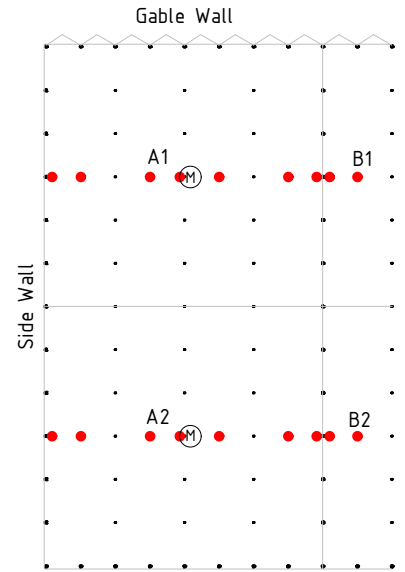
Detail A



Note:
Mount even with trellis

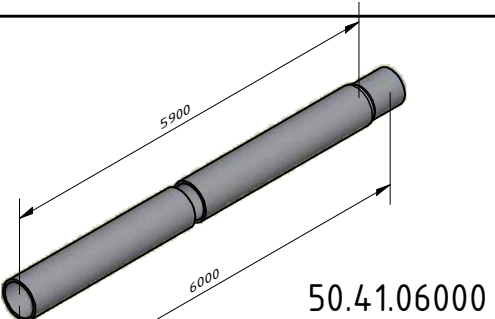


Bearing plate 2" at post

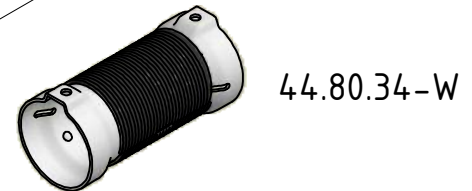


View B

Attention mount the wire tensioner on the shaft before installation



50.41.06000



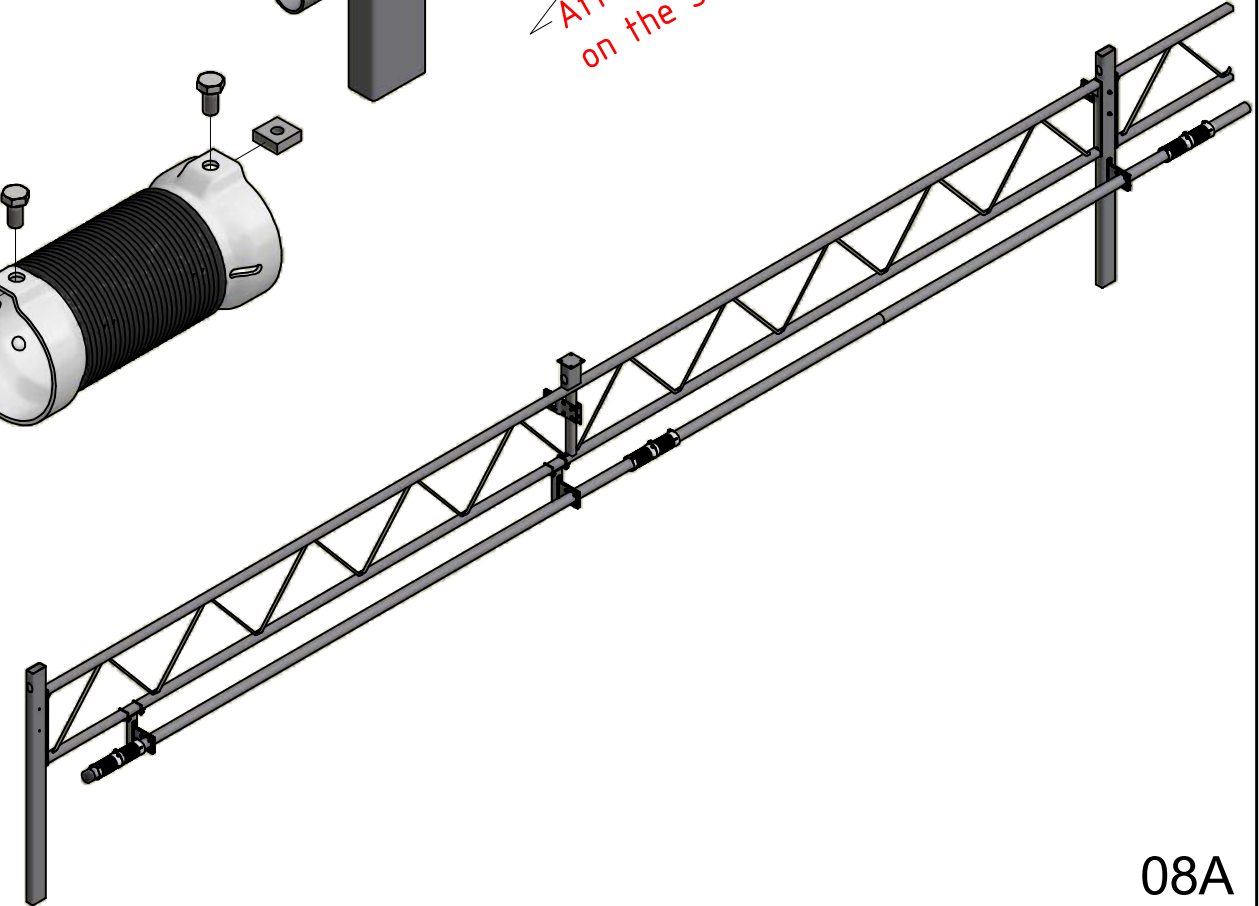
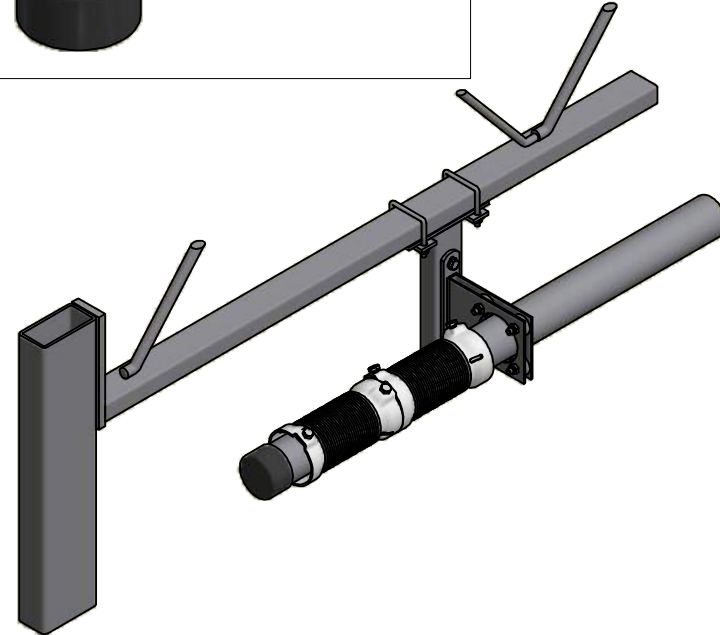
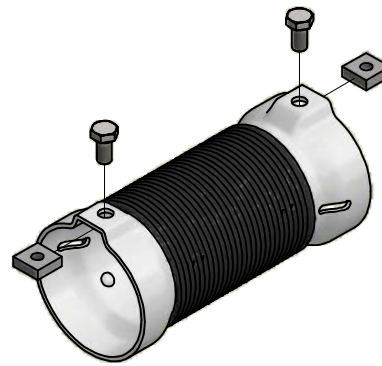
44.80.34-W

M8 53.25.20

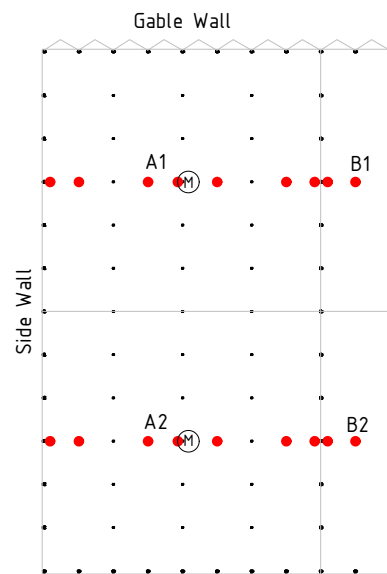
M8x16 55.40.16



44.16.60

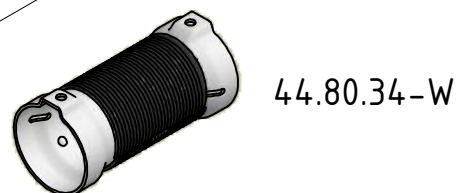
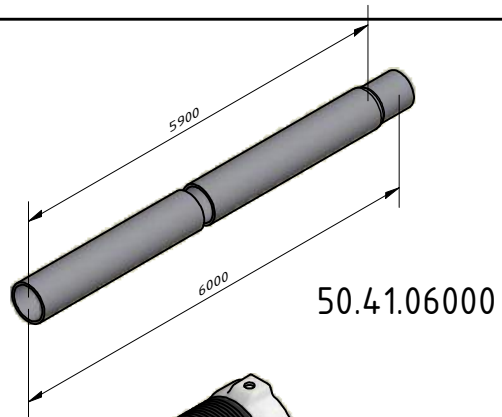


Bearing plate 2" at post



View B

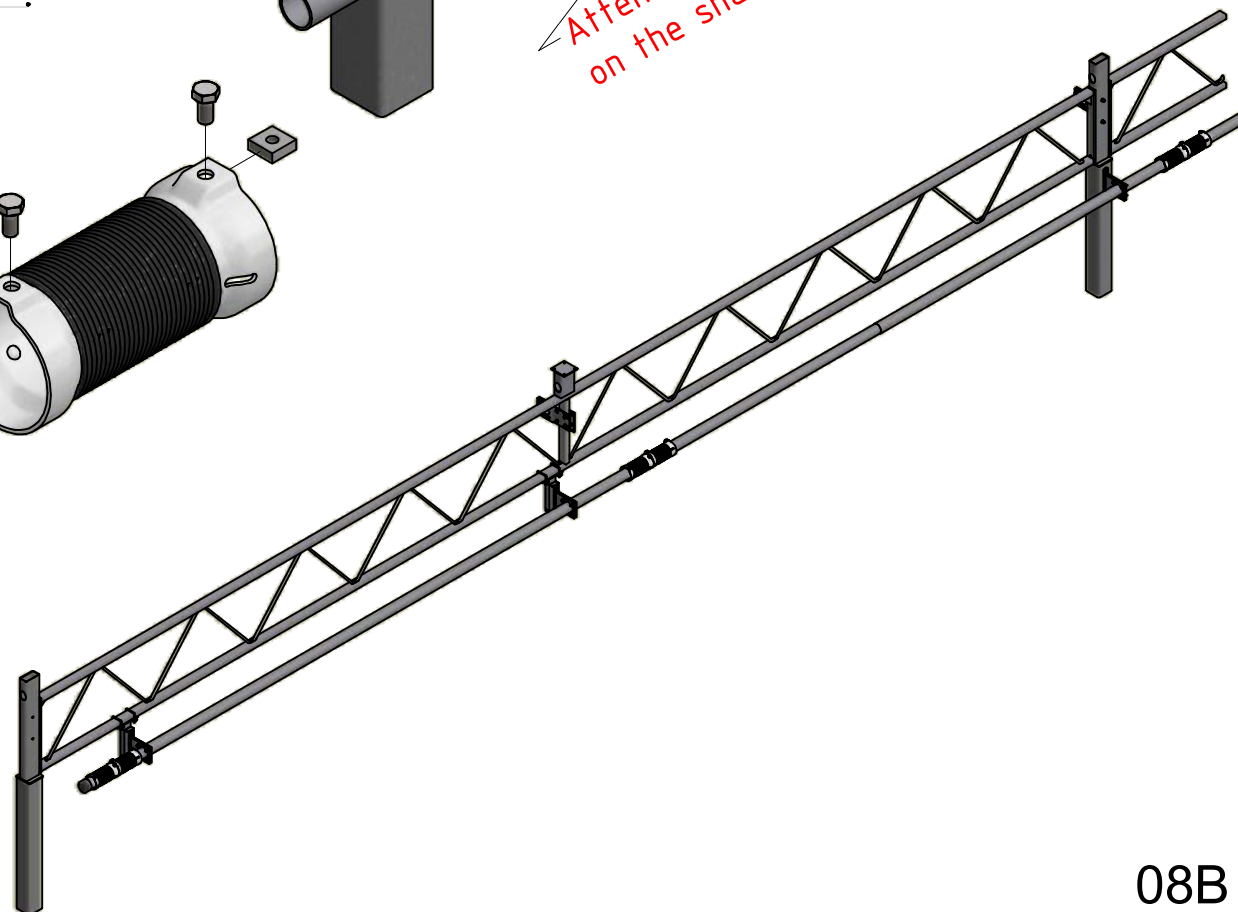
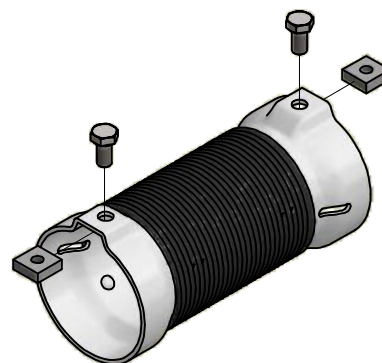
Attention mount the wire tensioner
on the shaft before installation

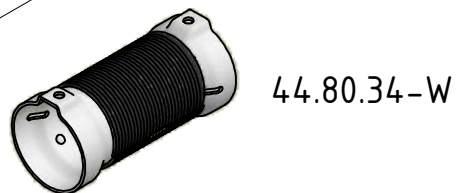
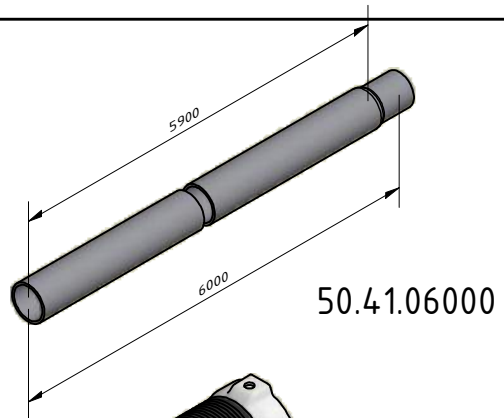


M8 53.25.20



M8x16 55.40.16





M8

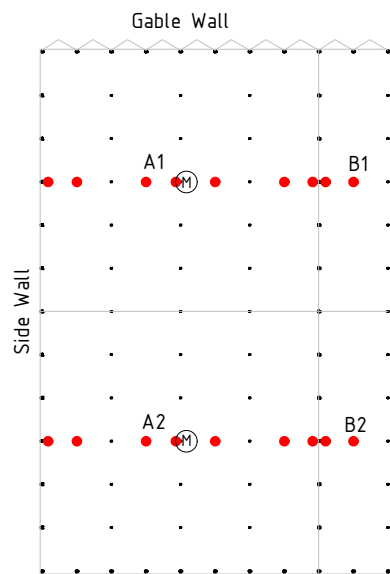


53.25.20

M8x16



55.40.16

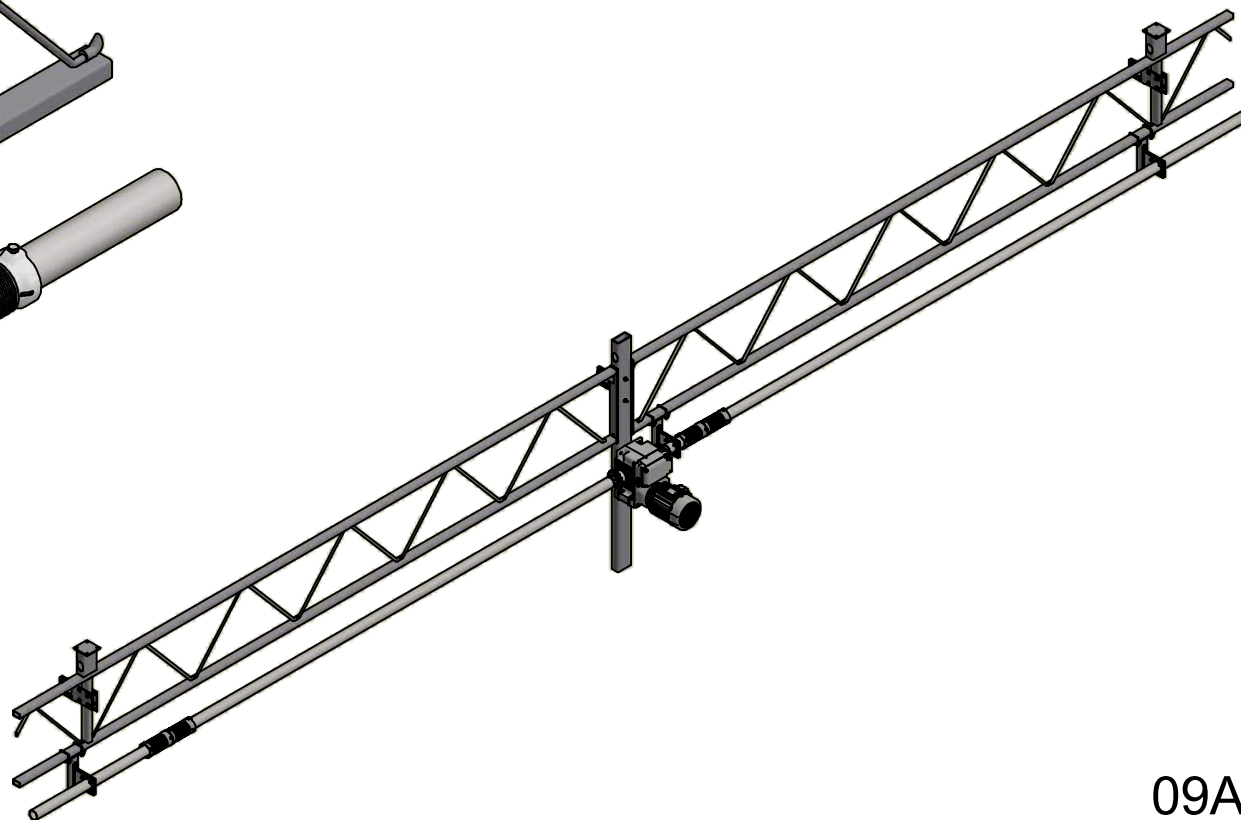
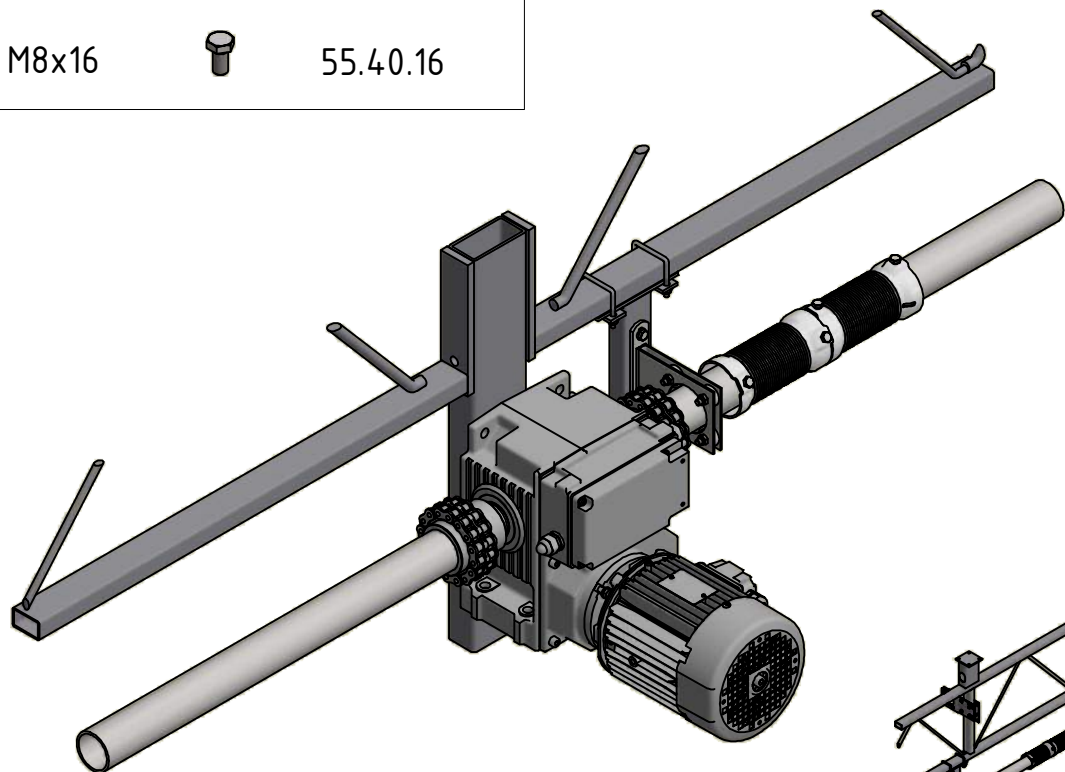
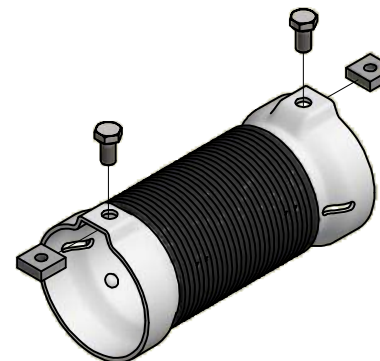


Bearing plate 2" at post

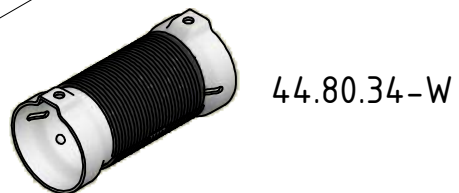
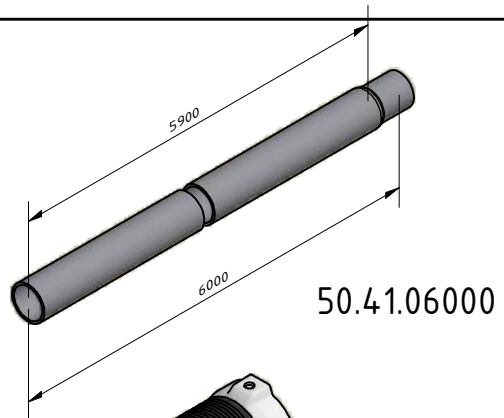
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09A



M8

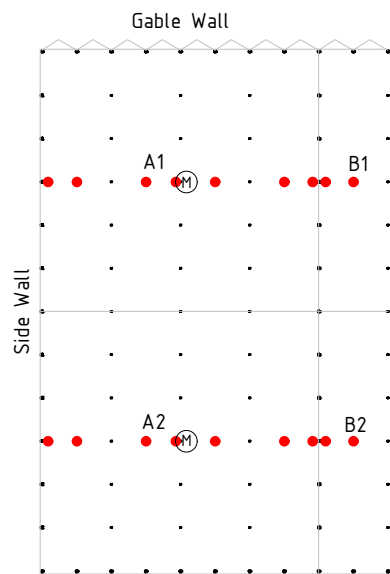


53.25.20

M8x16



55.40.16

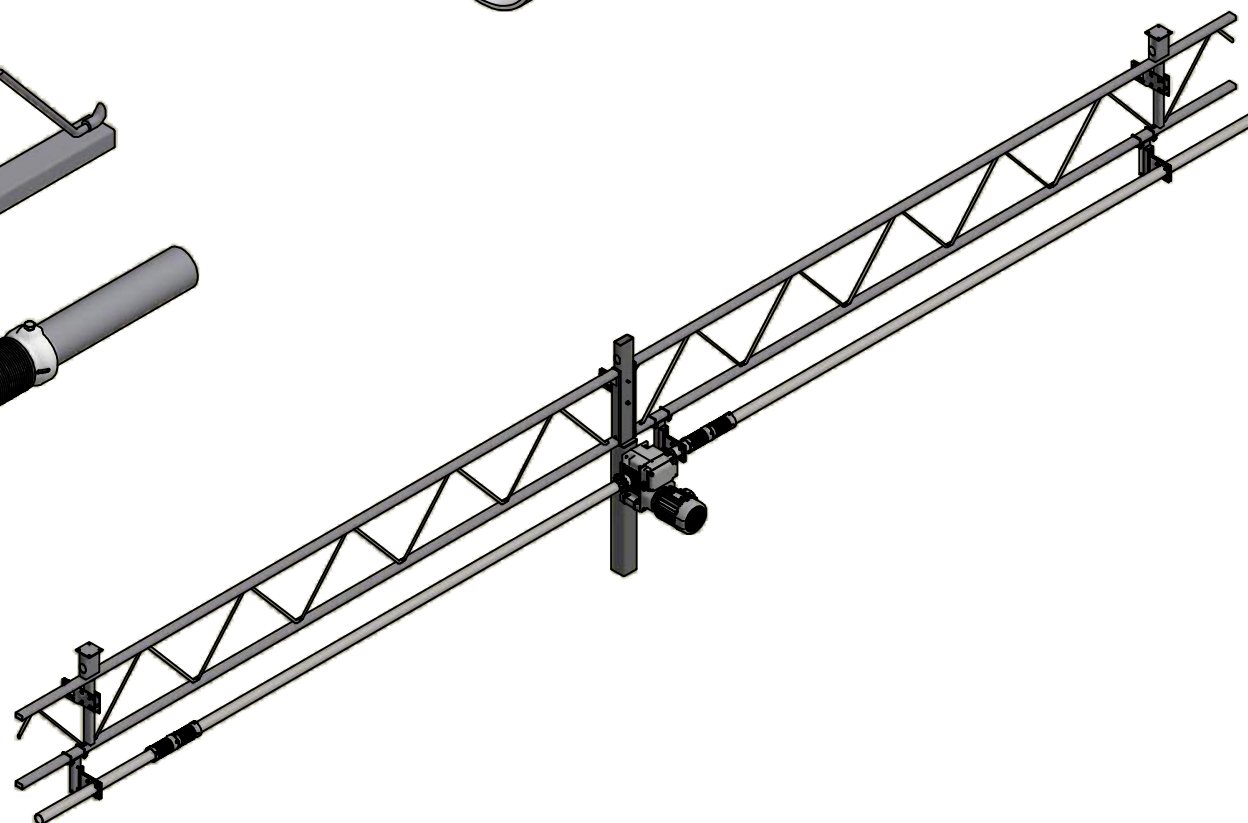
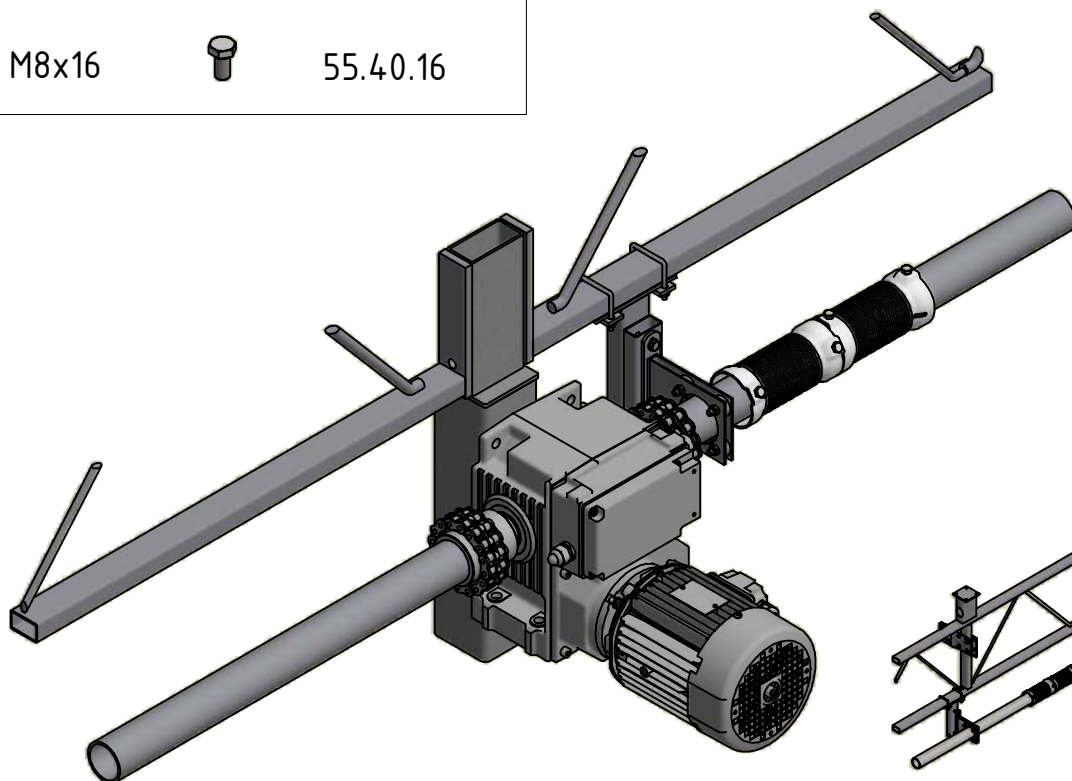
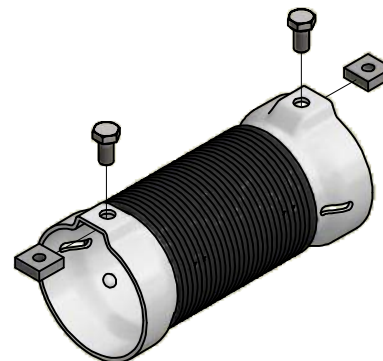


