



Van der Valk Horti Systems

DEVELOPER AND PRODUCER OF VENTILATION AND SCREENING SYSTEMS FOR GREENHOUSES

General Installation manual Lower screen – ValkScreenVision





Van der Valk Horti Systems

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

This manual is not project specific.

This manual is not legally binding.

No right may be derived from this installation manual.

Table of contents

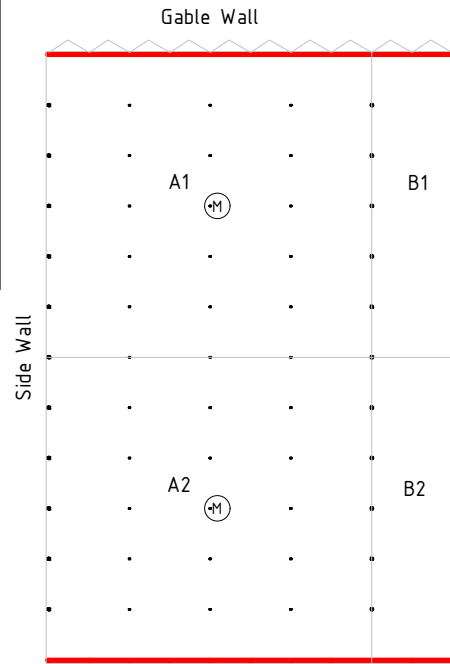
Wire brackets	Page	02
Reversing wheel	Page	03 – 05D
Bearing plates	Page	06 – 07B
Drive Shaft	Page	08A – 09B
Profiles	Page	10
Measure row Truss clips	Page	11
Black coated steel cable	Page	12A – 12B
Polyester wire	Page	13 – 14B
V-Pulley	Page	16
Steel wire	Page	17 – 18B
Truss clips	Page	19
Rope in behalf of cloth pulling	Page	20
KLI-MAX Slide	Page	21
Coupling profiles	Page	22
Entry section VSV	Page	23
Wire guide blocks	Page	24
KLI-MAX compact	Page	25
Screen Pulling	Page	26 - 27
Cloth hang down	Page	28 - 36