Welding of the drive shaft

VAN DER VALK

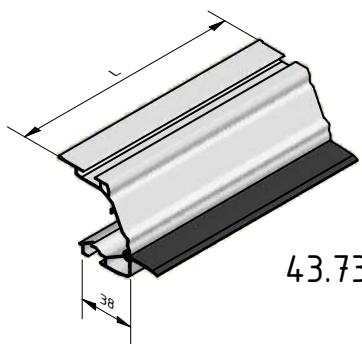


HORTI SYSTEMS

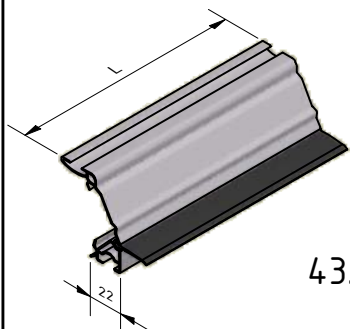


09B

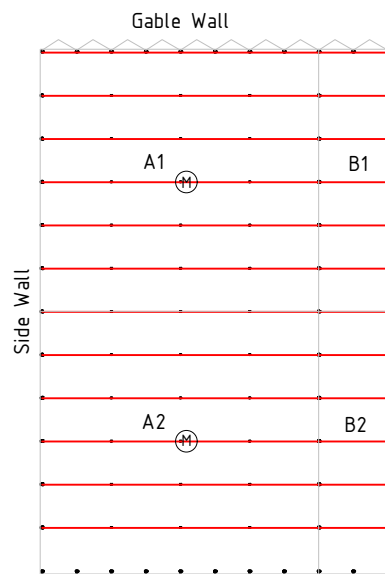
placing screen profiles



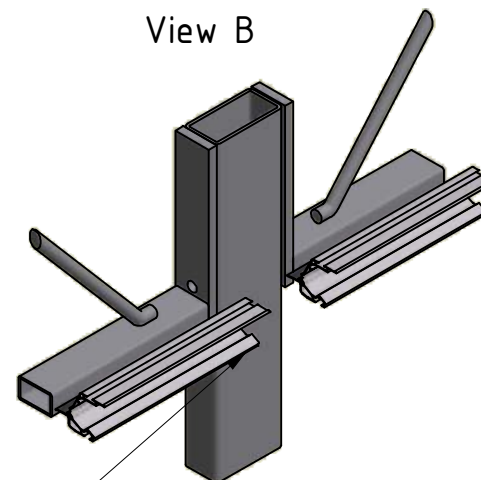
43.73. (L (mm))



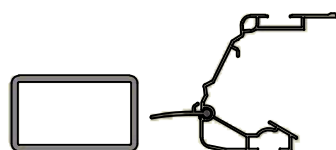
43.68. (L (mm))



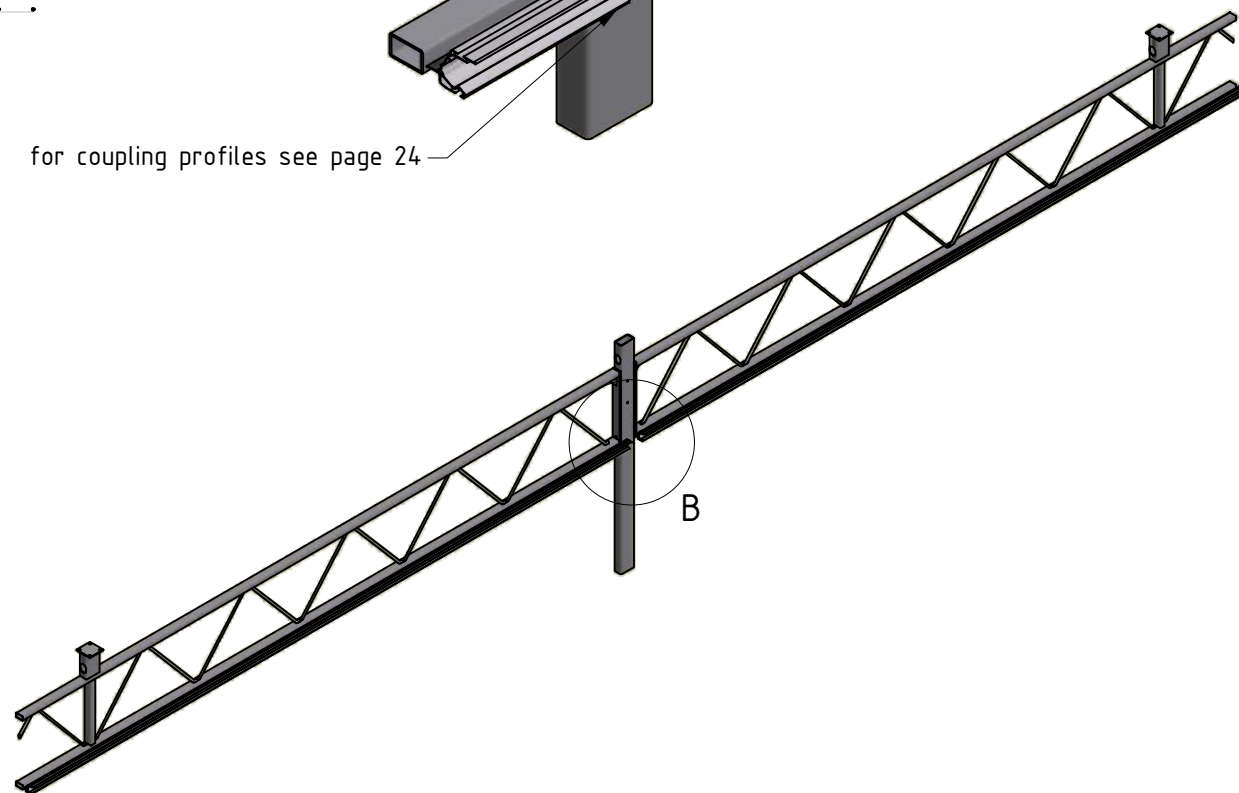
View B



for coupling profiles see page 24



Fix the screen profile to the trellis using a piece of rope for example.

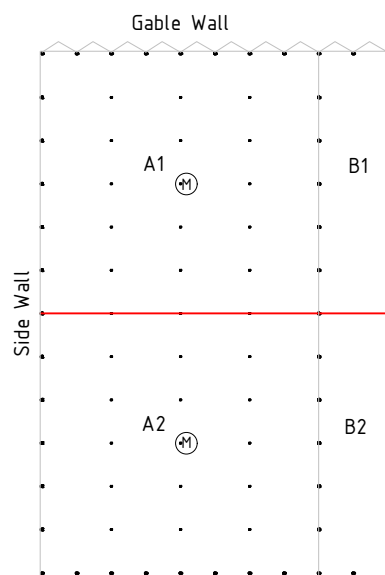




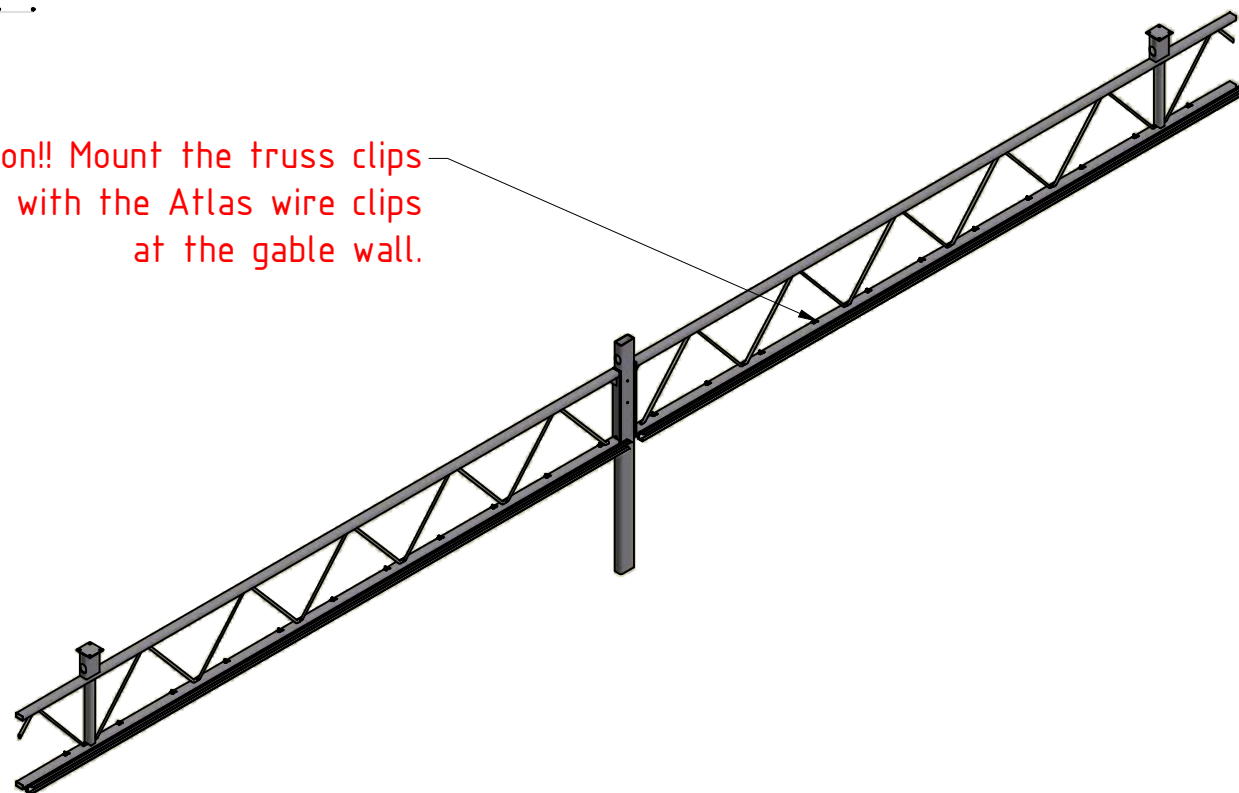
45.20. $\overset{+2}{-2}$ [mm]

Mount one row of truss clips

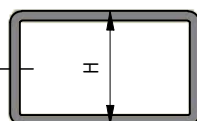
VAN DER VALK



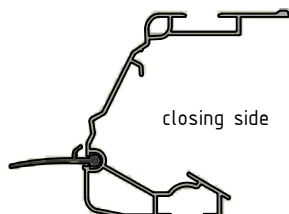
Attention!! Mount the truss clips
in line with the Atlas wire clips
at the gable wall.



cloth package side



closing side





48.20.15



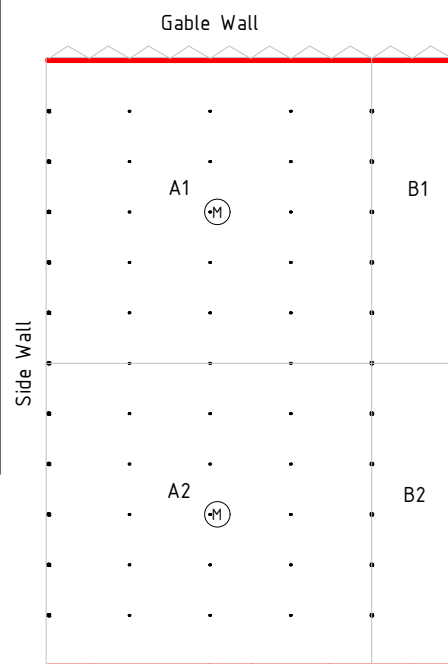
48.80.10



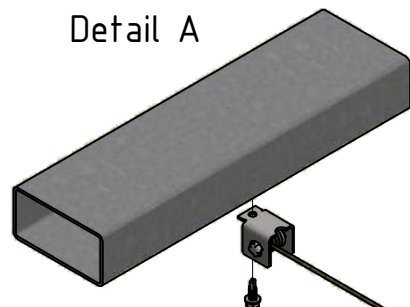
53.57.20

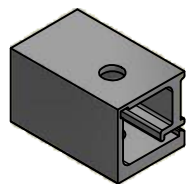
Black coated steel cable

VAN DER VALK



Detail A





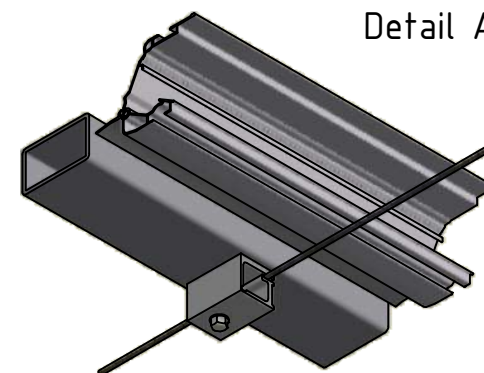
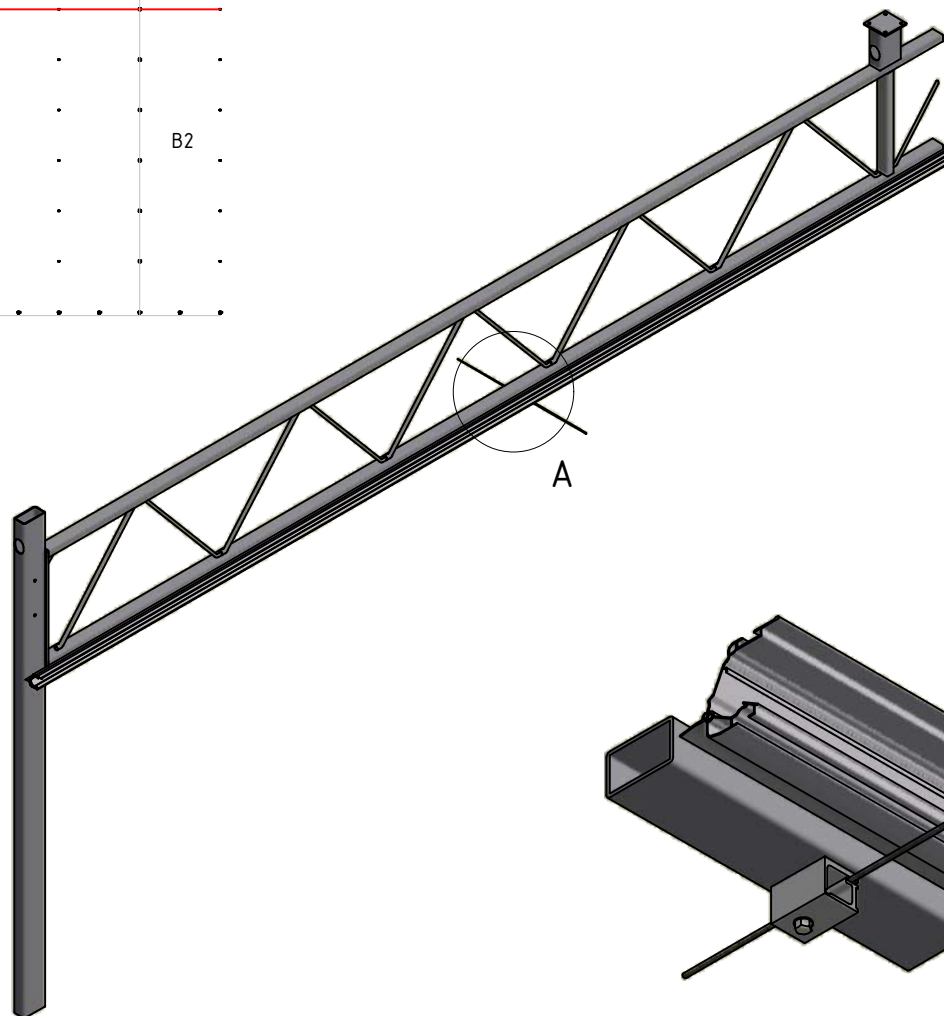
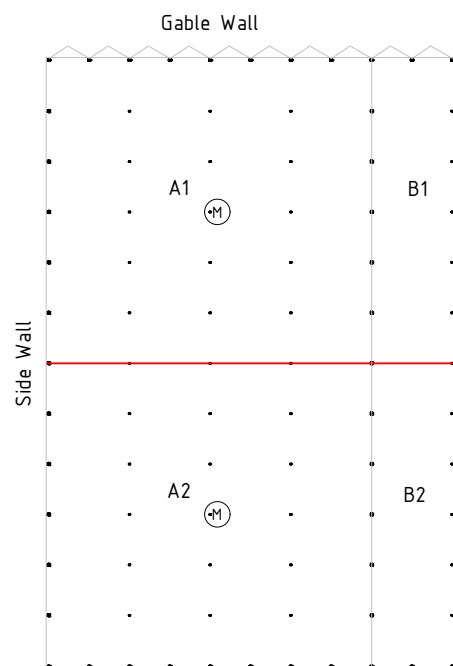
44.30.10



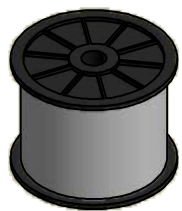
53.57.15

Black coated steel cable

VAN DER VALK



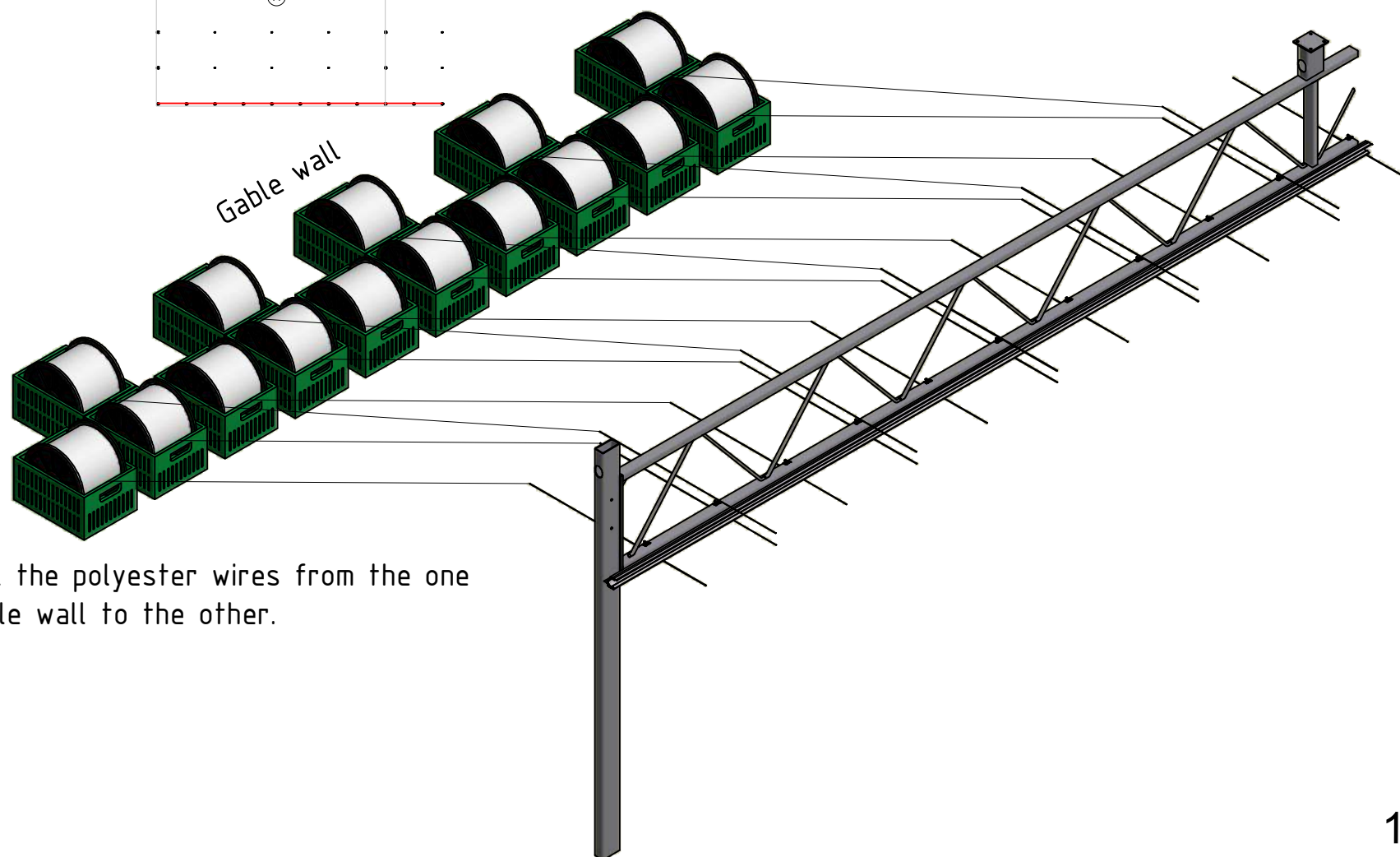
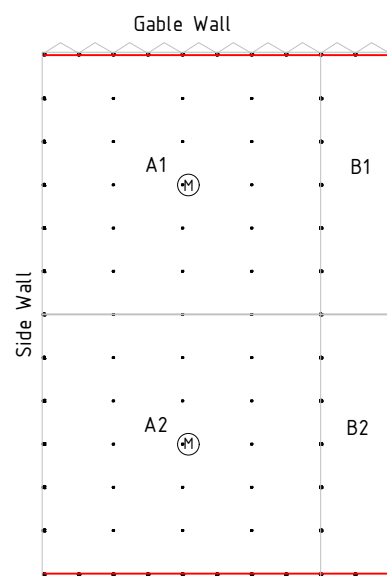
Detail A



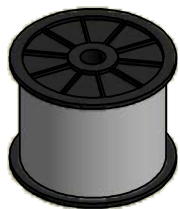
48.50.30

Polyester wires

VAN DER VALK



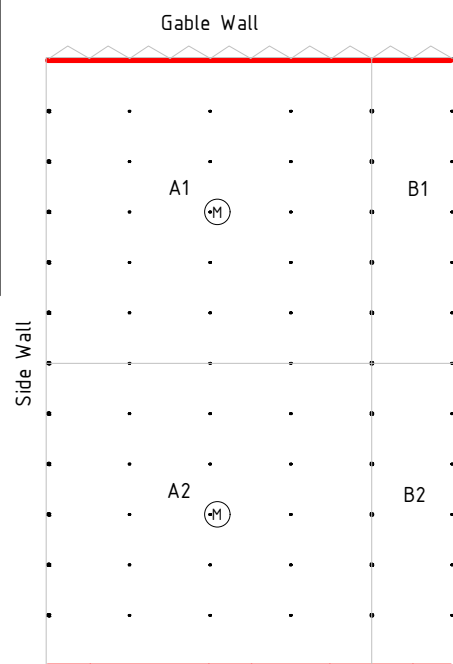
Pull the polyester wires from the one gable wall to the other.



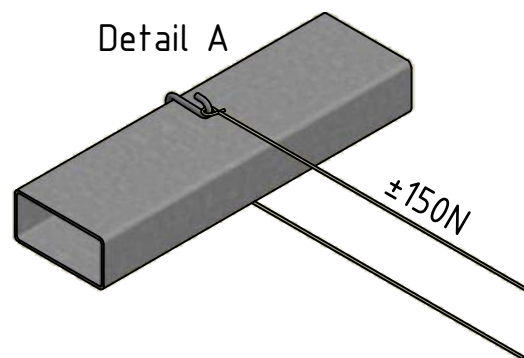
48.50.30

Polyester wires

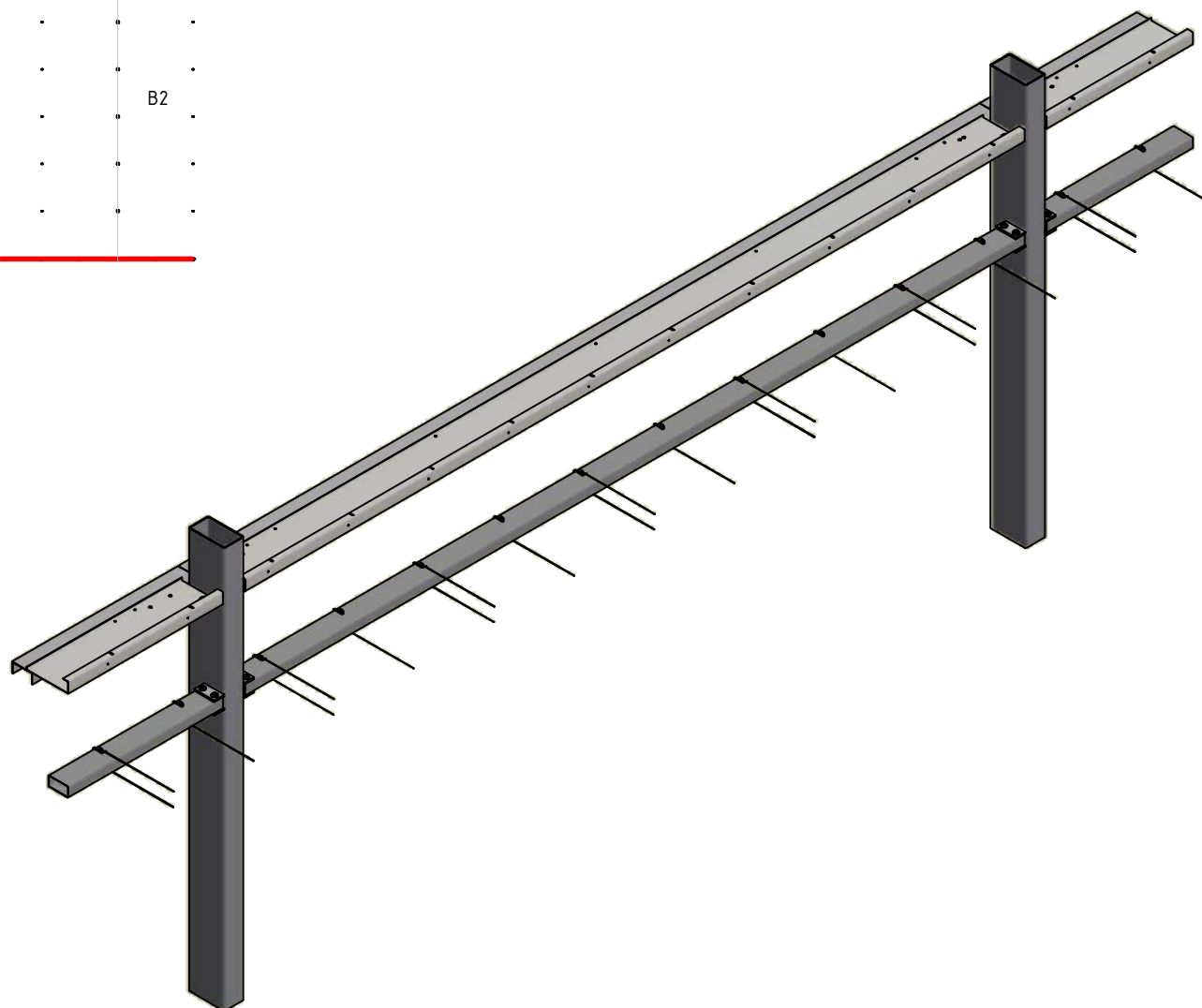
VAN DER VALK

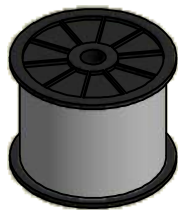


Detail A

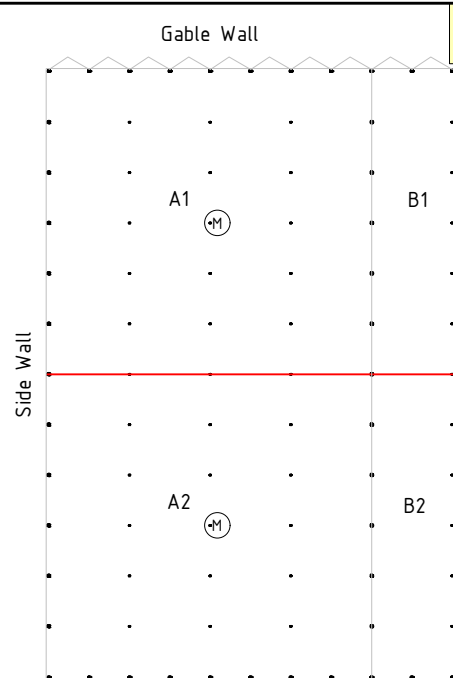


Knot the polyester wires to the wire brackets at both gable walls.



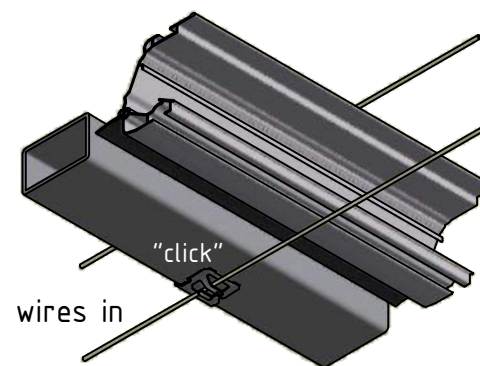
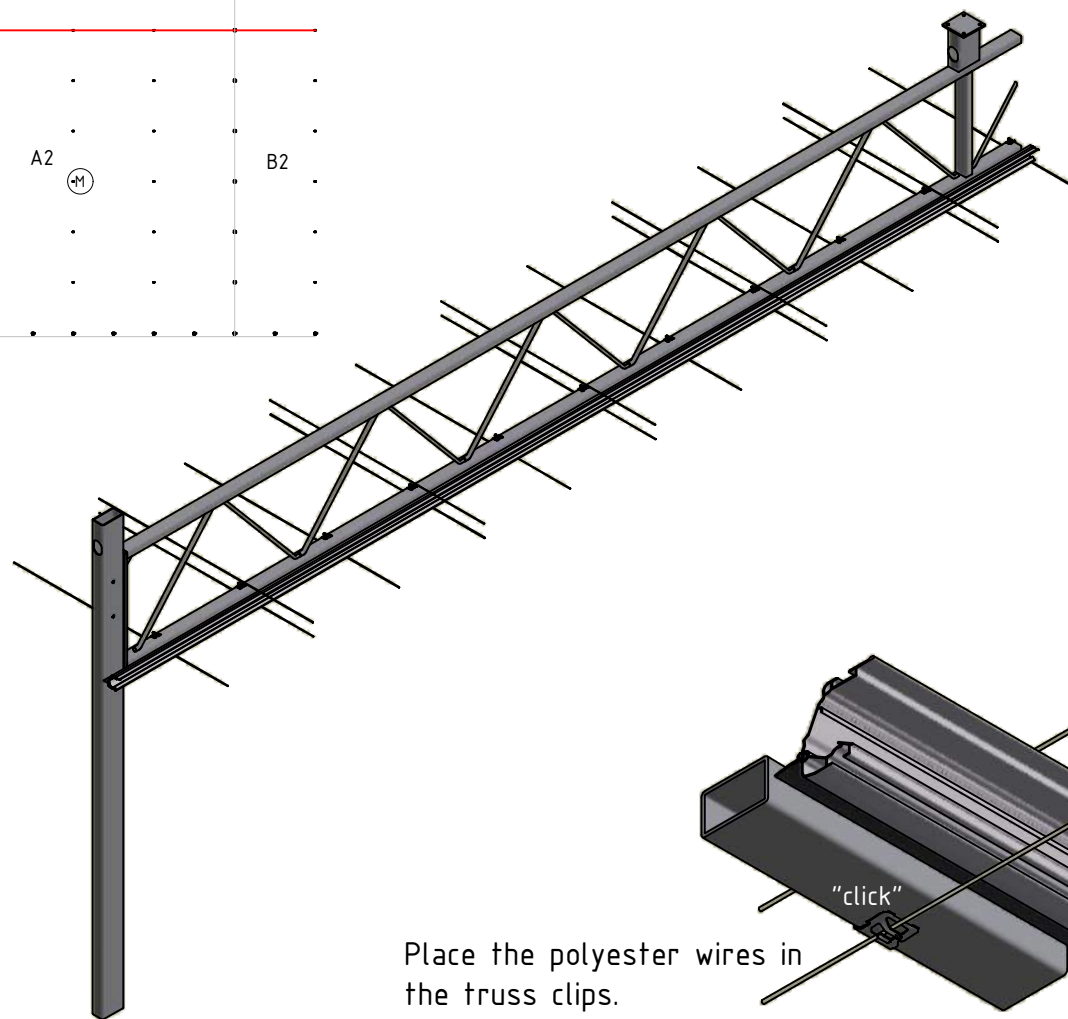


48.50.30



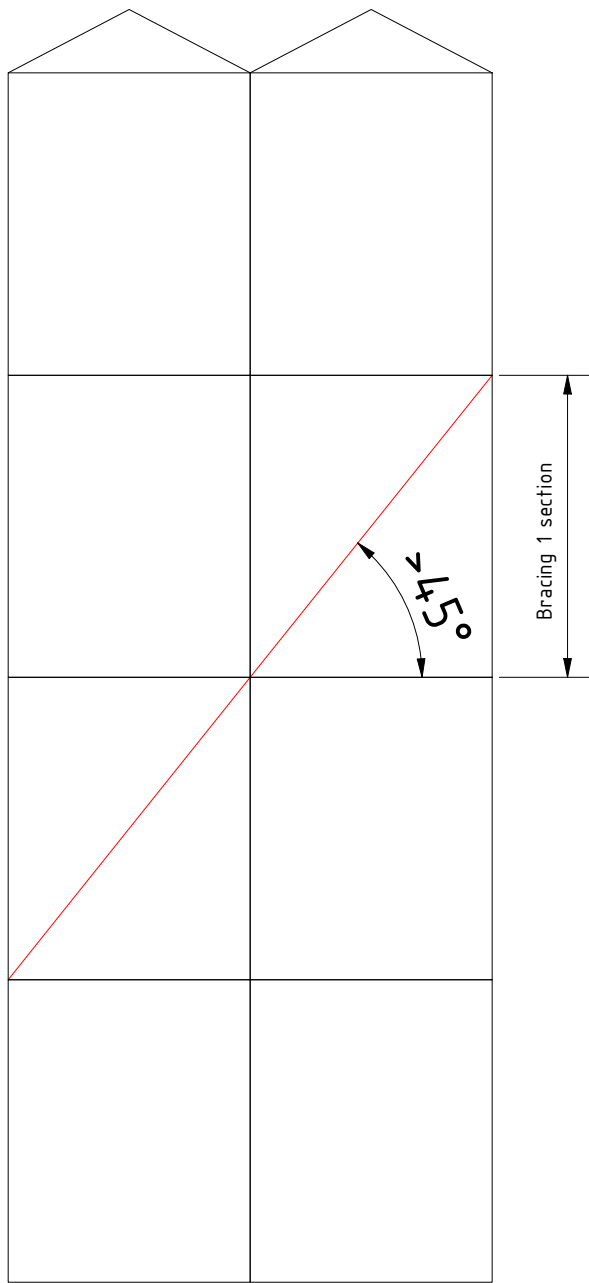
Polyester wires

VAN DER VALK

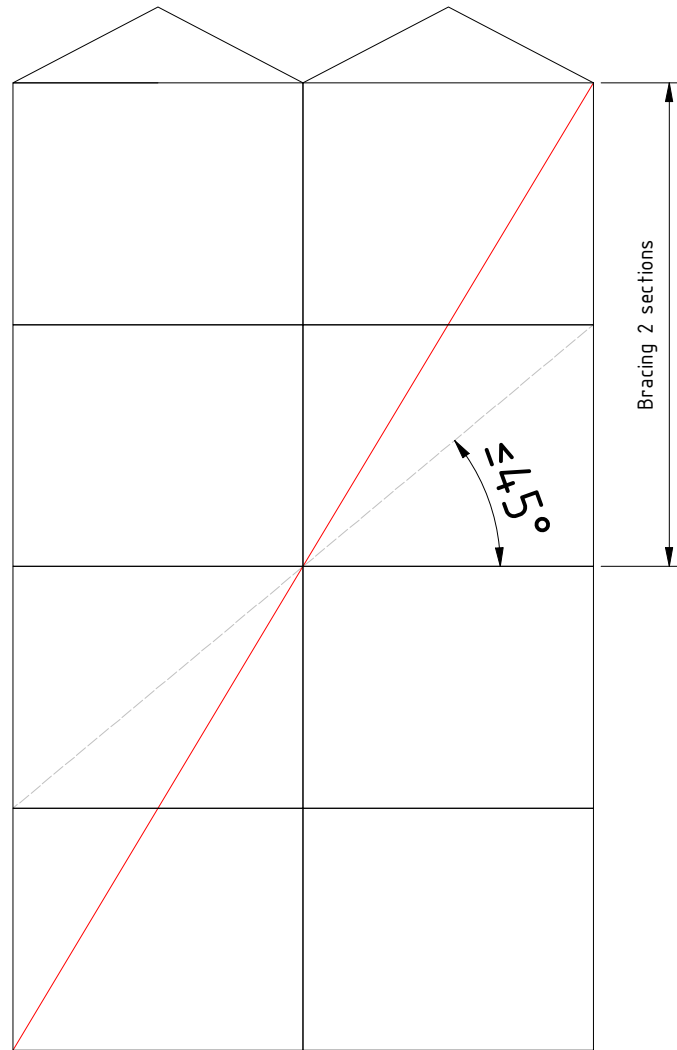


"click"

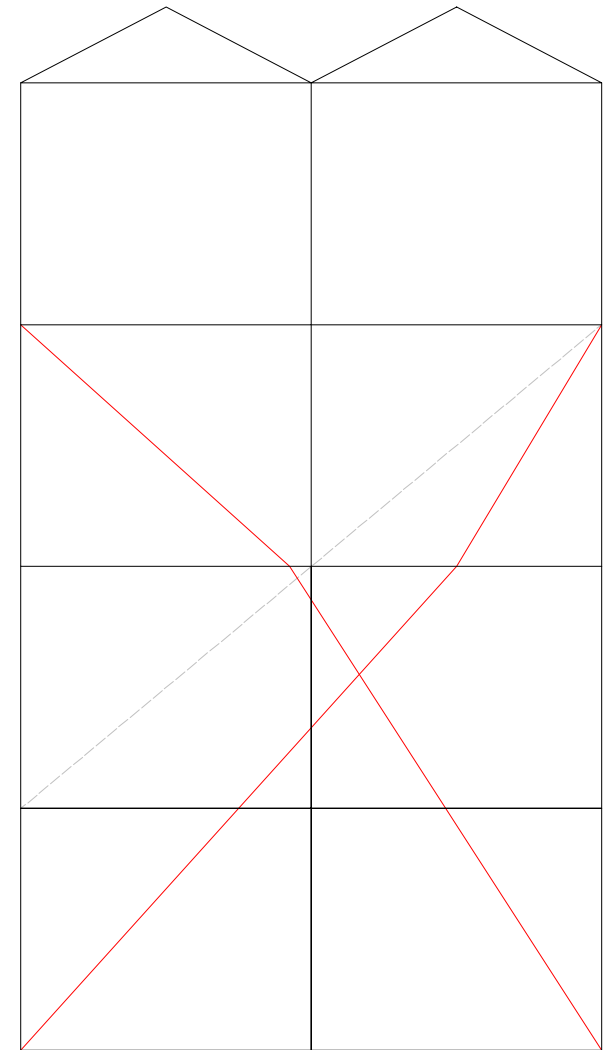
Place the polyester wires in
the truss clips.



Option A:
Use if bay size is smaller
than the section size.



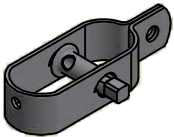





Option B:
Use if the bay size is bigger than
the section size.

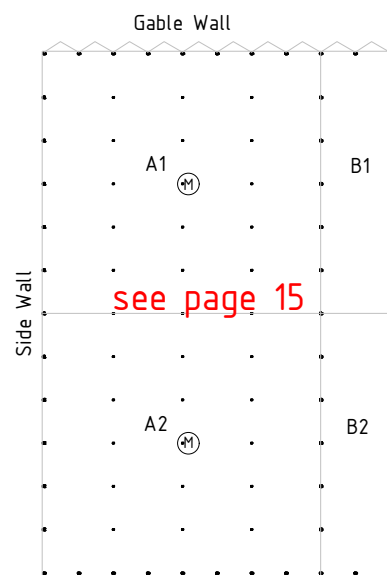


Option C:
Use if the bay size is bigger than
the section size.

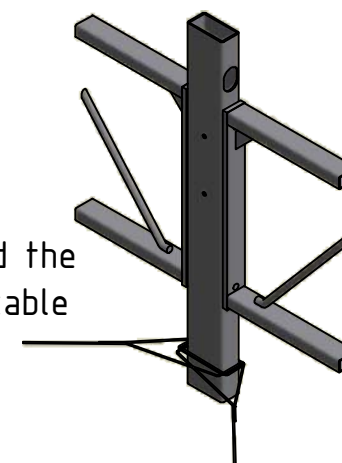
section size ↓	bay size →			
	3200 mm	4000 mm	4267 mm	4500 mm
4000 mm	Option A	Option B/C	Option B/C	Option B/C
4500 mm	Option A	Option A	Option A	Option B/C
5000 mm	Option A	Option A	Option A	Option A

bracing of bearing plates

	48.80.12
M6x65 	55.30.65
M6 	55.30.00
	48.80.30
	48.80.37
	48.10.17

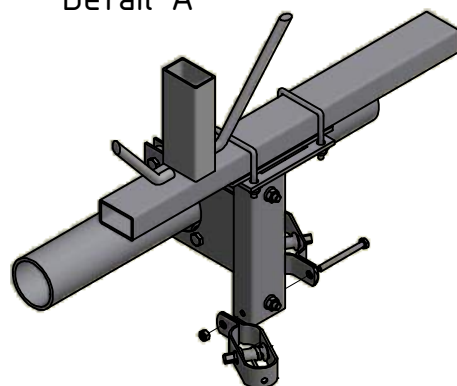


Detail B

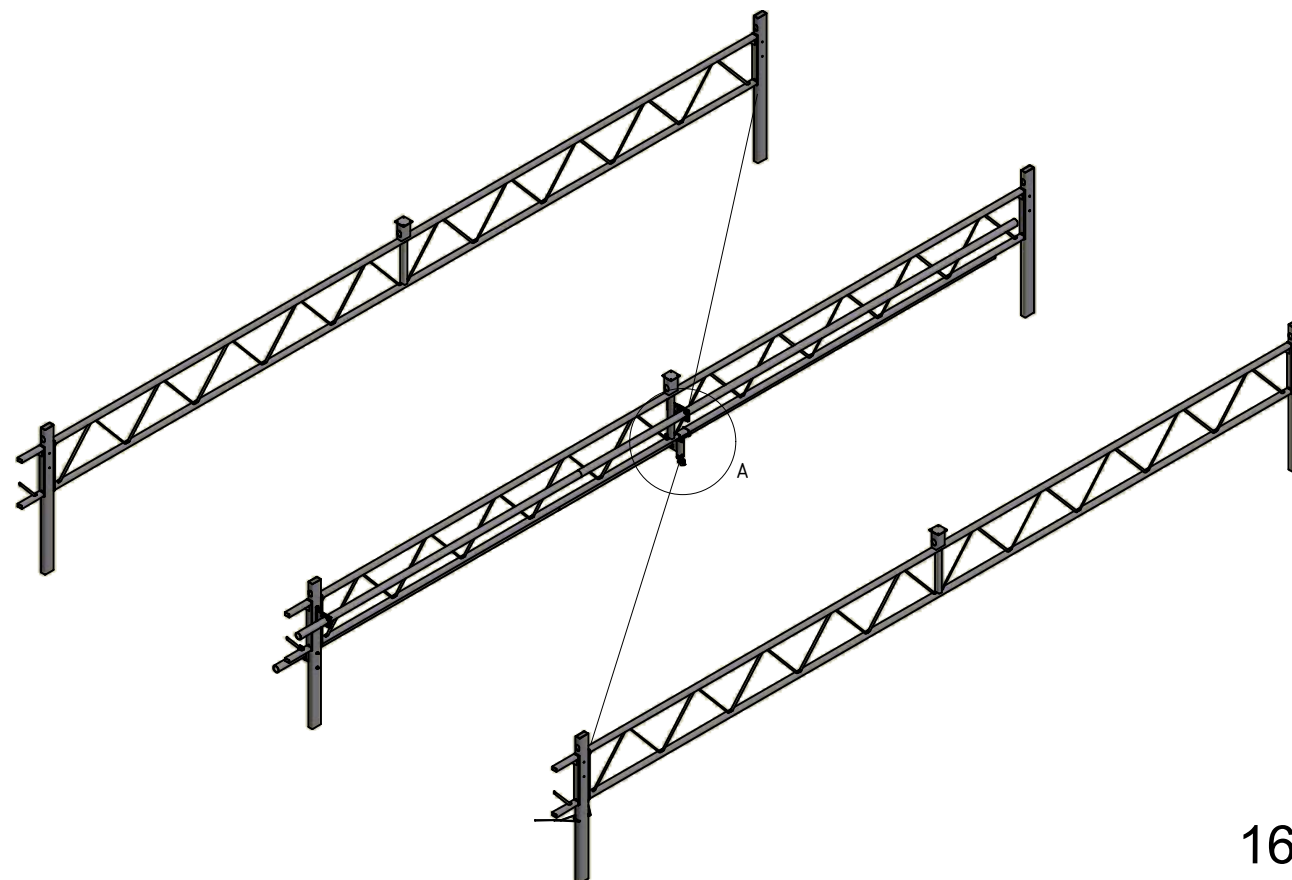


Fix the end around the column using the cable clamps.

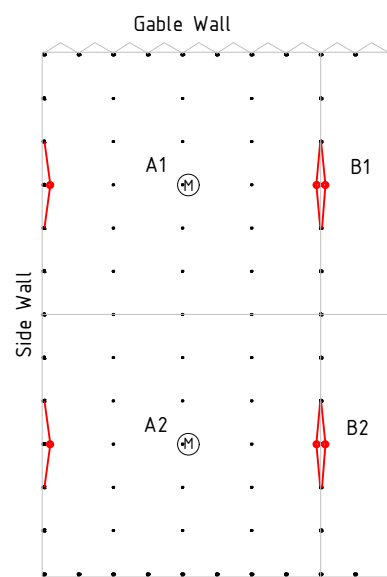
Detail A



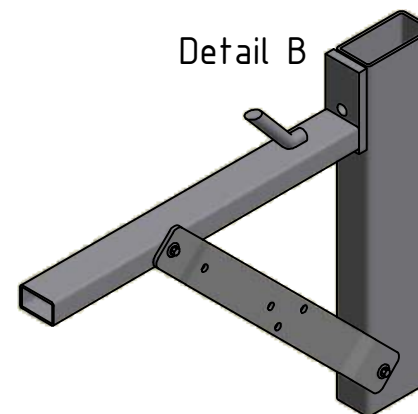
mount the wire tensioners to the brackets of the bearing plates



bracing of bearing plates

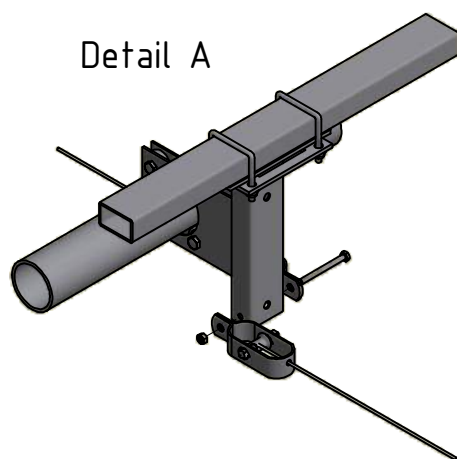


Detail B

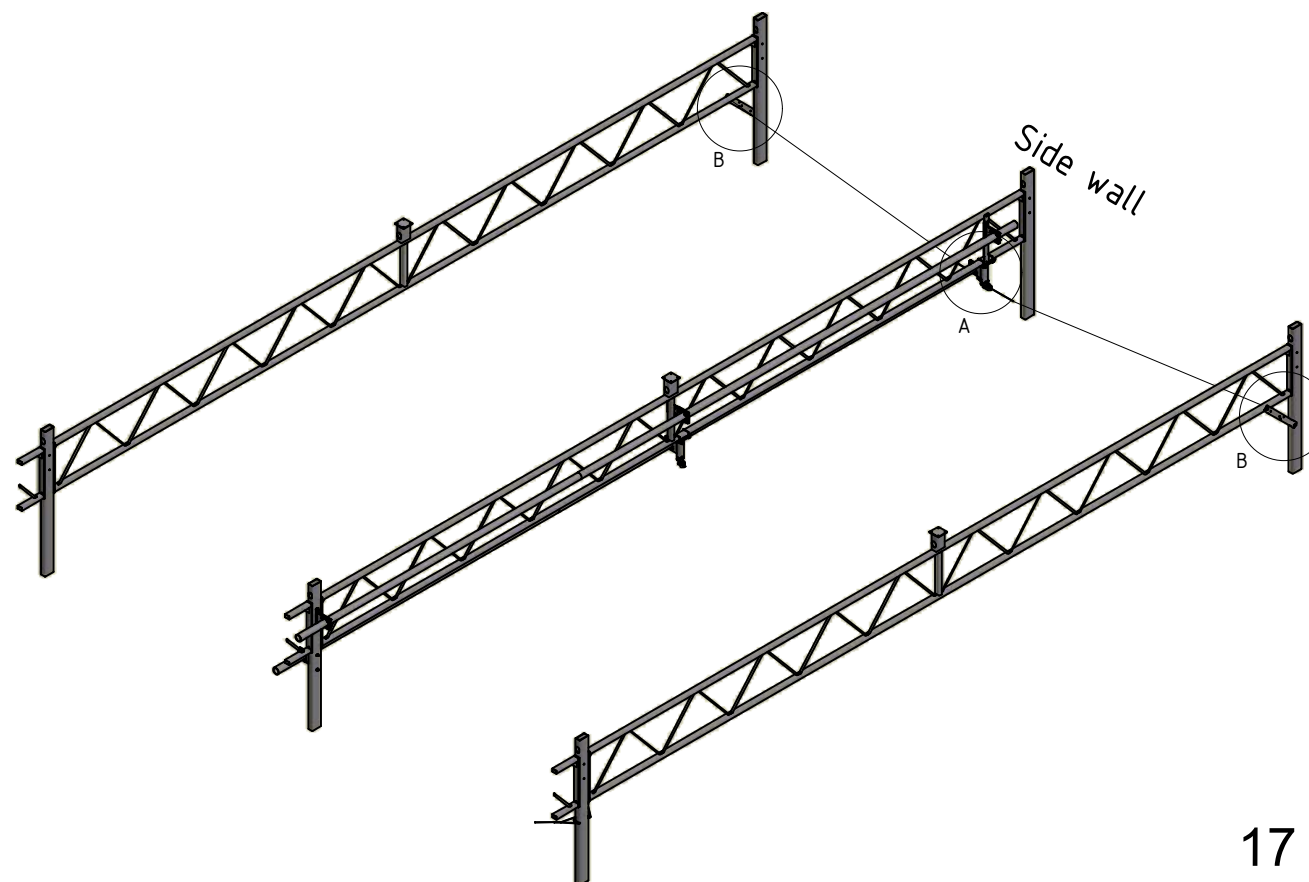


Mount the strip to the column and trellis using the supertex. Fix the cable to the strip using a knot.

Detail A



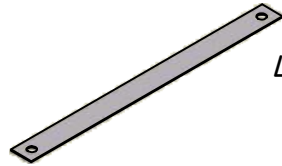
mount the wire tensioners to the brackets of the bearing plates



Mount V-Pulley

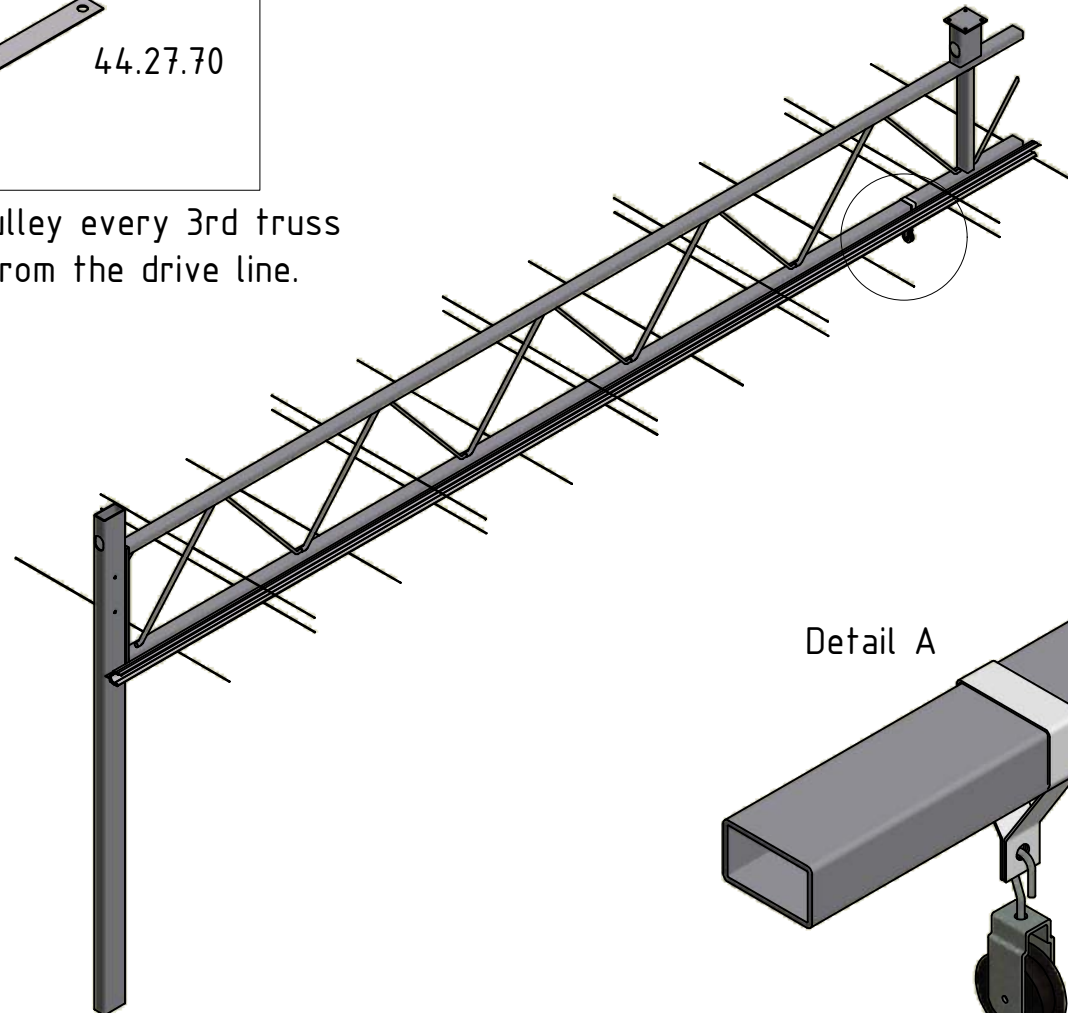


44.27.75

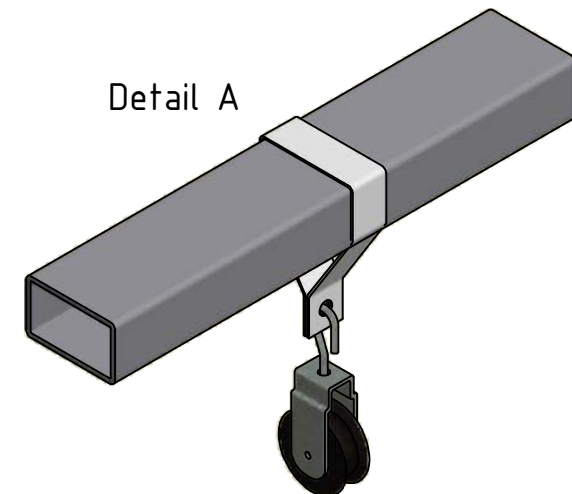


44.27.70

Mount V-pulley every 3rd truss measured from the drive line.



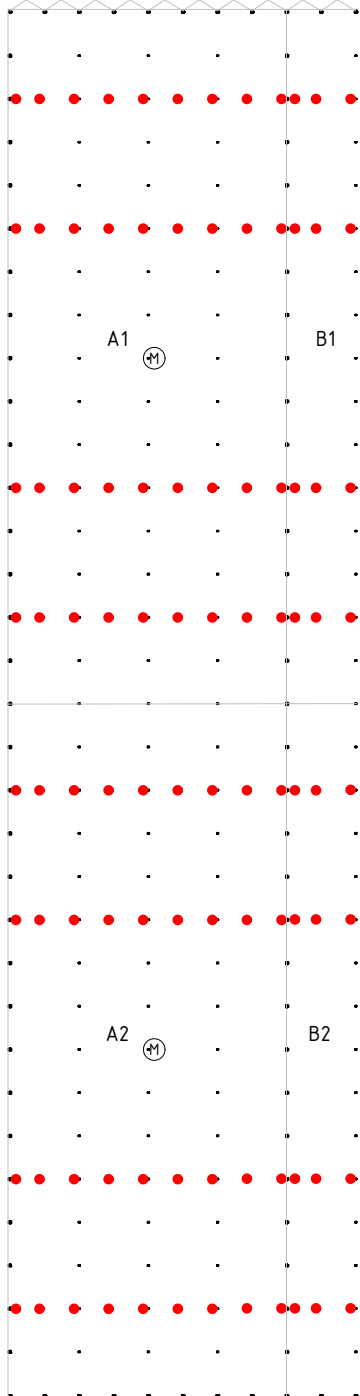
Detail A



Fold strip around truss.

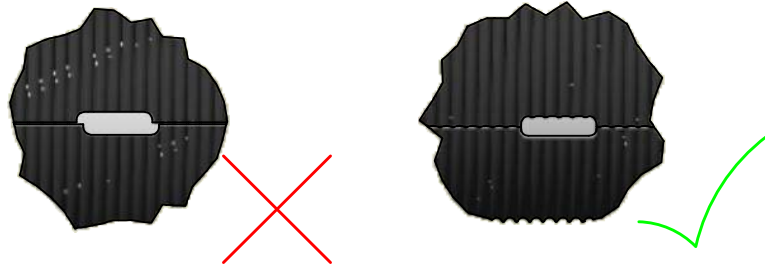
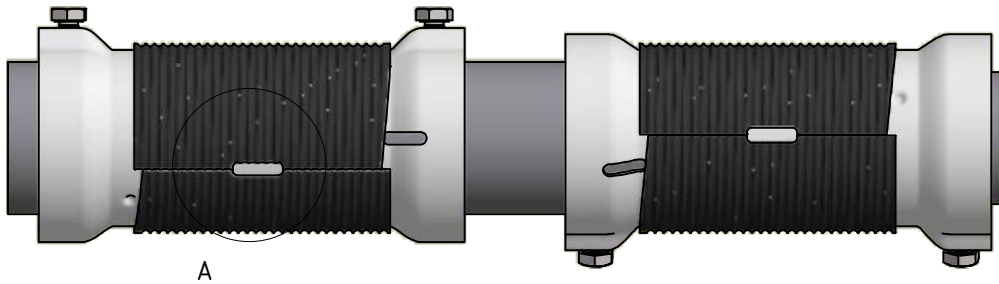
Side Wall

Gable Wall

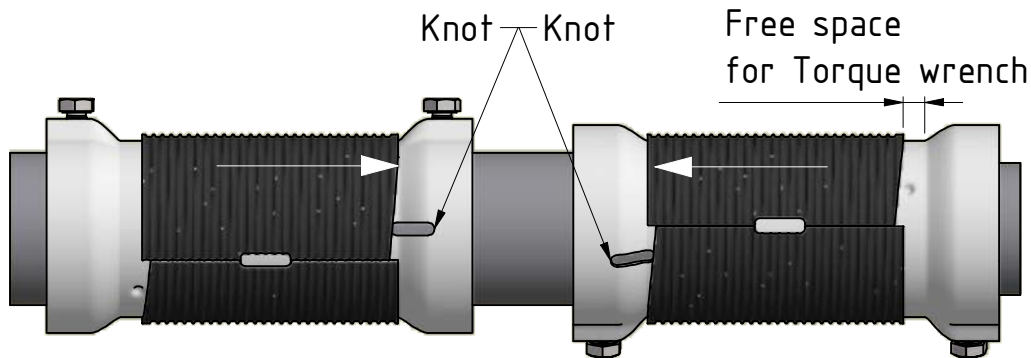


Before mounting the wire on the wire tensioners make sure that everything on page 19/19B is clear and understood.

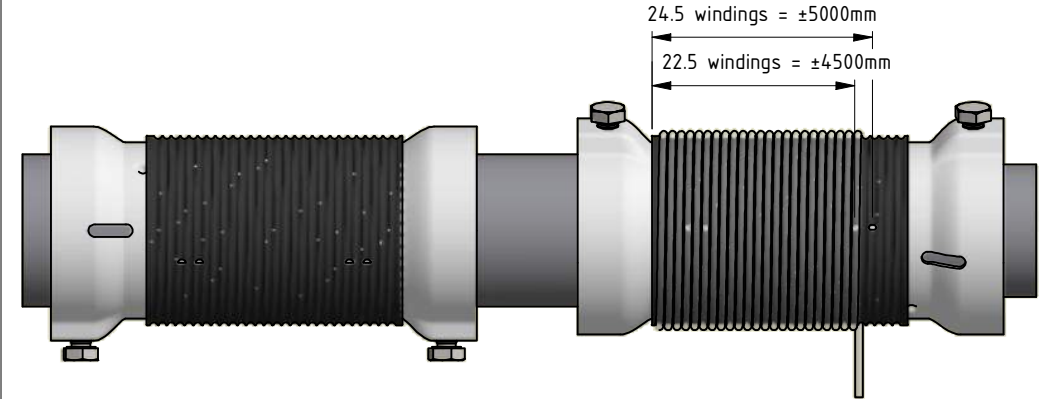
- 1 Make sure that the plastic cable drum is placed correctly. The plastic cable drum is correctly placed when the rectangular is aligned.



- 2 Make sure that the plastic cable drum is moved to the side where the knot will be placed. So that on the other side is enough space for the Torque wrench.

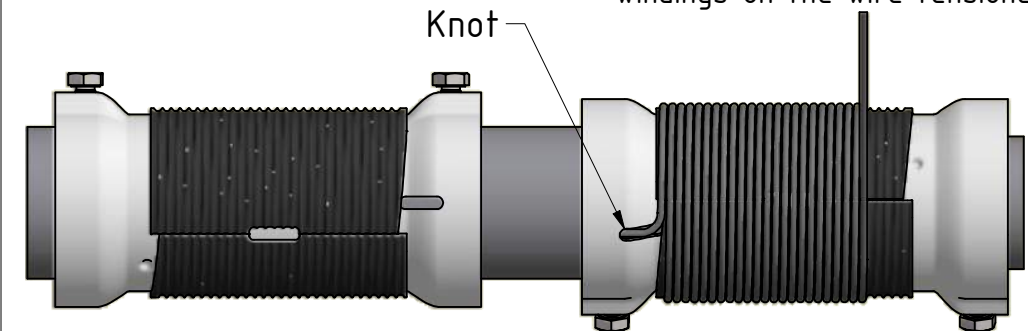


- 3 The holes in the plastic cable drum stand for how much wire need to be on the wire tensioners at a certain section size.



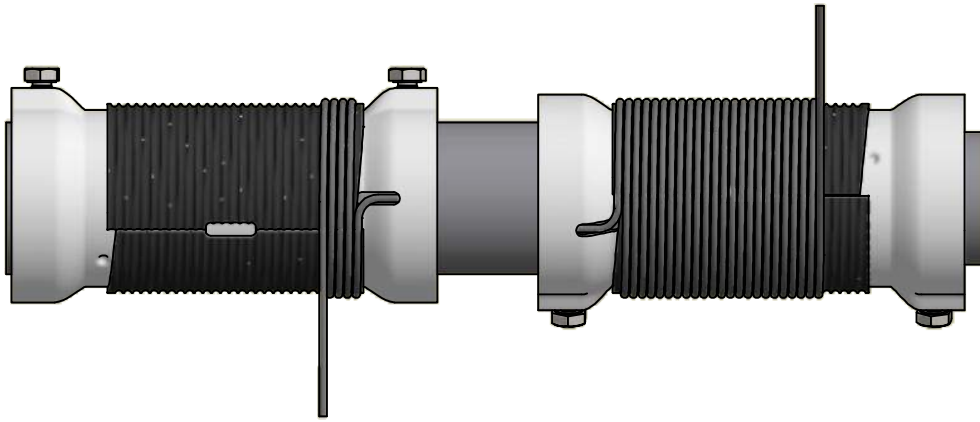
Bay size [mm]	No. of windings on wire tensioner 1	No. of windings on wire tensioner 2
3200	3.5	17.5
3658	3.5	19.5
4000	3.5	20.5
4500	3.5	22.5
5000	3.5	24.5

- 4 Tie a knot at the end of the wire and place the required number of windings on the wire tensioner.

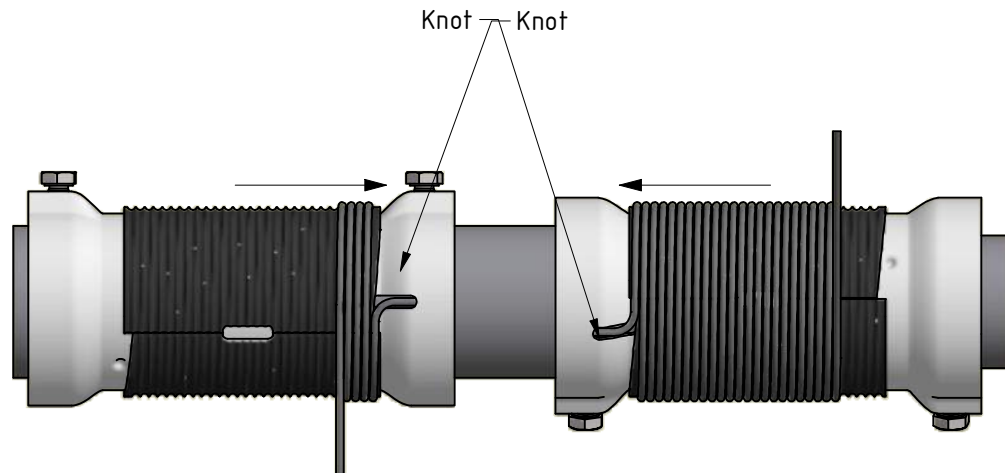


Before mounting the wire on the wire tensioners make sure that everything on page 19/19B is clear and understood.

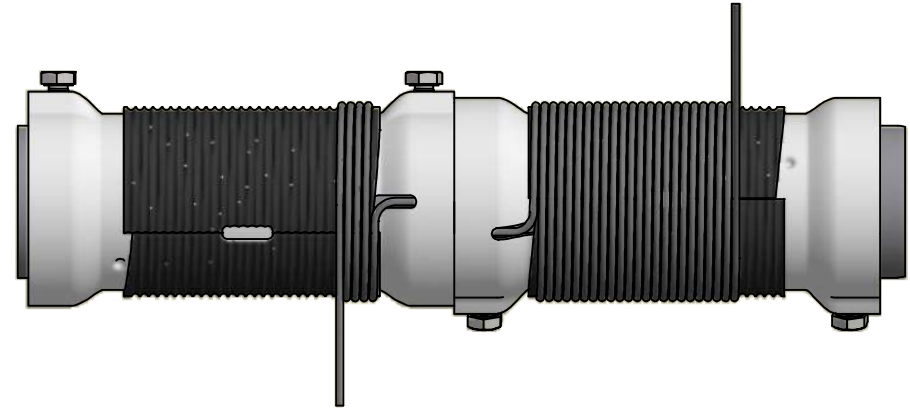
- 5 Make sure that there is ca. one meter extra wire available for the 3,5 windings on the other wire tensioner, as shown below.



- 6 Slide the wire tensioners together so that the knots are hidden between the two wire tensioners.



- 7 In the end the wire has to be on the wire tensioners as is shown in the drawing below.



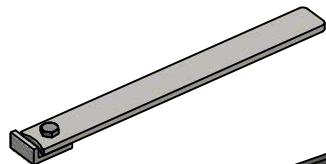
When finished page 19/19B continue to page 20 for tensioning of the wire.

VAN DER VALK

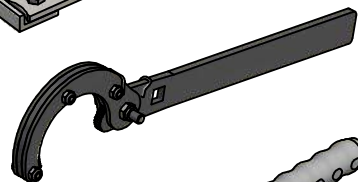




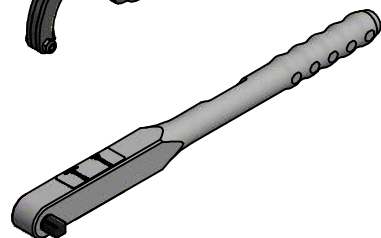
48.10.17



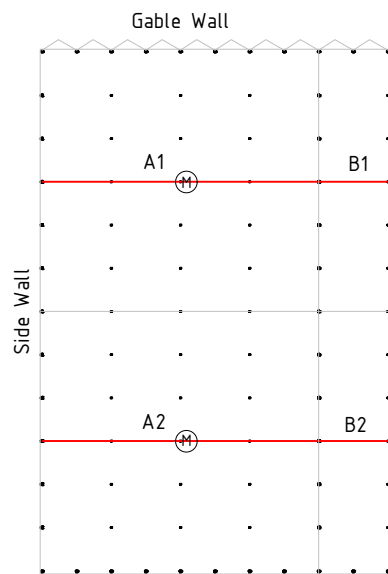
61.16.12



61.16.11

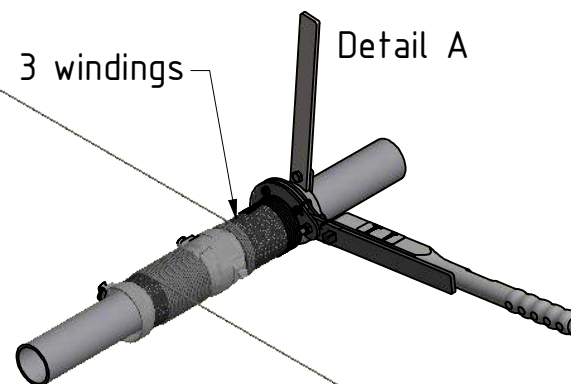


61.16.15

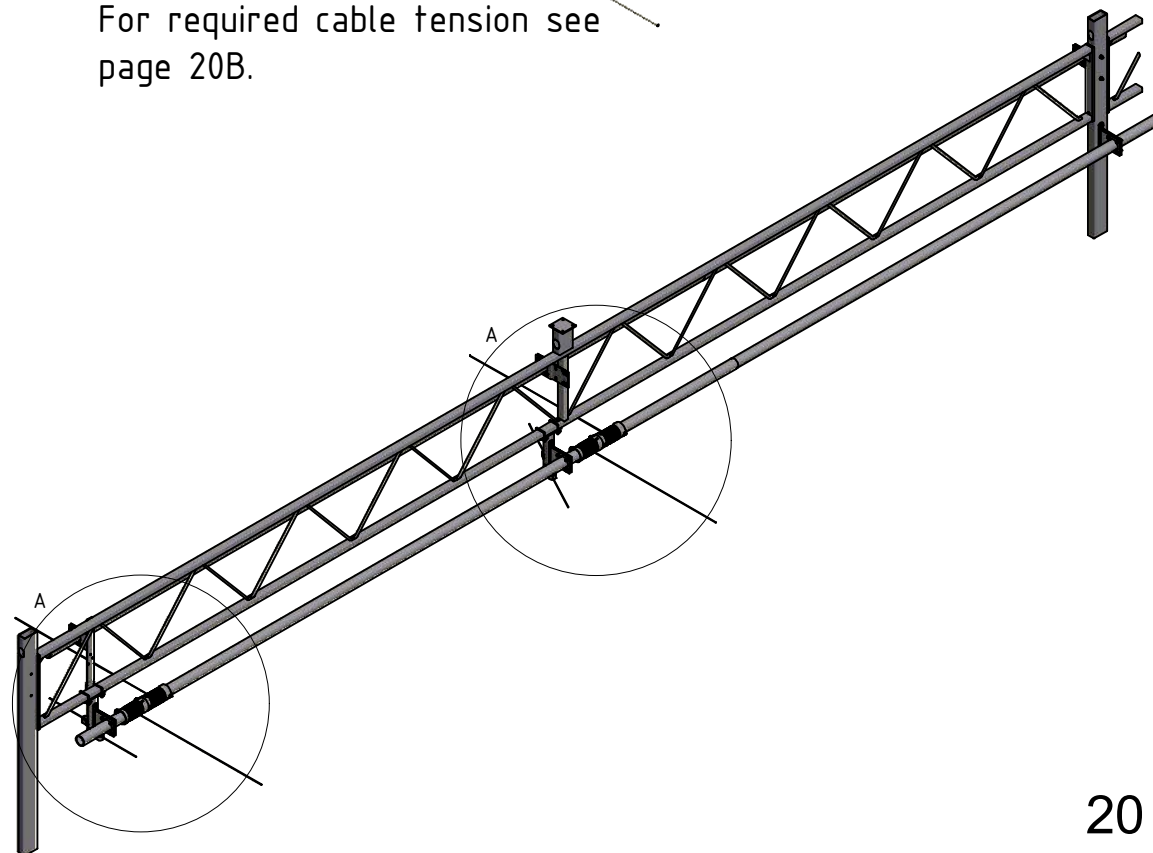


Mount steel cable

VAN DER VALK



For required cable tension see page 20B.



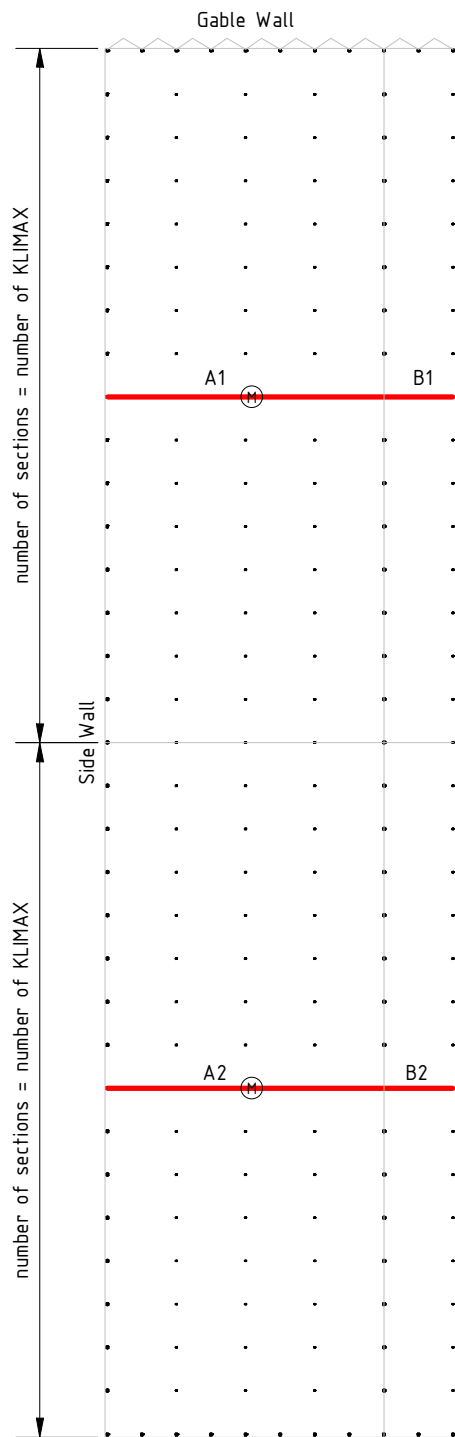


KLIMAX green has a max. skid force of 3,5 kg

KLIMAX blank has a max. skid force of 6 kg

KLIMAX red has a max. skid force of 9 kg

In the neutral position (= mounting position) there should be a certain tension to be applied. This tension (= pretension) is of great importance for the correct operation of the system. The pretension depends on the number of slip blocks on one steel cable.



(number of KLIMAX x max. skid force)

$$\text{Cable pre tension} = \frac{\text{---}}{2} + 20 \text{ kg}$$

Example: See greenhouse on the left with 16 sections and a blank KLIMAX

$$\text{Cable pre tension} = \frac{(16 \times 6 \text{ kg})}{2} + \text{preload of } 20 \text{ kg} = 68 \text{ kg}$$

the torque wrench must be set to 35 Nm (See tabel)

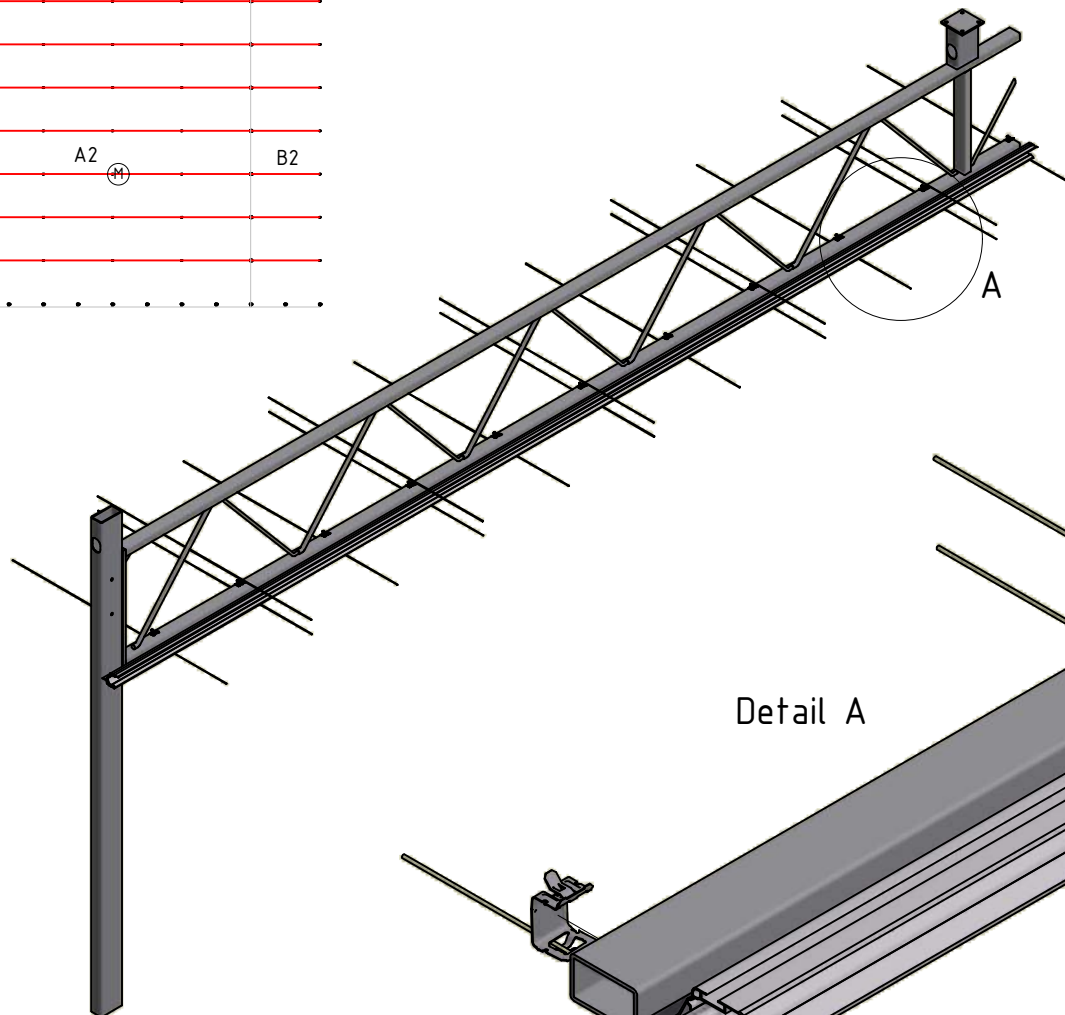
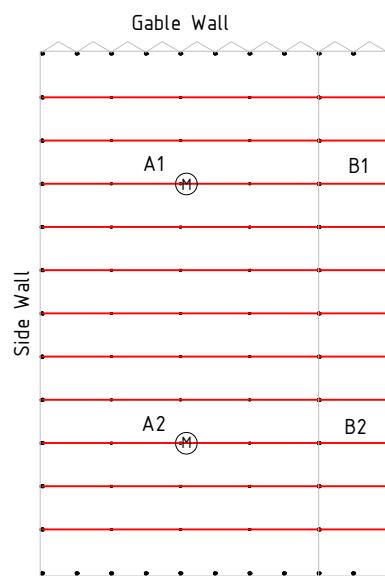
Cable tension	Moment
[kg]	[Nm]
40	20
50	25
60	30
80	40
100	50
130	60



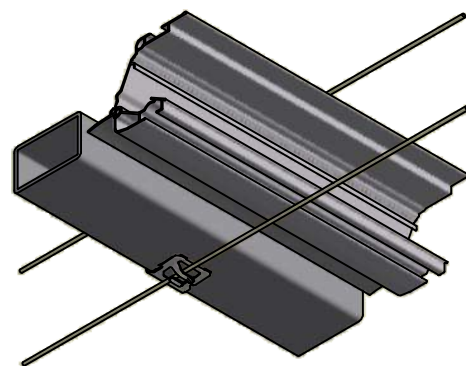
45.20.---
(H+2 [mm])

Truss clips and cloth stop fingers.

VAN DER VALK

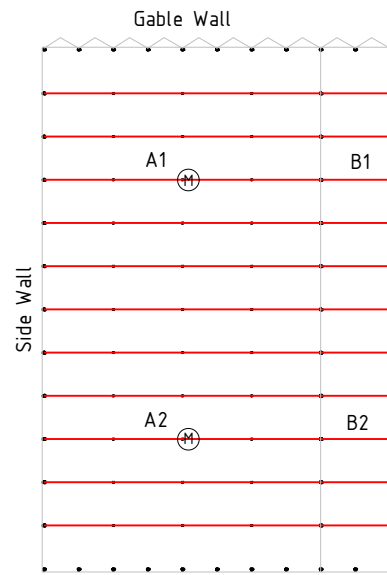


Detail A

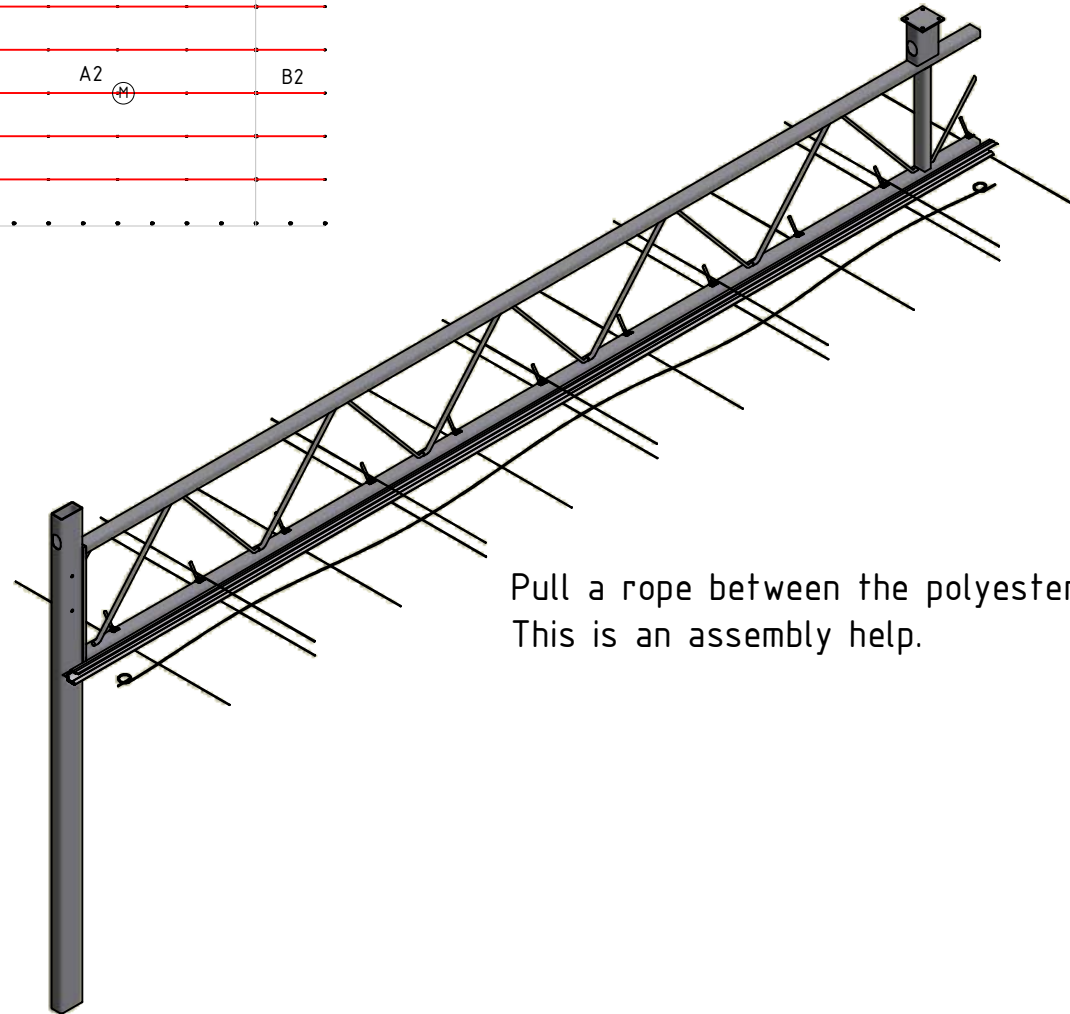


Place the polyester wires in
the truss clips.

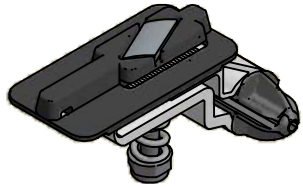
Rope not
supplied by Van
der Valk



Additional rope



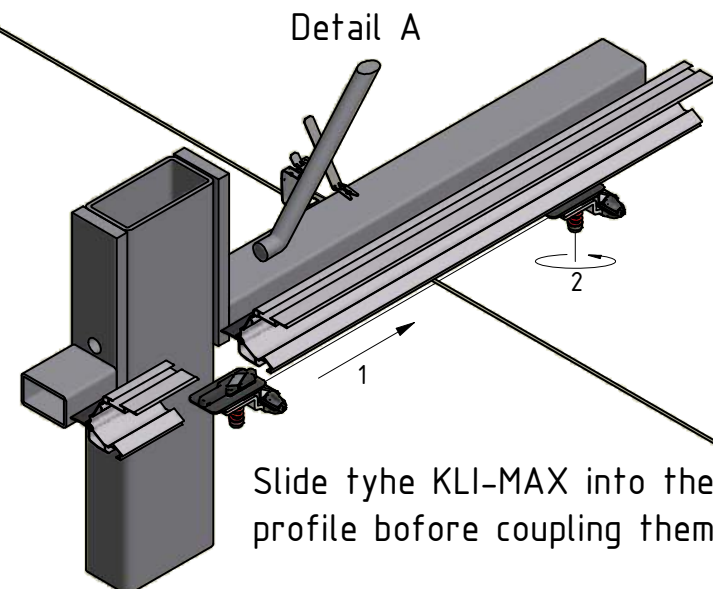
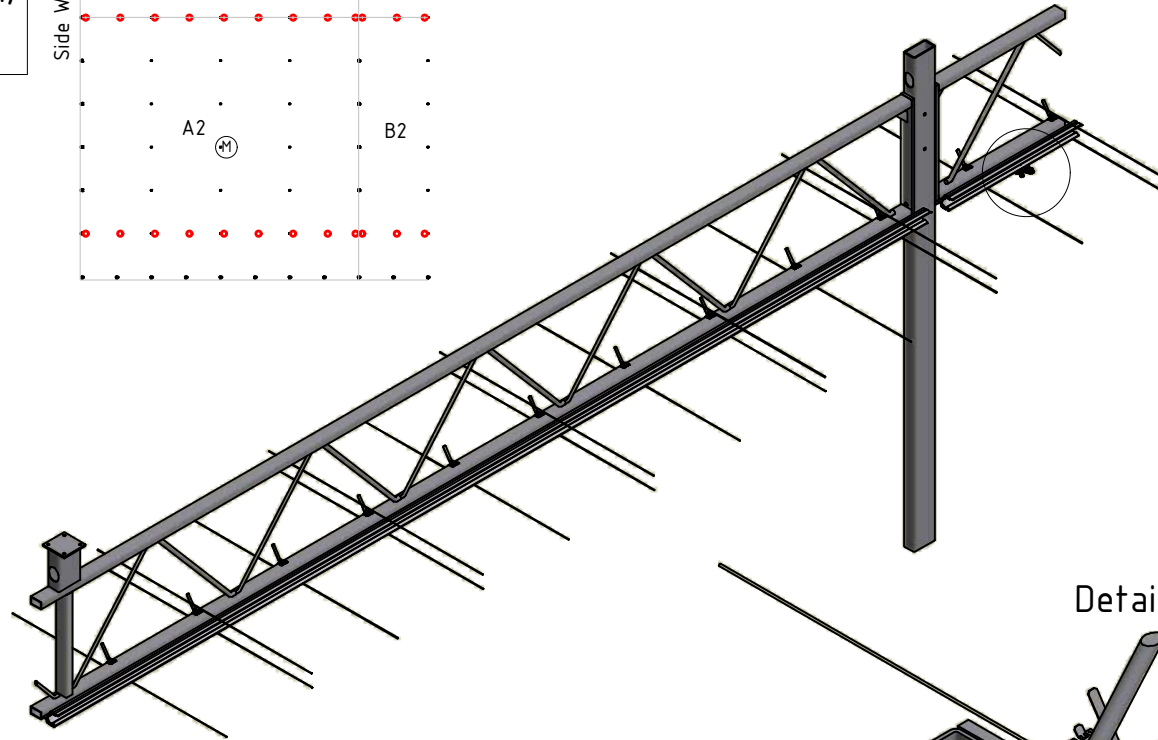
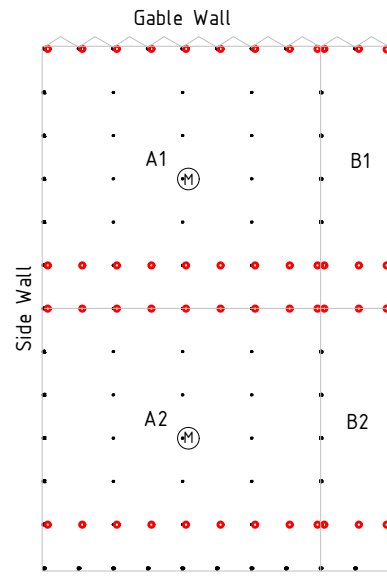
Pull a rope between the polyester wires.
This is an assembly help.



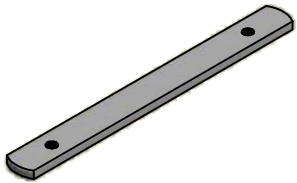
44.40.45 (Blank spring) (Ø3mm)
44.40.46 (Red spring) (Ø3mm)

KLI-MAX Slide

VAN DER VALK



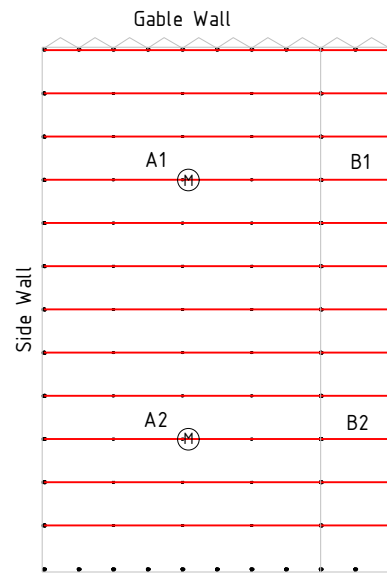
Slide tyhe KLI-MAX into the profile before coupling them.



44.05.10

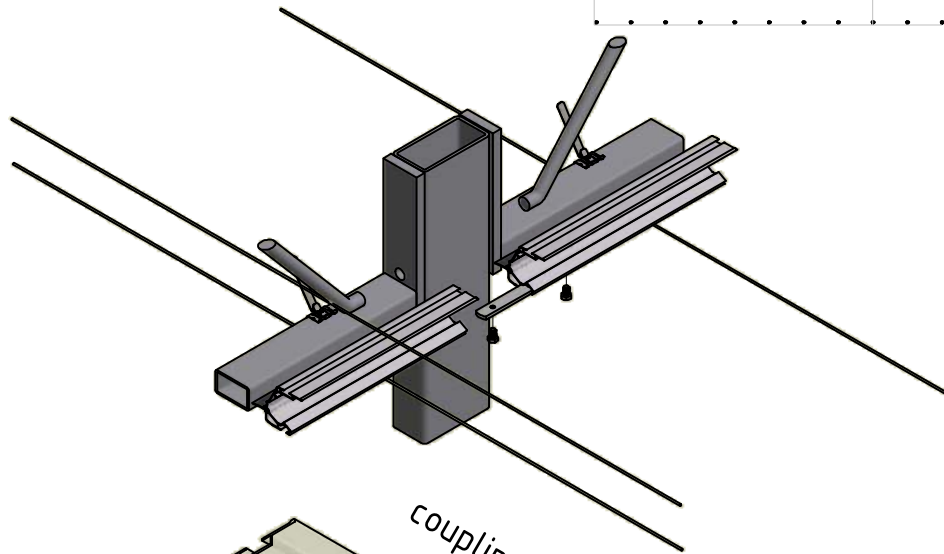


55.30.10

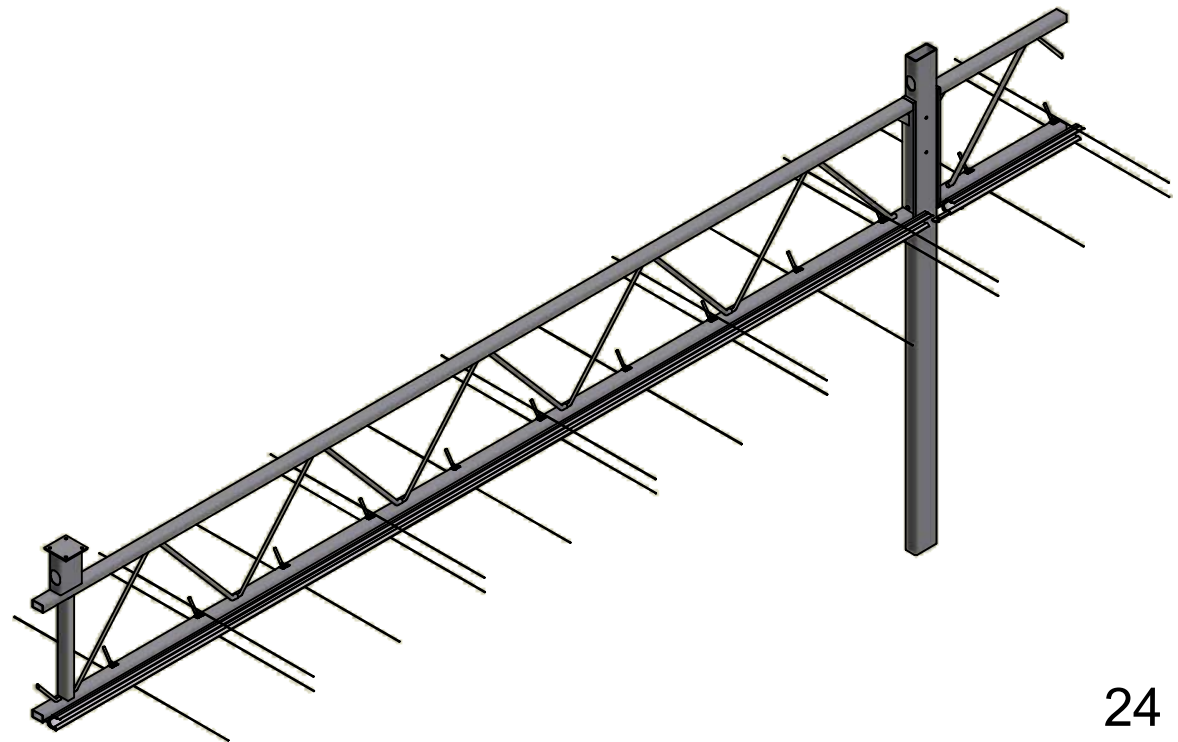
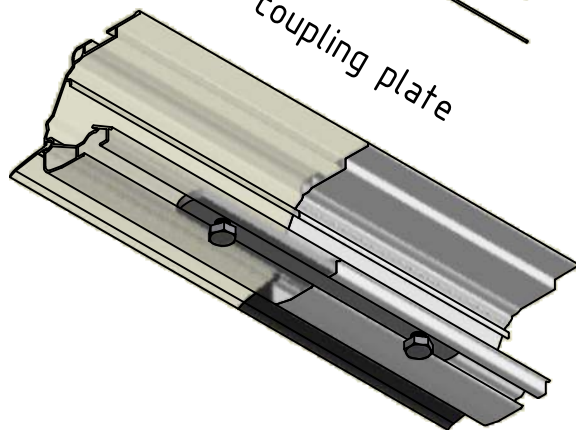


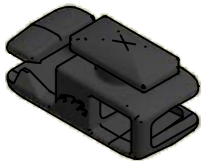
Coupling profiles

VAN DER VALK



coupling plate

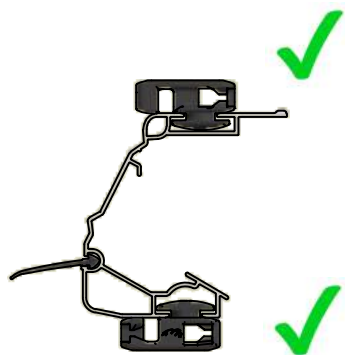
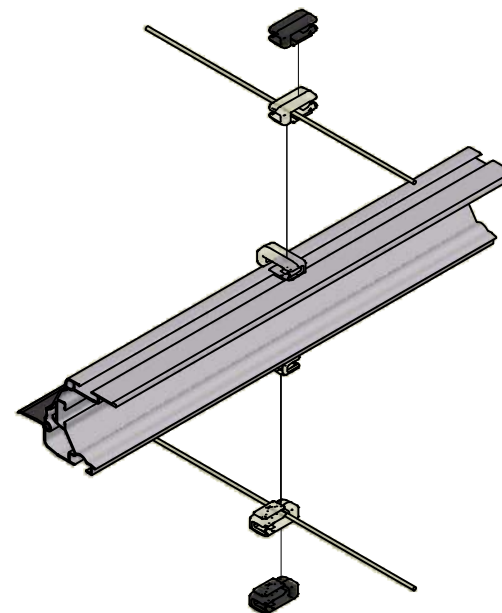
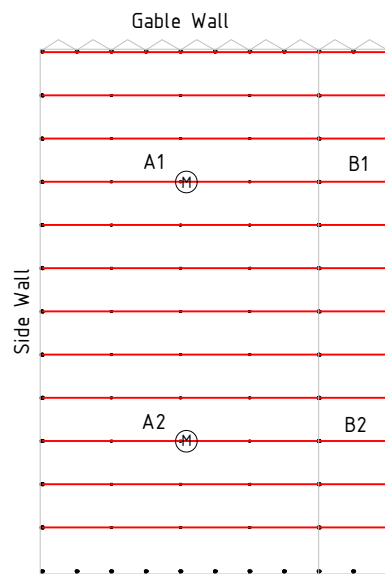




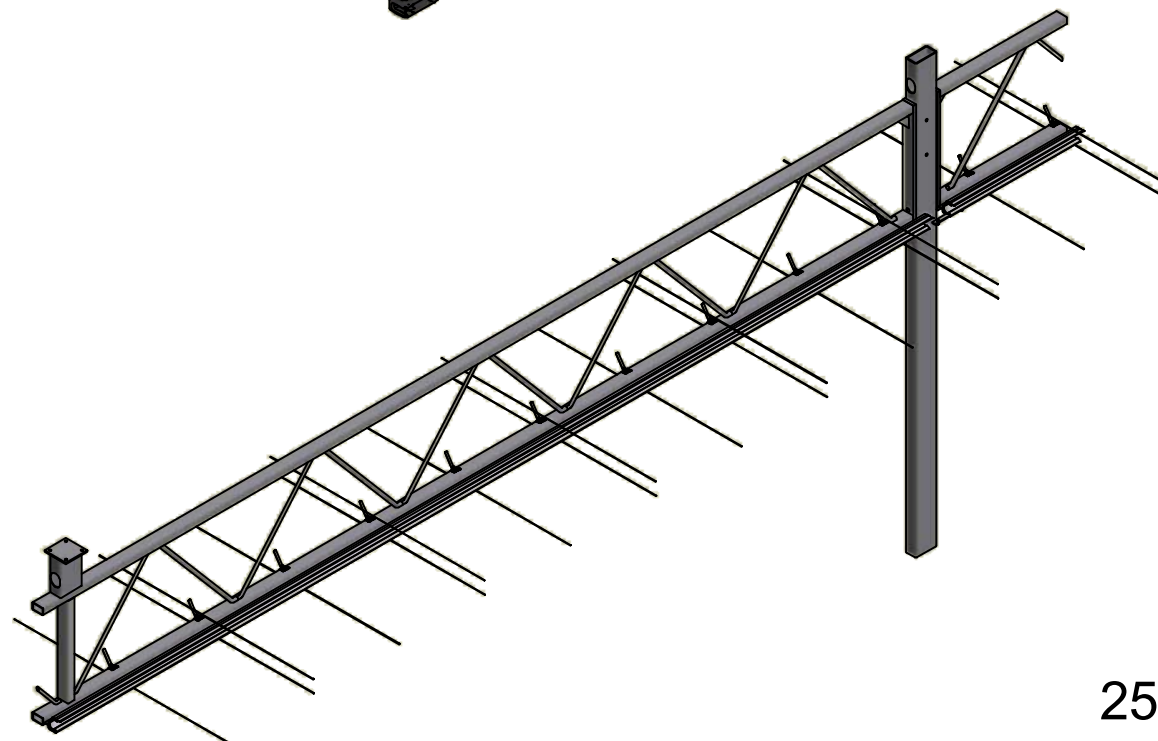
44.15.27

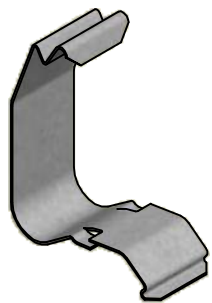
Mount wire guide blocks

VAN DER VALK



Mount the wire guide blocks with the opening as shown.

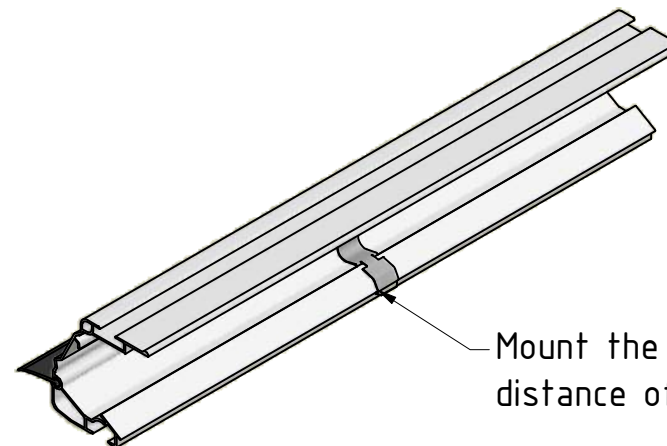
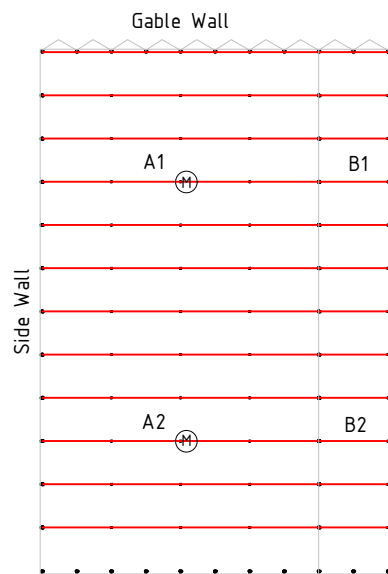




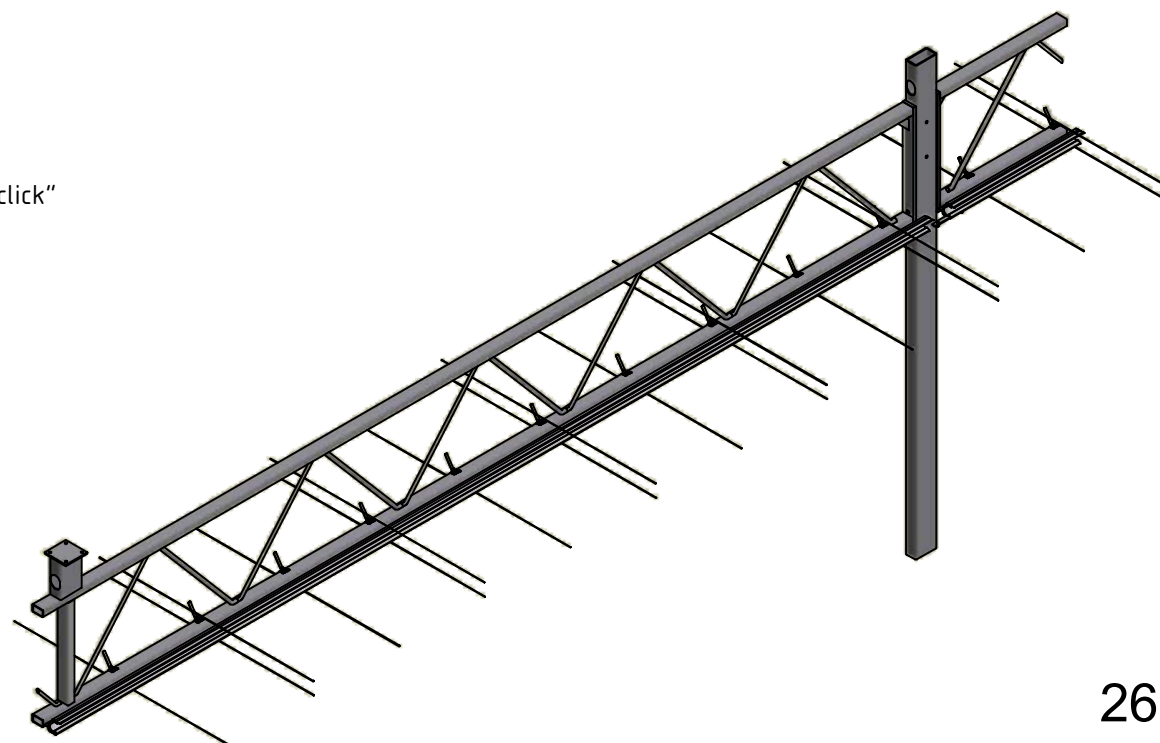
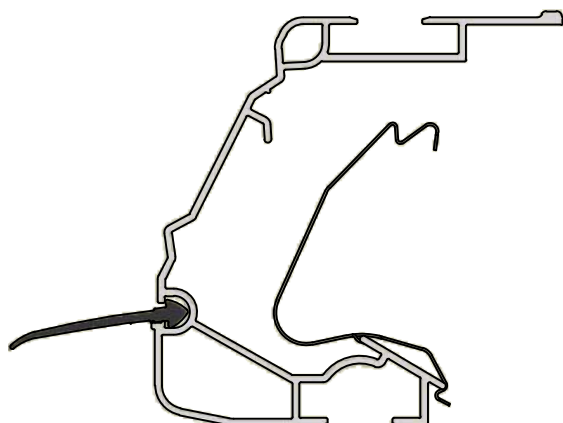
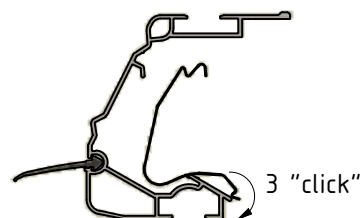
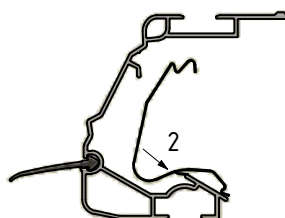
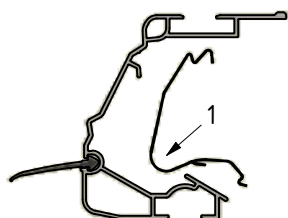
45.25.20

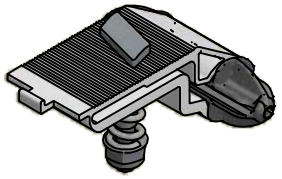
Cloth clip Triple-plus

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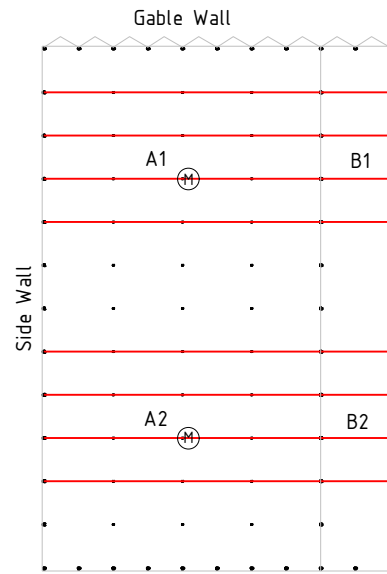


Mount the cloth clips on a distance of approx. 40cm.



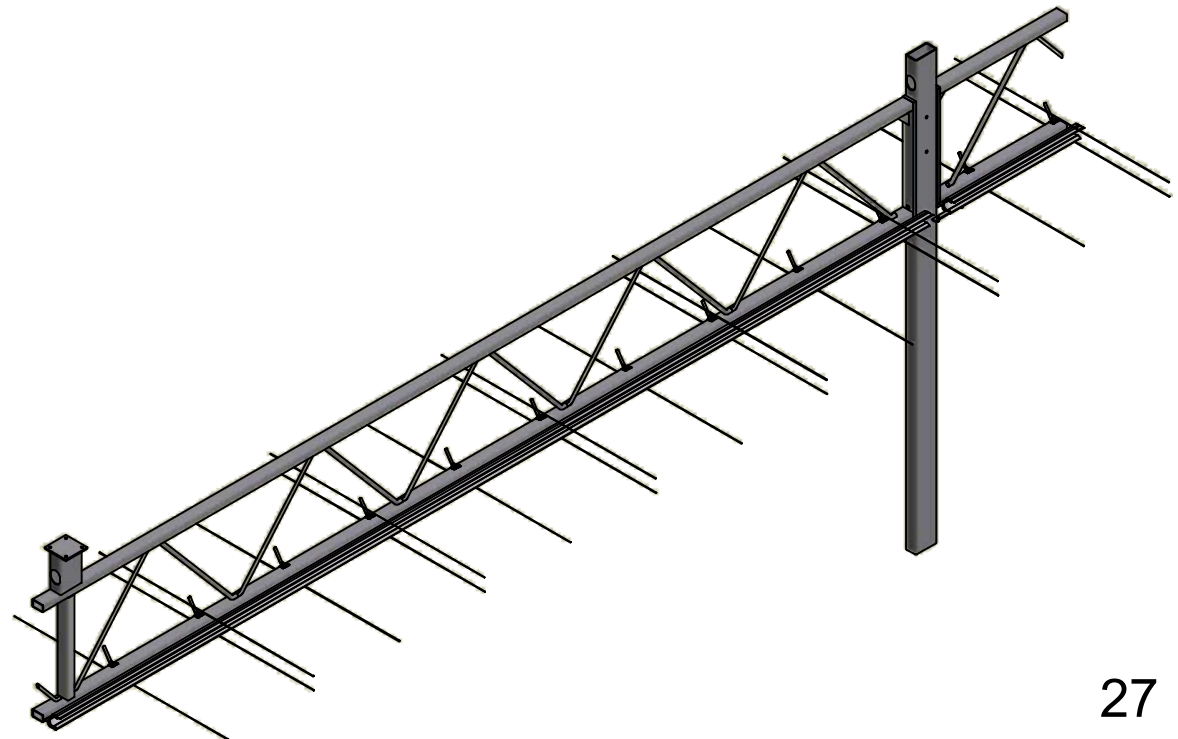
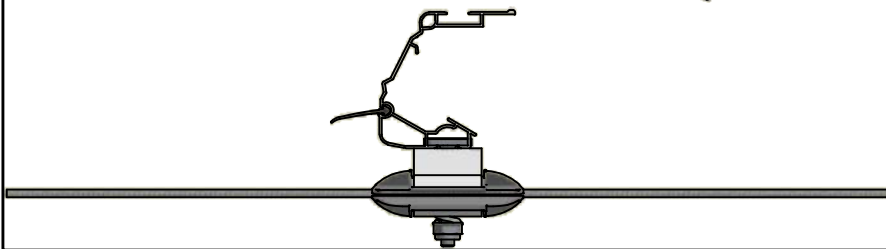
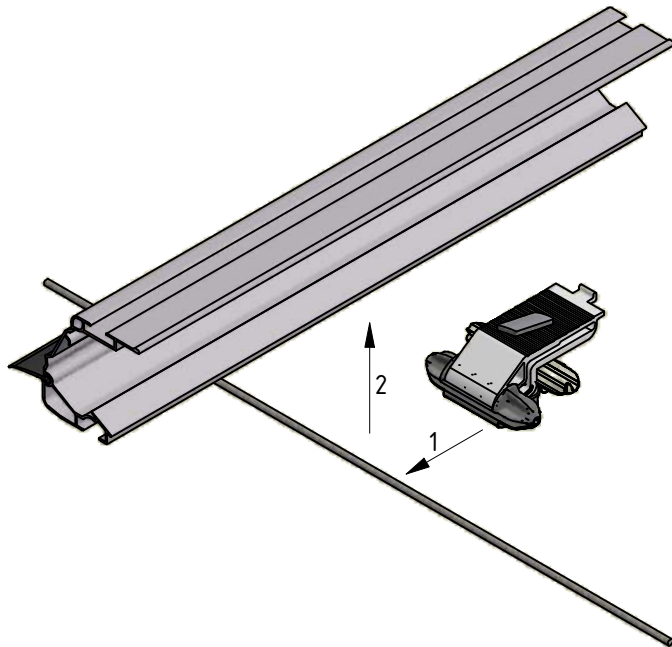
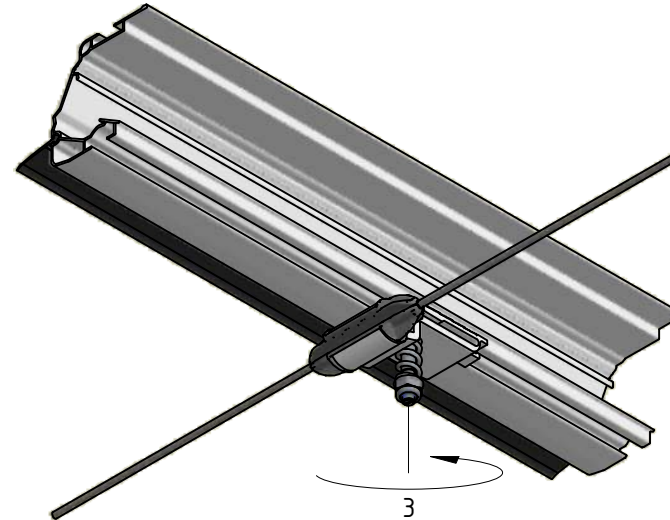


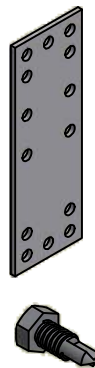
44.40.35 (blank)
44.40.36 (red)



KLI-MAX compact

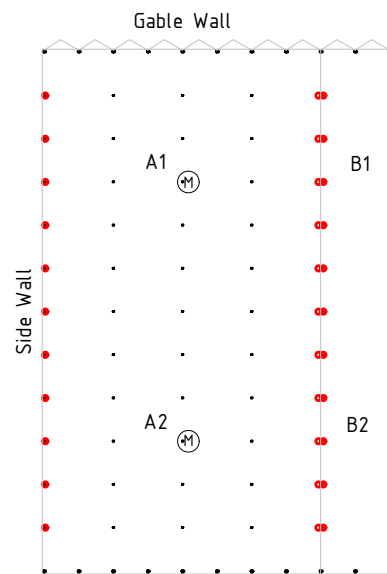
VAN DER VALK





44.27.15

53.57.20

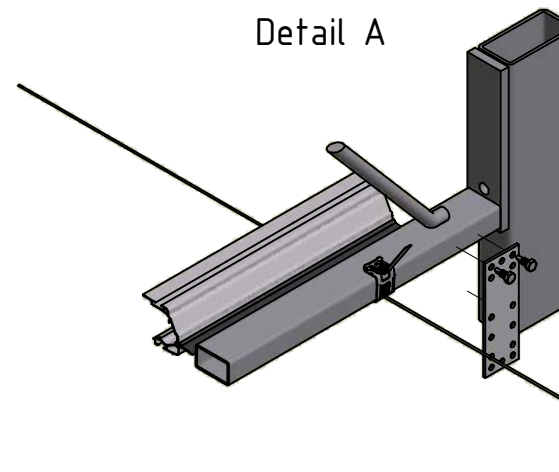


Overhang strip

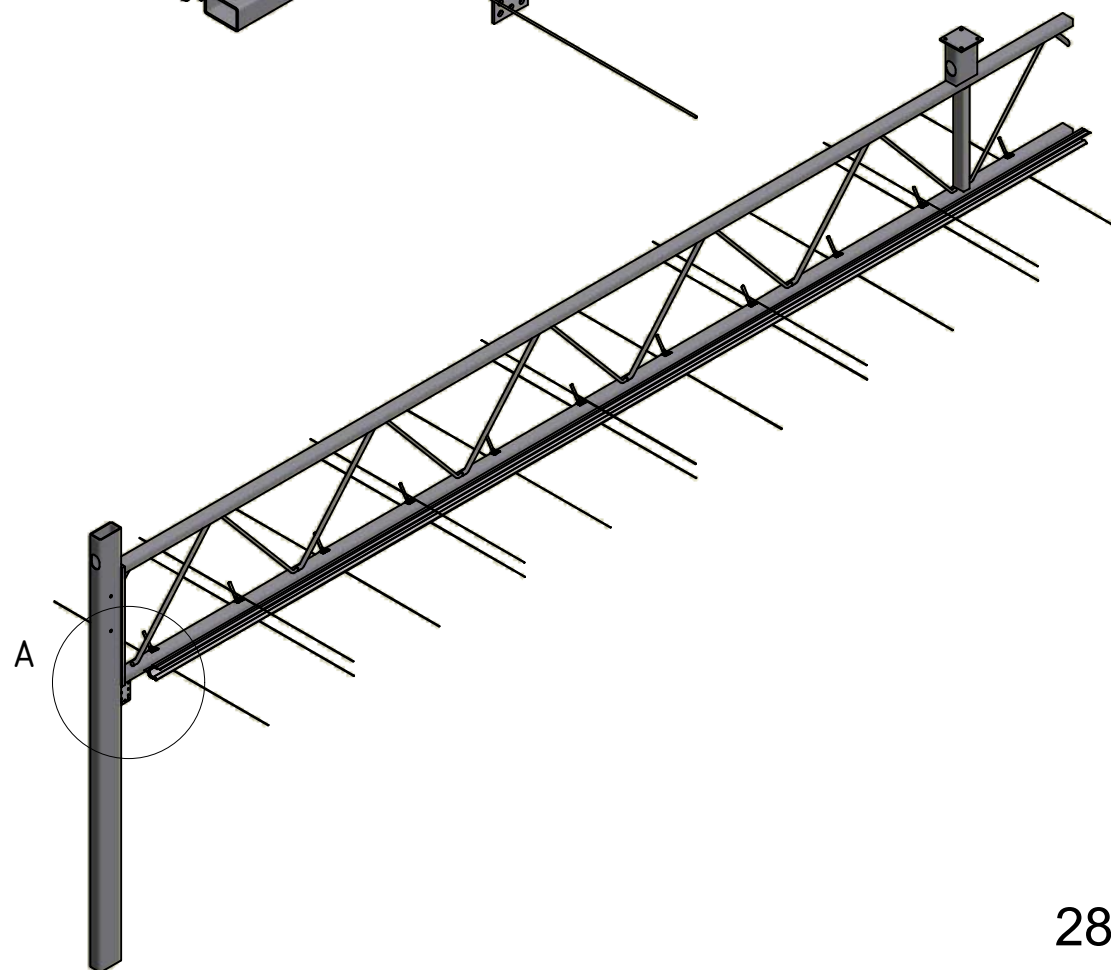
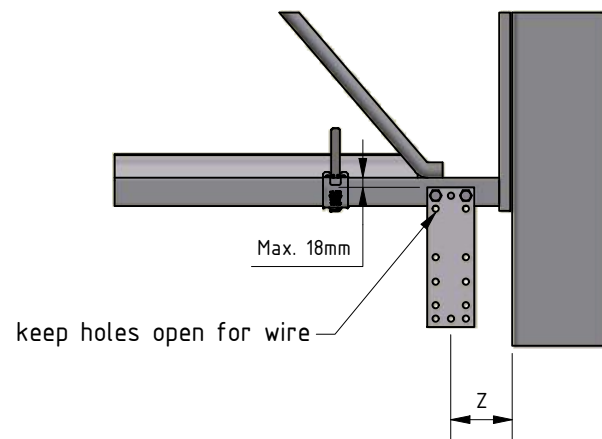
VAN DER VALK

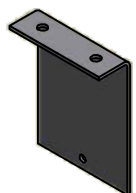


Detail A



Detail A

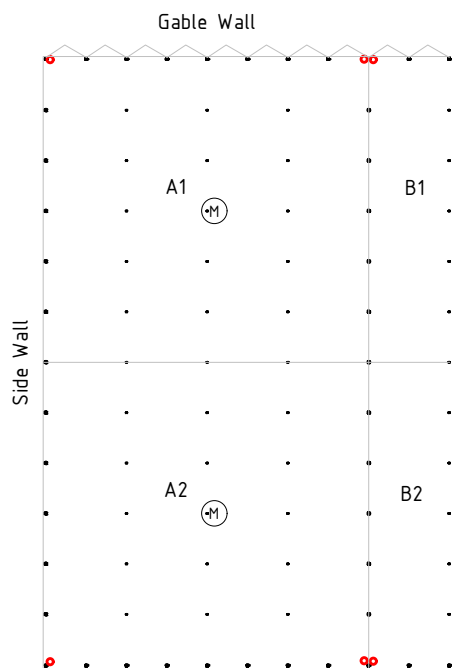




44.84.25

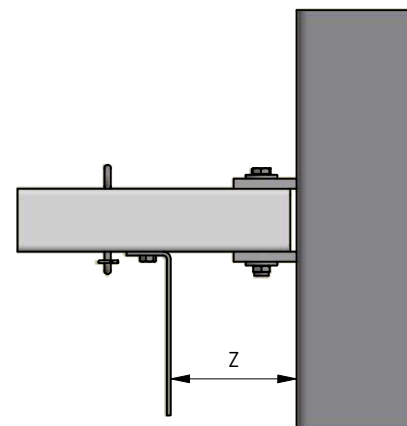


53.57.20

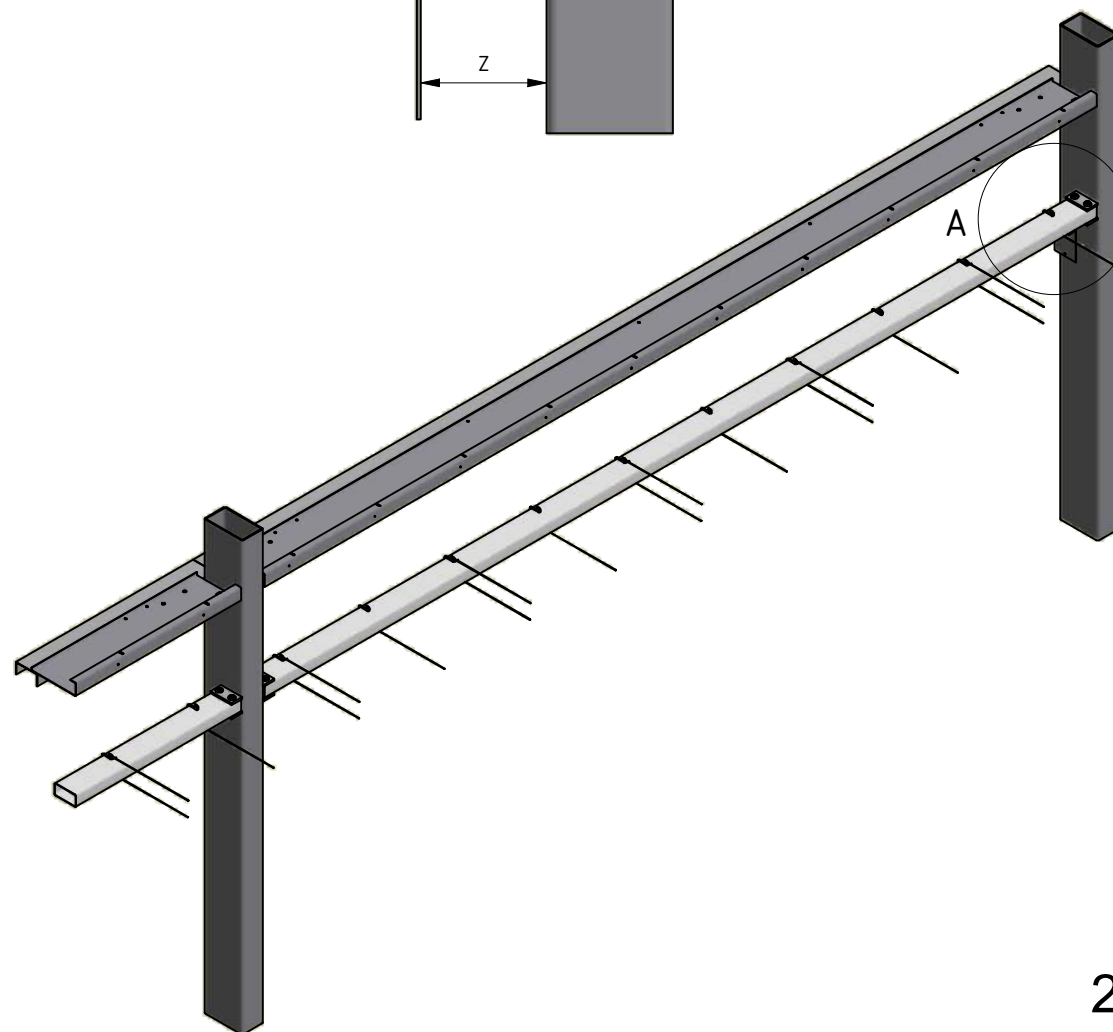
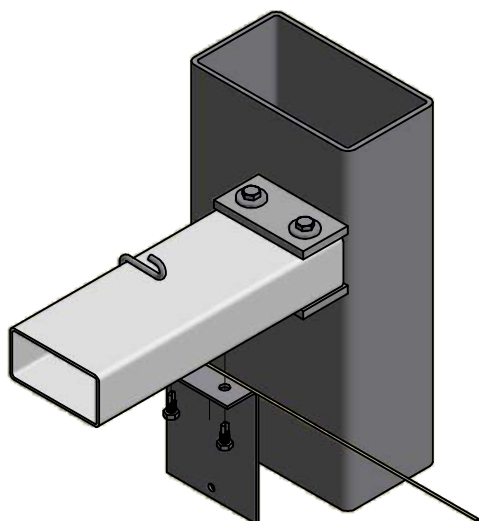


Clamping bracket for side wall

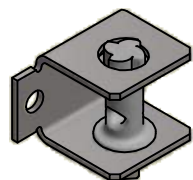
VAN DER VALK



Detail A



Knot the polyester wires to the wire brackets at both gable walls.



48.80.10



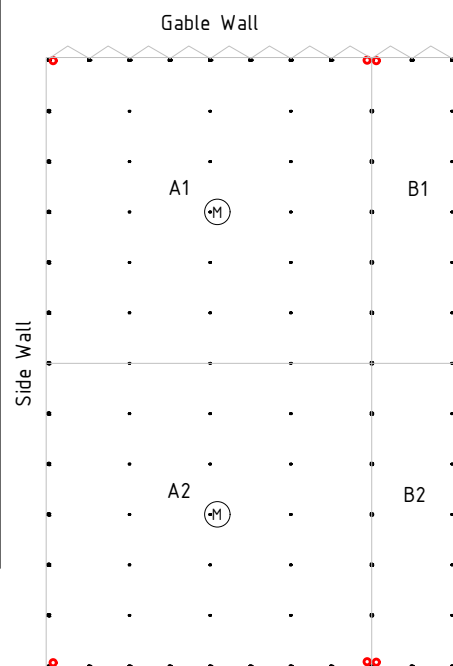
53.57.12



55.30.16

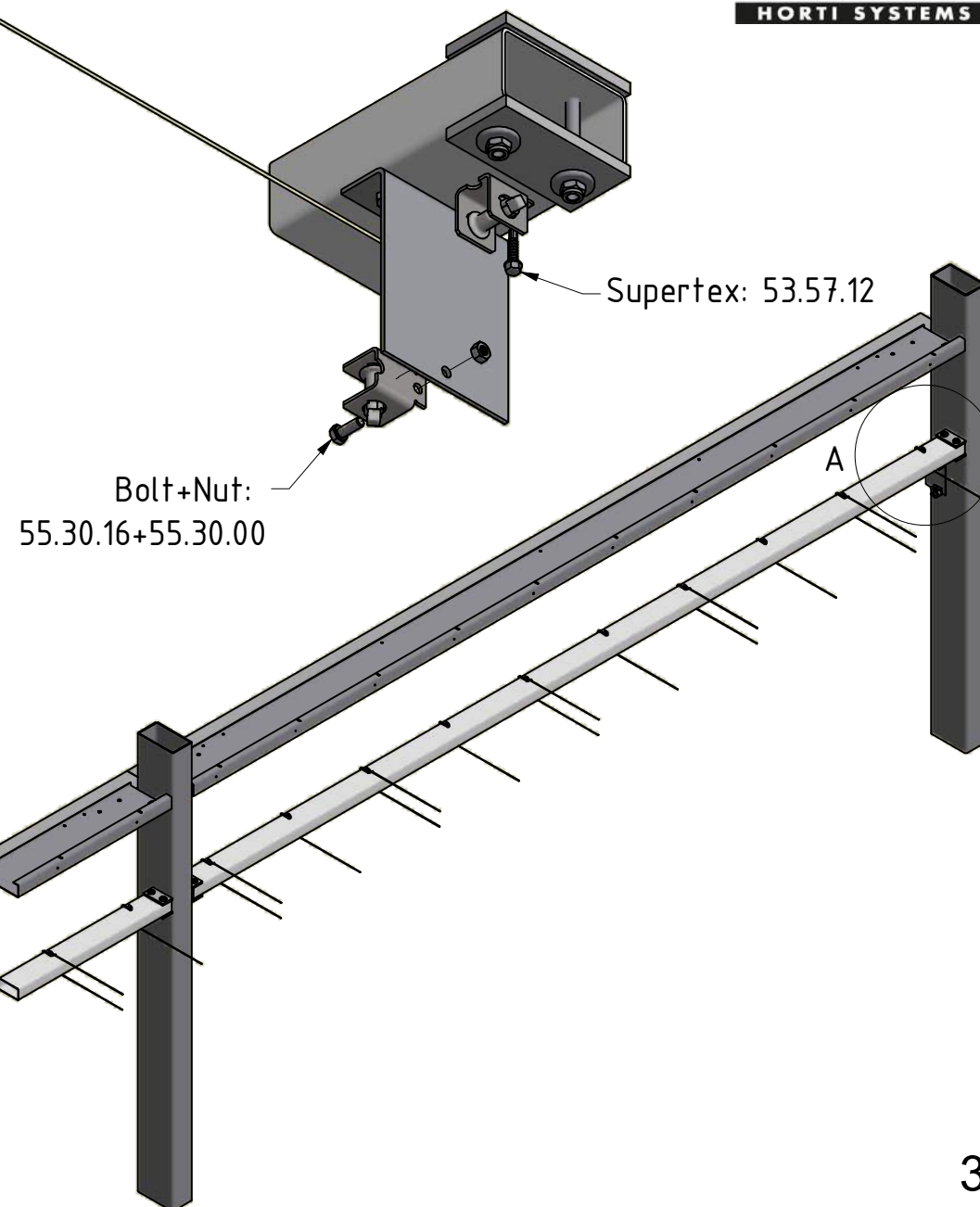


55.30.00

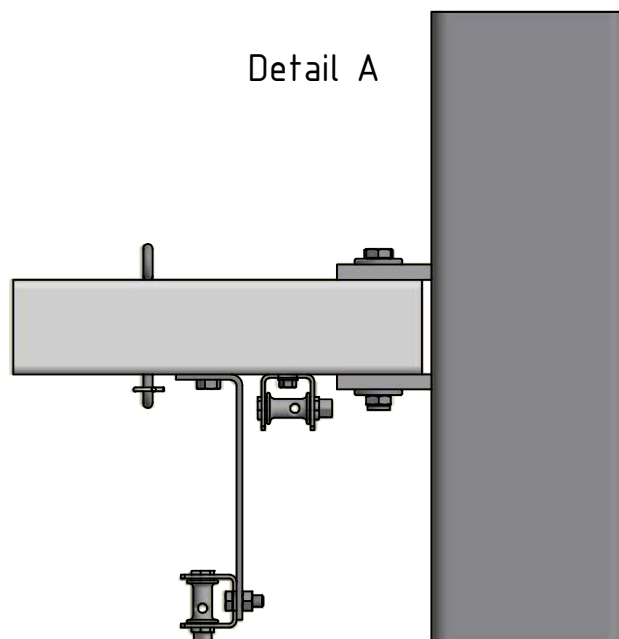


Wire strainer side wall

Detail A



Detail A





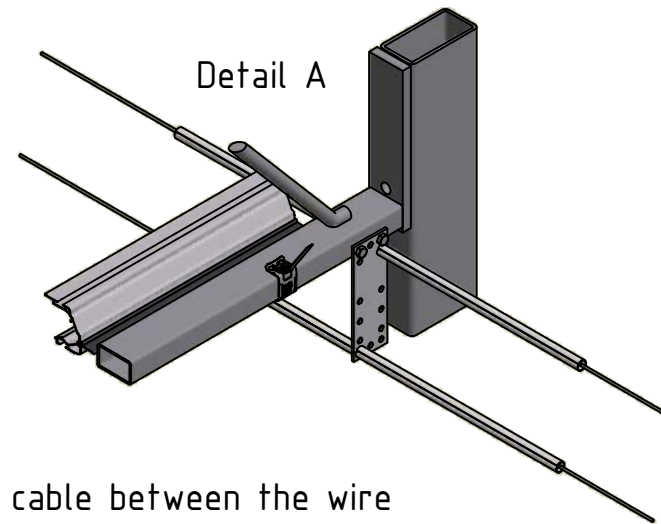
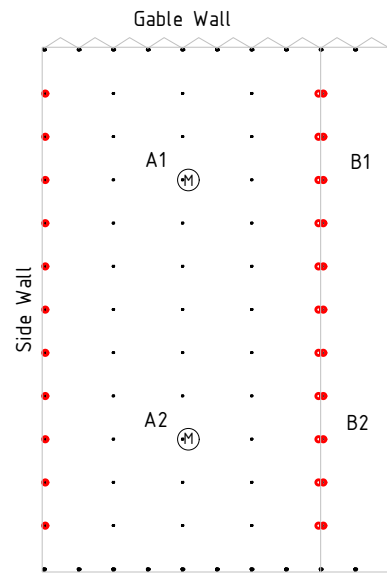
48.20.15



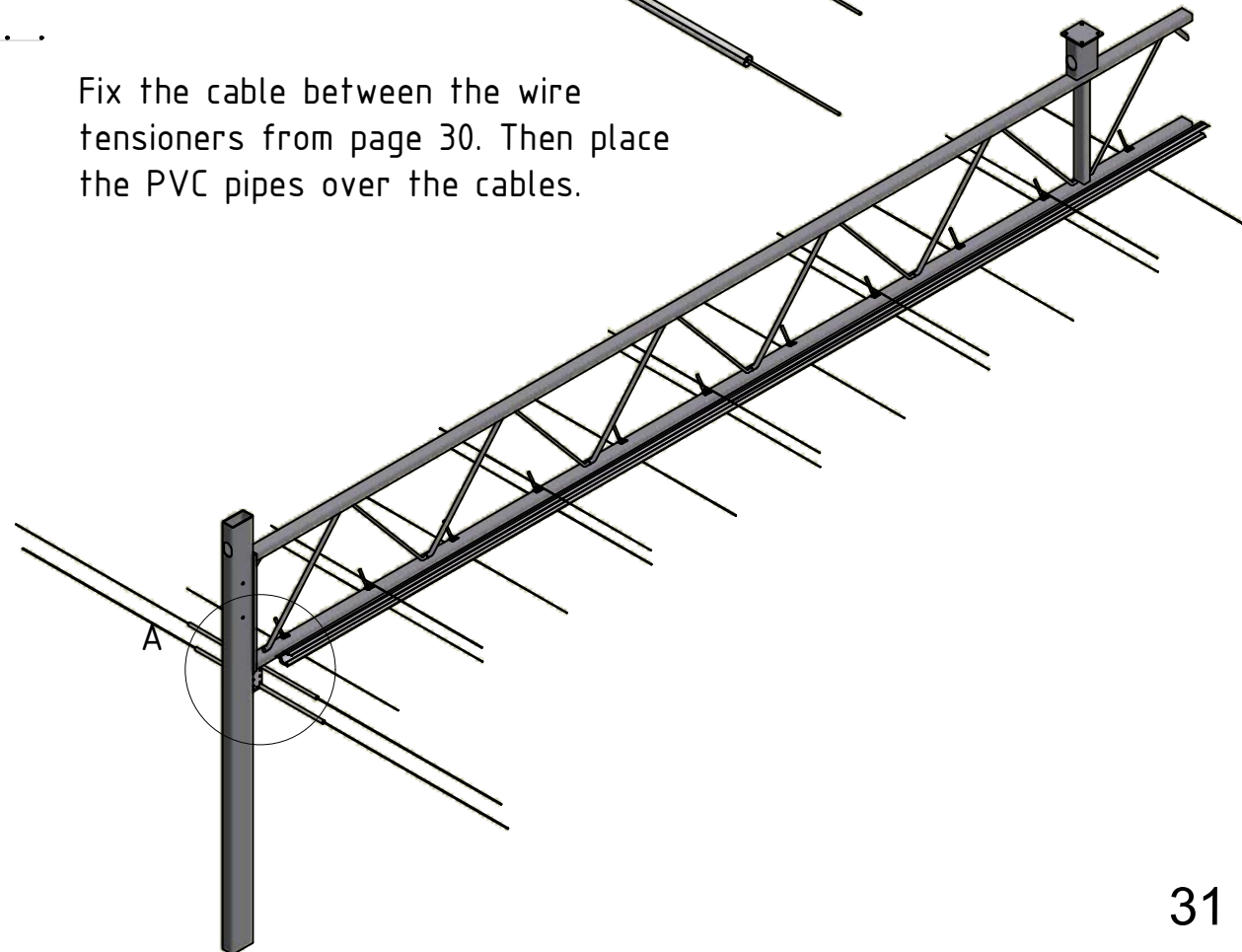
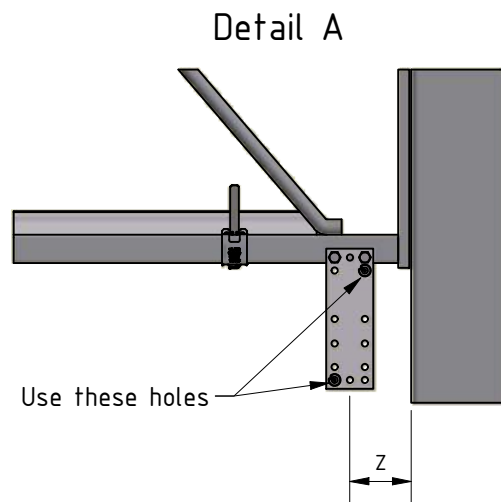
48.60. (L [mm])

PVC pipes

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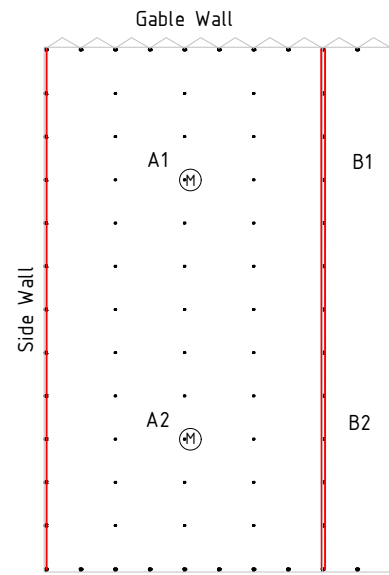
Fix the cable between the wire tensioners from page 30. Then place the PVC pipes over the cables.



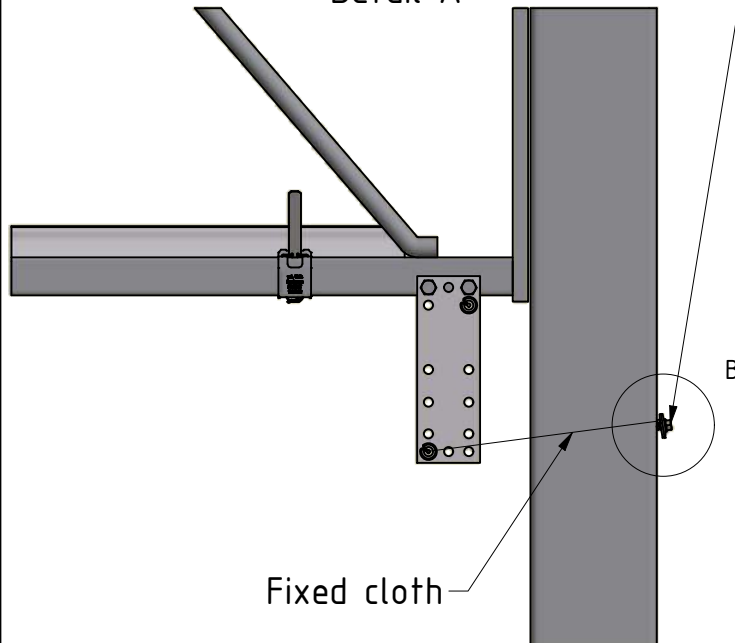
Fixed cloth

Attention!! The materials to create the fixed cloth may not be delivered by Van der Valk Horti Systems. The type of fixed cloth depends on the screen installer itself.

	48.80.10
	53.57.12
	53.55.18
	48.20.15
	61.10.05
	61.10.06

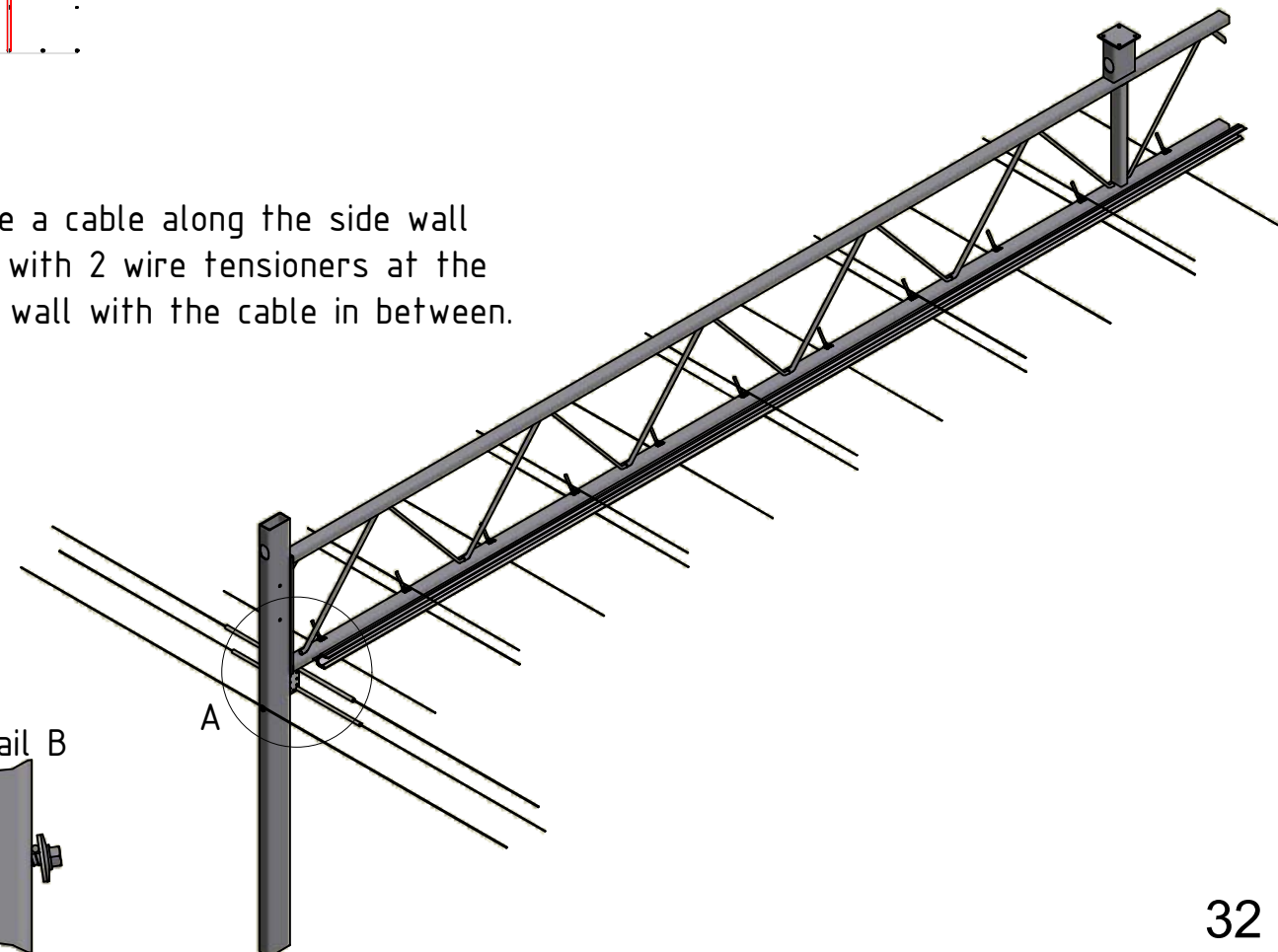
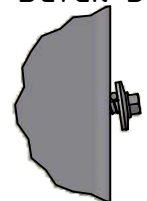


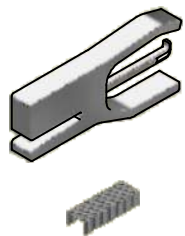
Detail A



Create a cable along the side wall using with 2 wire tensioners at the gable wall with the cable in between.

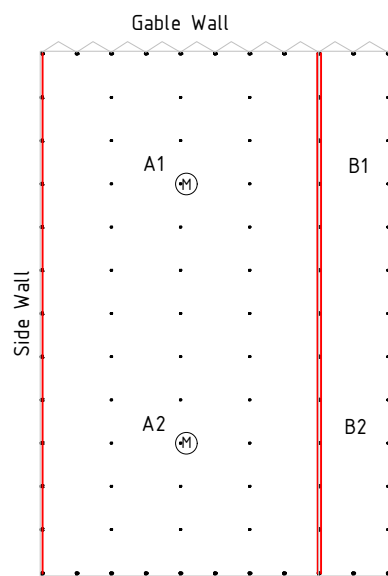
Detail B





61.10.05

61.10.06

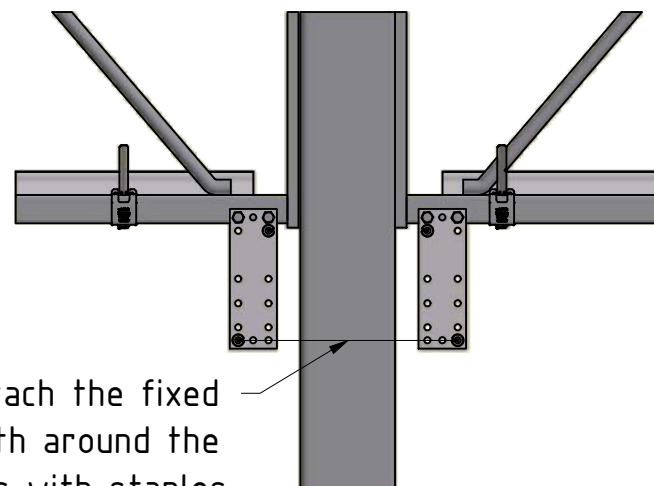


Fixed cloth

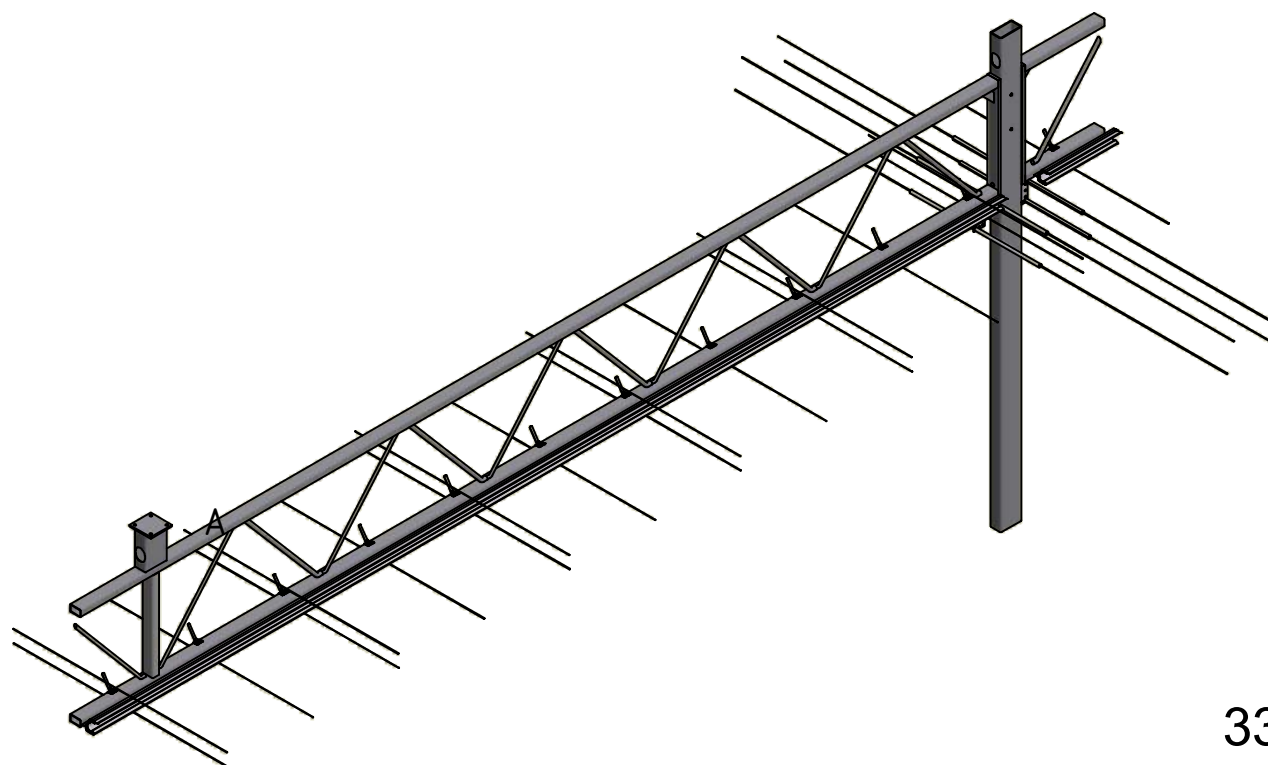
VAN DER VALK

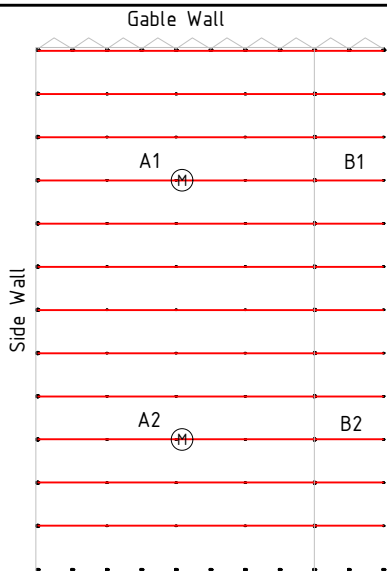


Detail A



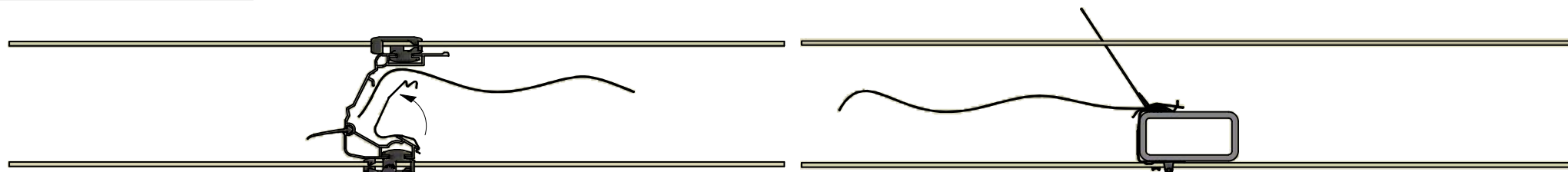
attach the fixed cloth around the cables with staples.



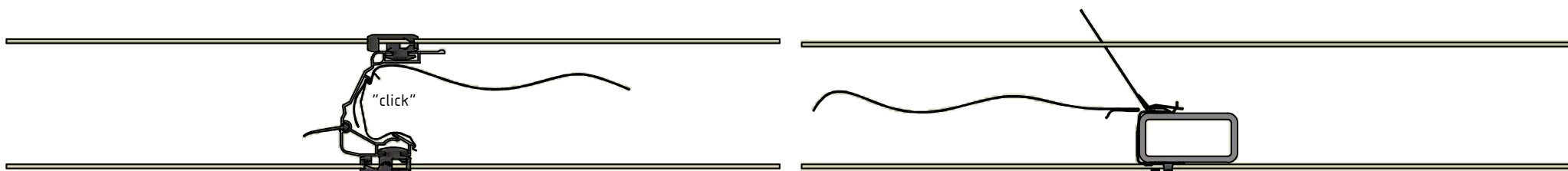


Attachment of cloth to screen profile and trusses.

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To attach the cloth to the truss clips use a flexible knife for example.





44.27.05



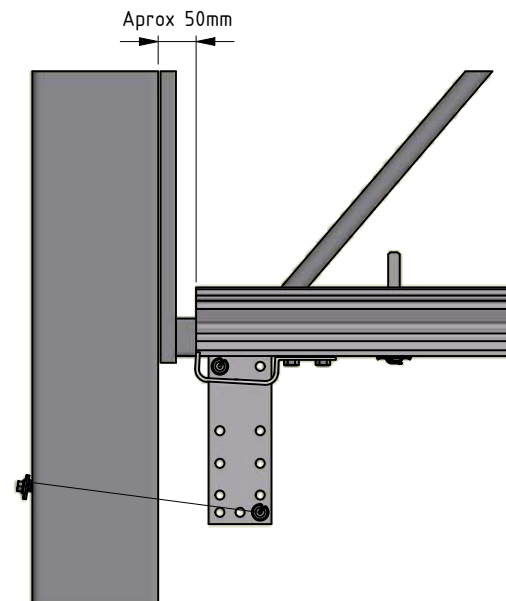
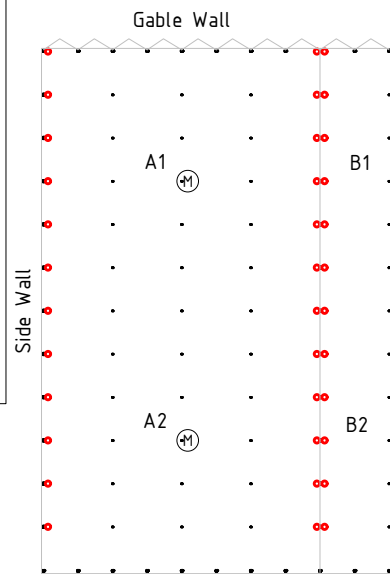
44.05.05

M6x10

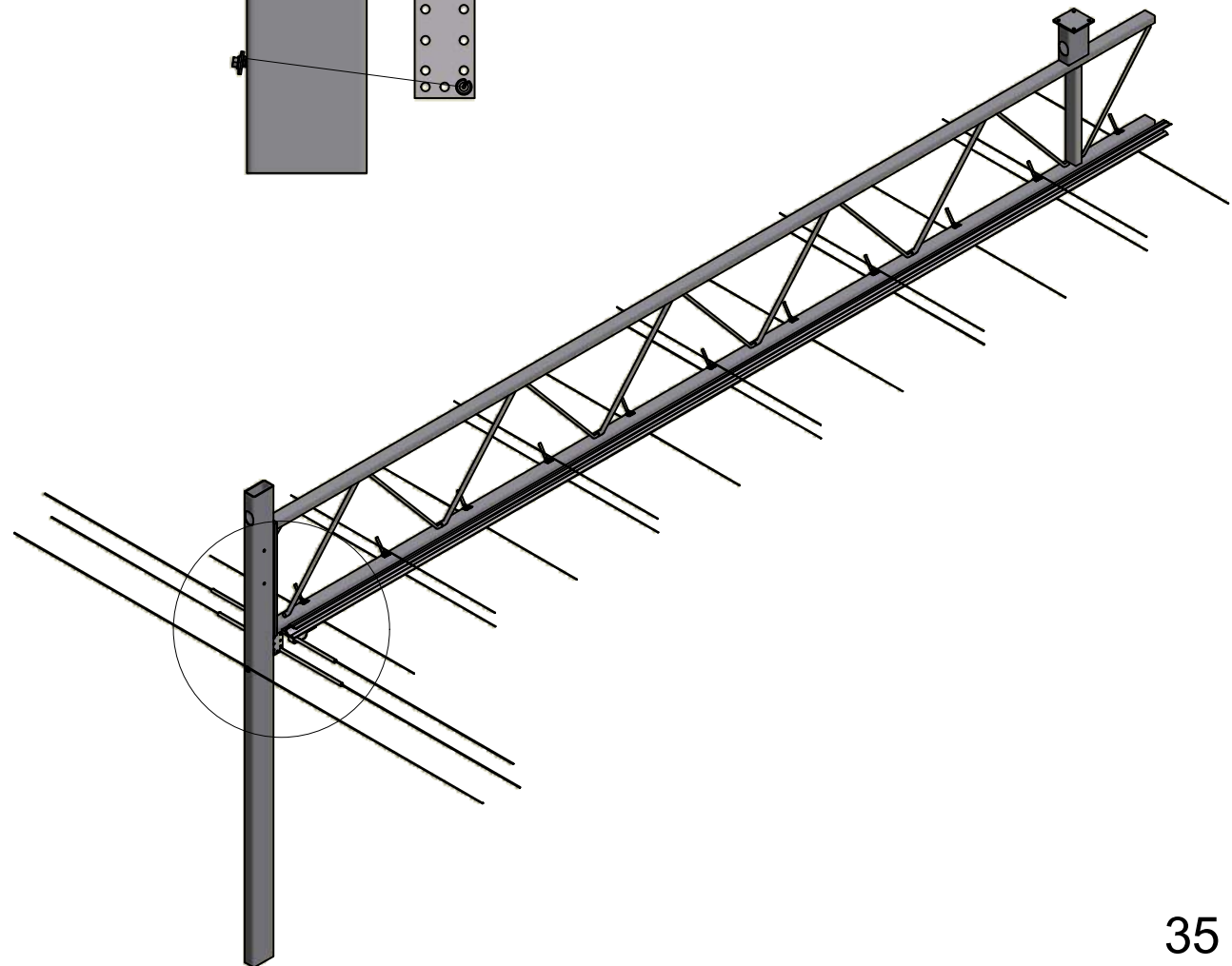
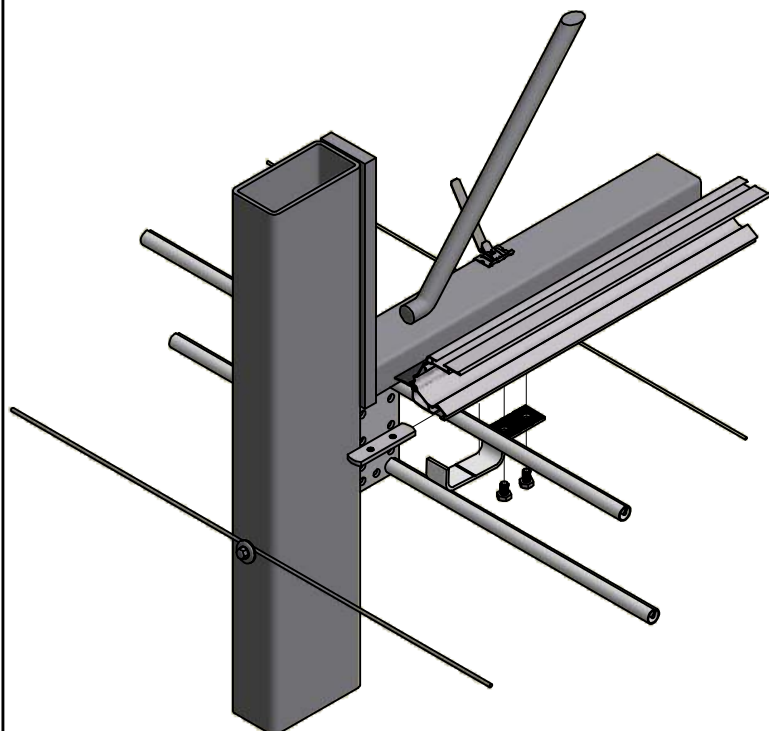


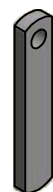
55.30.10

screen guide



VAN DER VALK



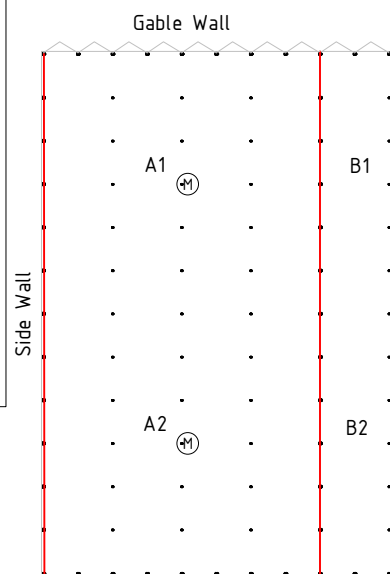


44.70.25

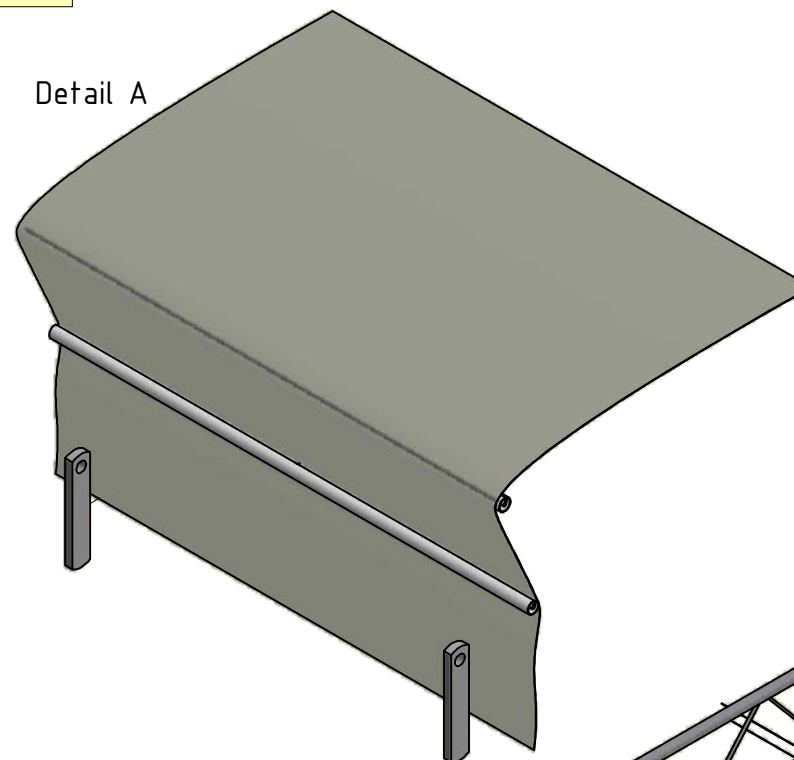


45.45.50

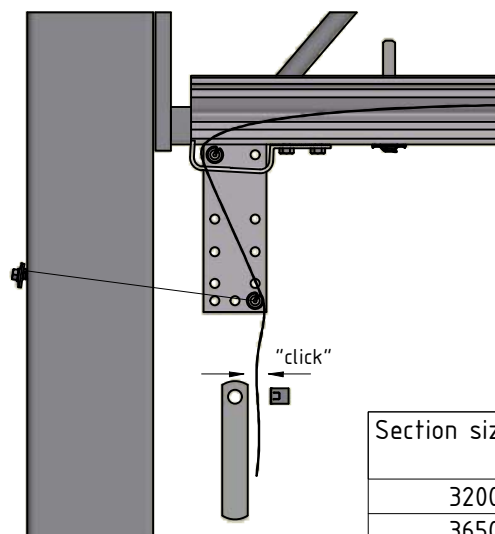
Cloth weight



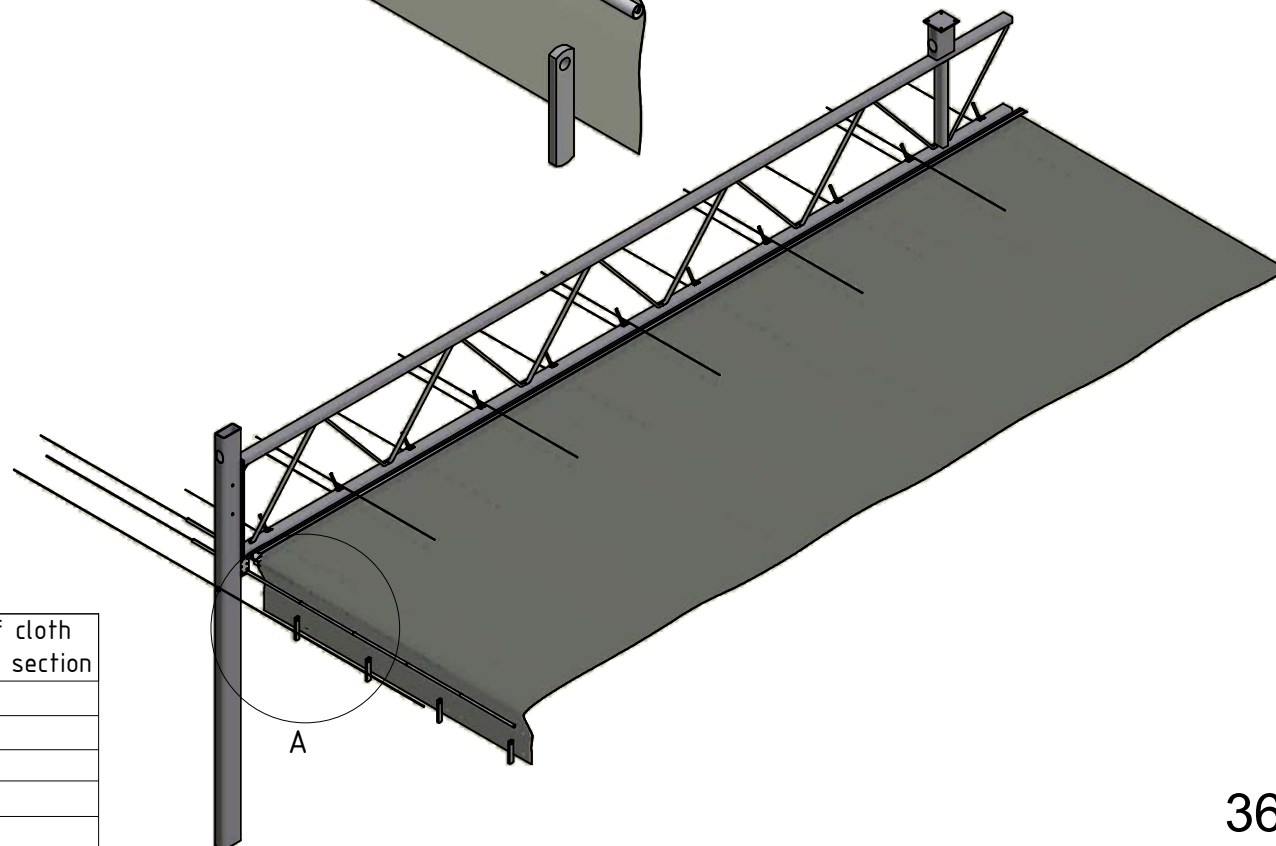
Detail A



Detail A



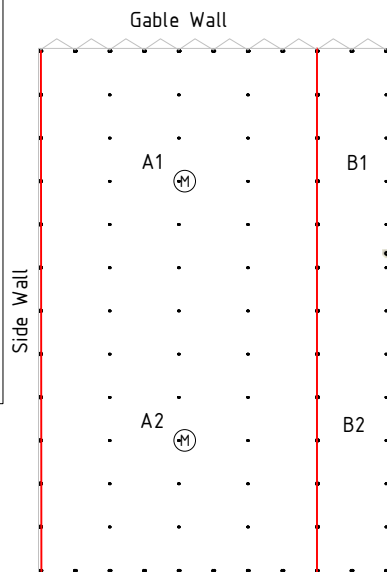
Section size [mm]	Number of cloth weights per section
3200	5
3650	5
4000	6
4500	7
5000	8





44.15.20

45.45.50

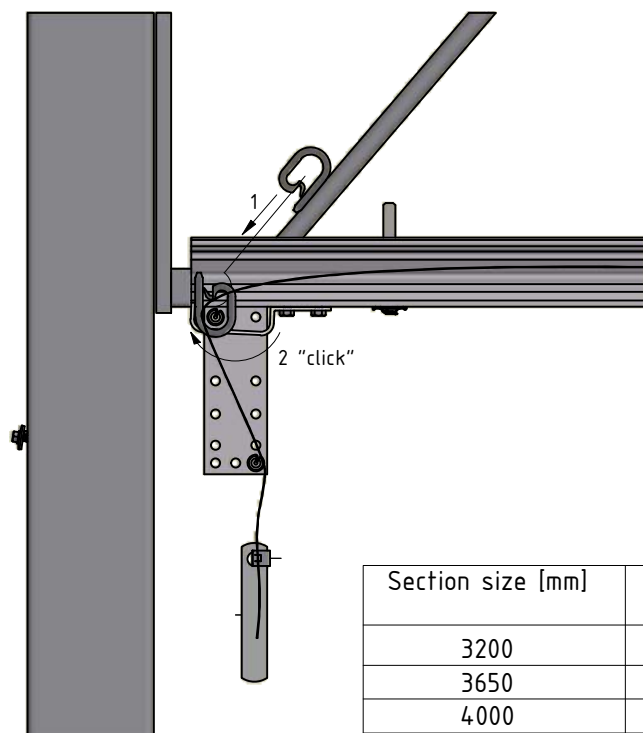
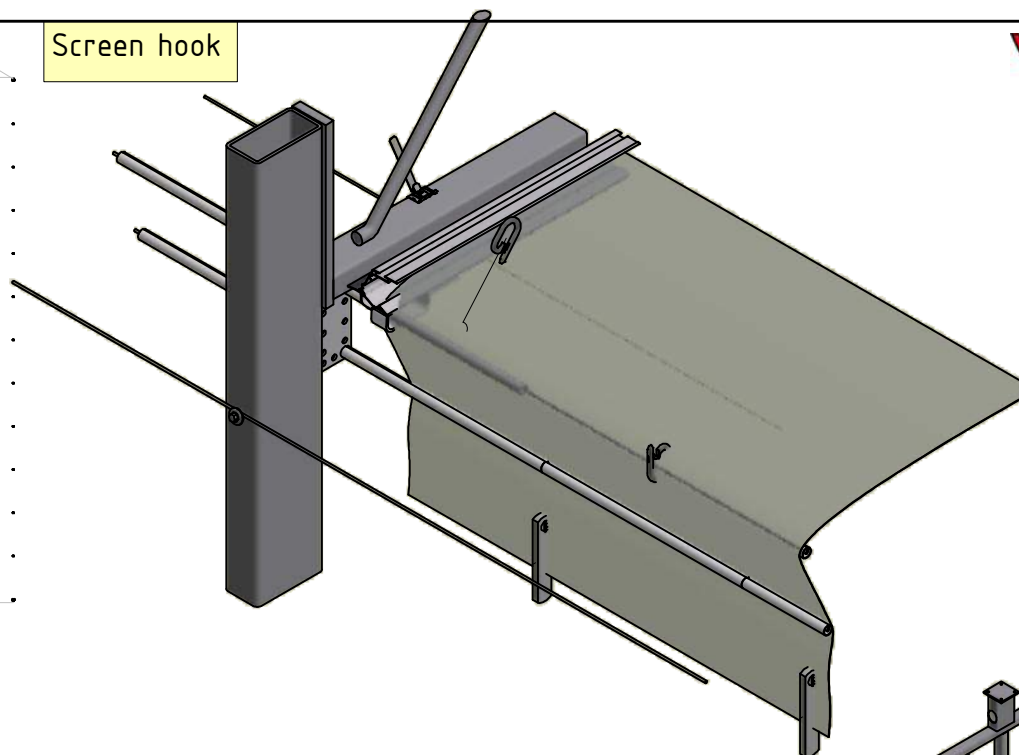


Screen hook

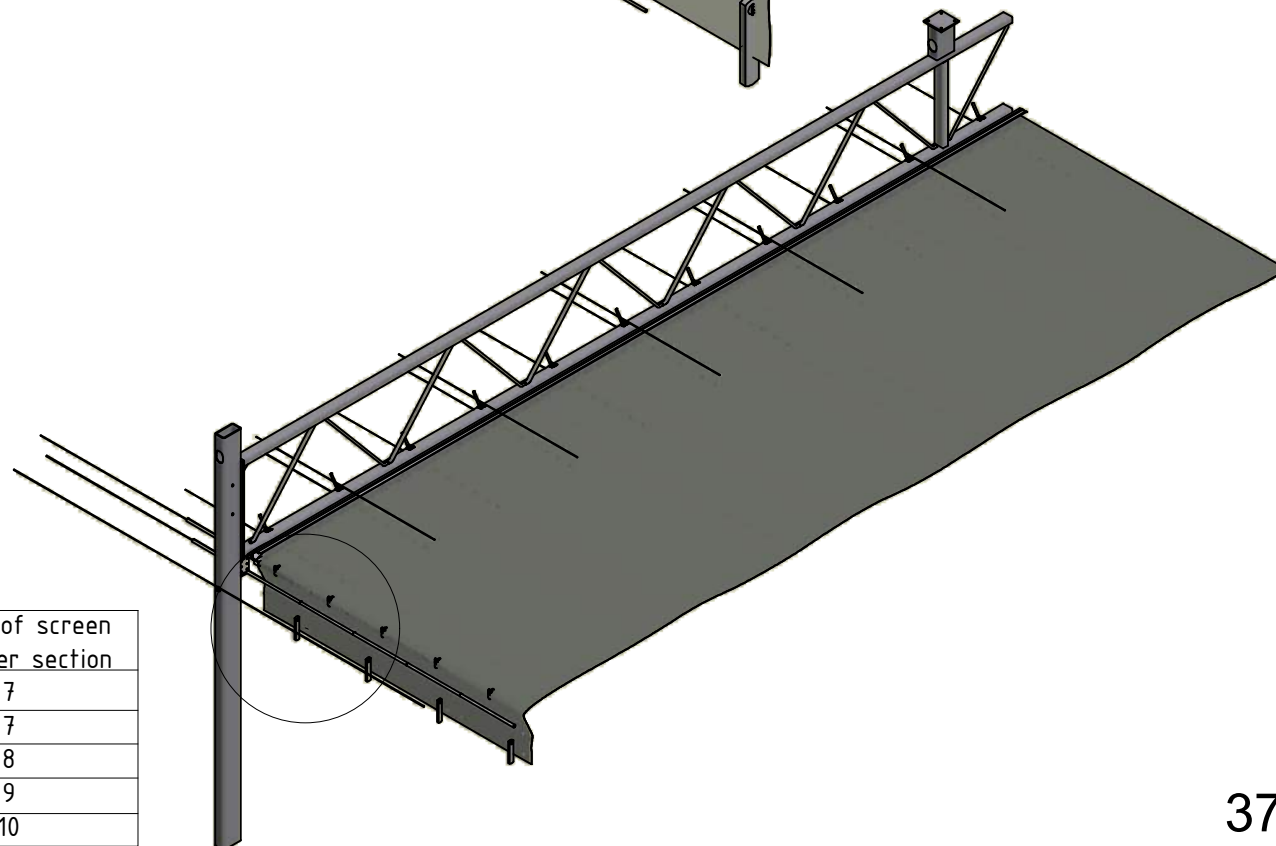
VAN DER VALK



HORTI SYSTEMS



Section size [mm]	Number of screen hooks per section
3200	7
3650	7
4000	8
4500	9
5000	10



Van der Valk Horti Systems

Van der Valk Horti Systems has been a familiar name in the greenhouse industry for many years. In fact, we are the only specialised company that has completely dedicated itself to the development and production of vent-opening and screen mechanisms. That is why our systems can be found in so many greenhouses. Our high-quality components not only get your business moving, but more importantly, keep it moving.

Greenhouses are becoming increasingly larger and more complex. And consequently the thousands of components are increasingly less accessible for maintenance. You must be able to blindly trust these. That is why at Van der Valk Horti Systems we go to extreme lengths with each new product development.

The development of new products and systems is a core activity. Each component clearly sets itself apart with its own carefully considered details. Moreover our products are fully tested and approved before they arrive in your greenhouse. Van der Valk Horti Systems, your guarantee for operational continuity.



PLEASE CONTACT VAN DER VALK HORTI SYSTEMS OR YOUR
GREENHOUSE BUILDER/INSTALLER FOR MORE INFORMATION.