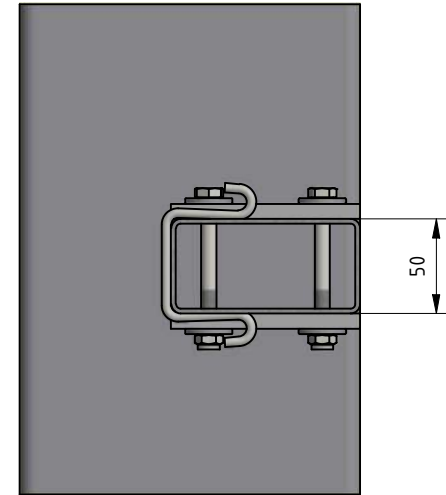
45.81.89

Mounting wire brackets

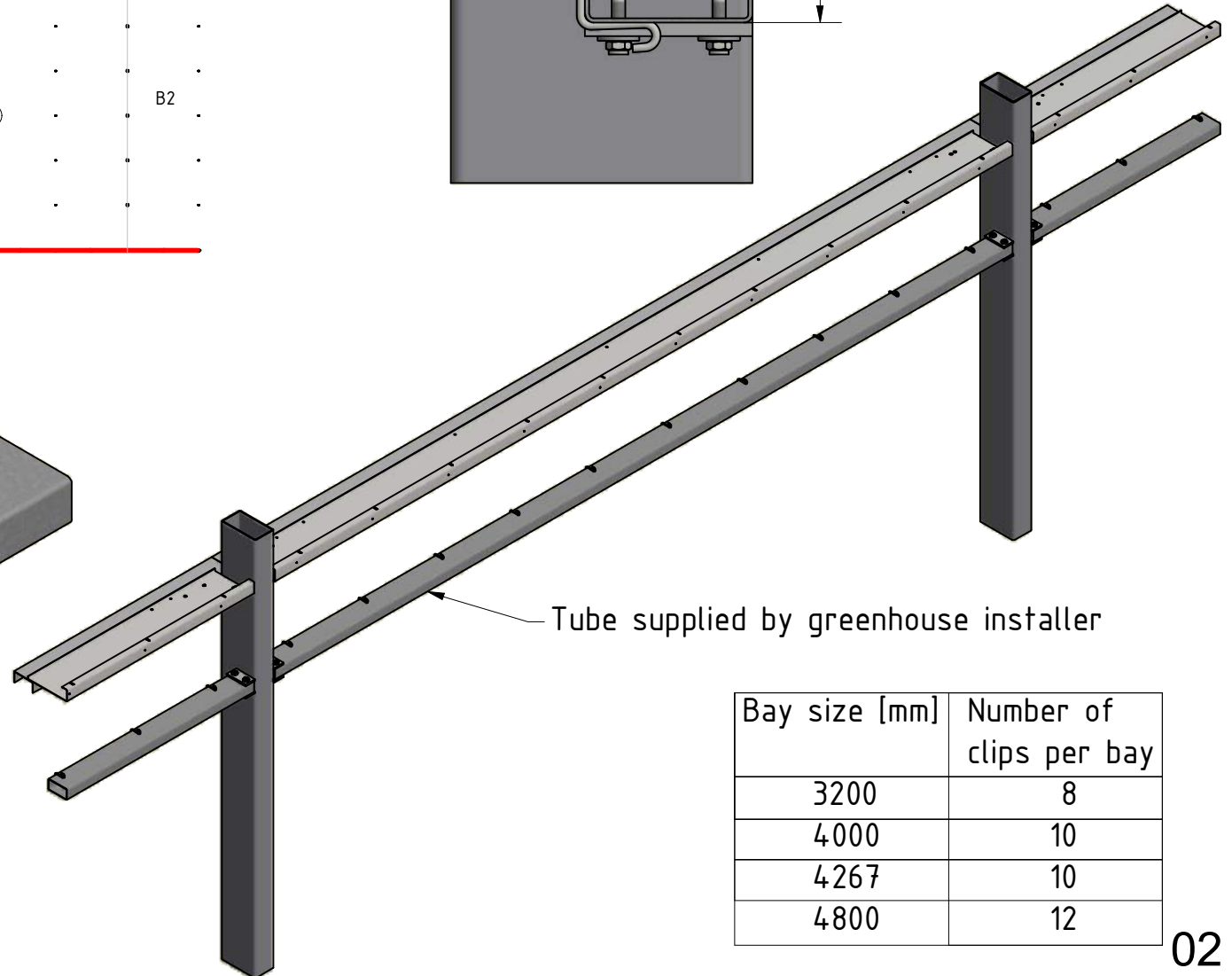
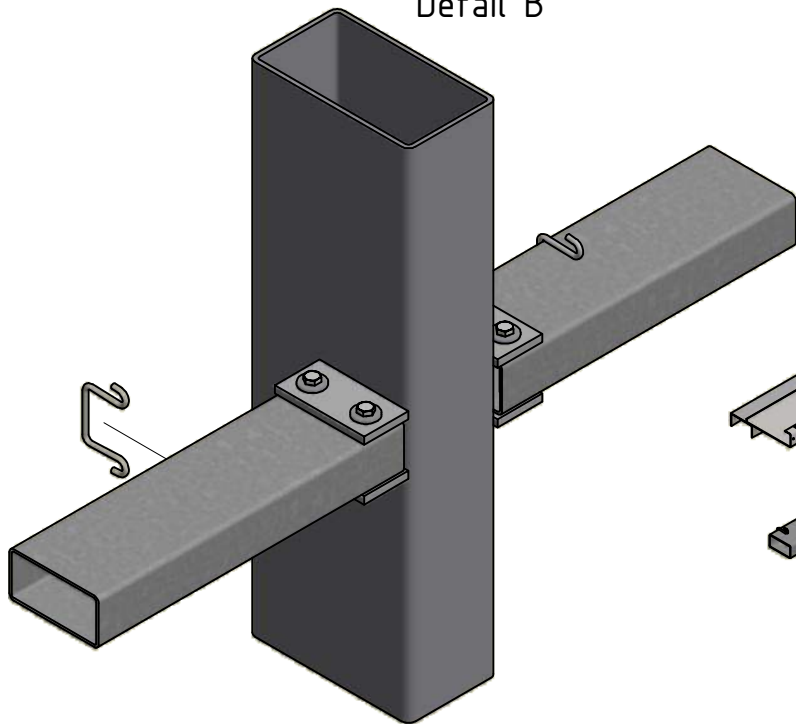
VAN DER VALK



View A



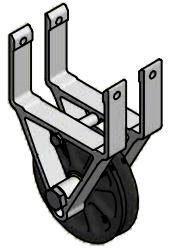
Detail B



Bay size [mm]	Number of clips per bay
3200	8
4000	10
4267	10
4800	12



Mounting reversing wheels



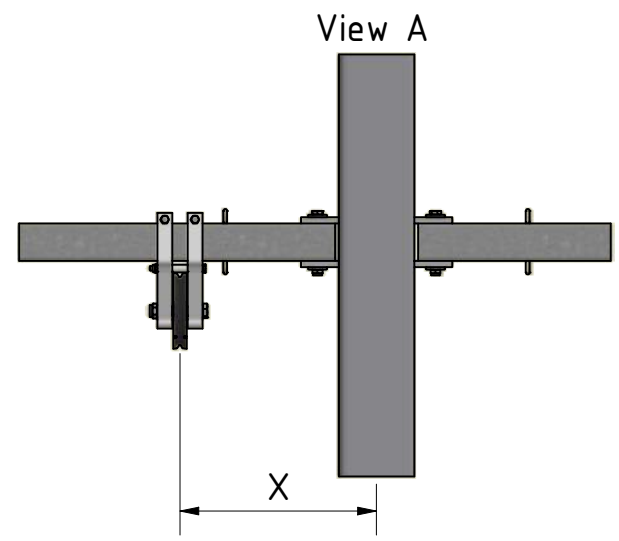
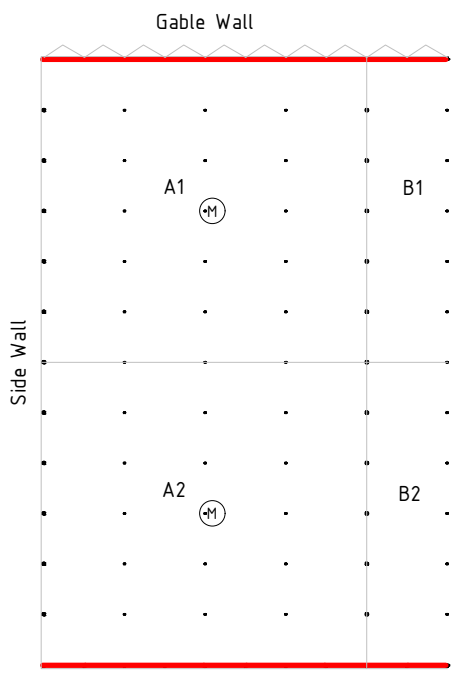
44.710.-----



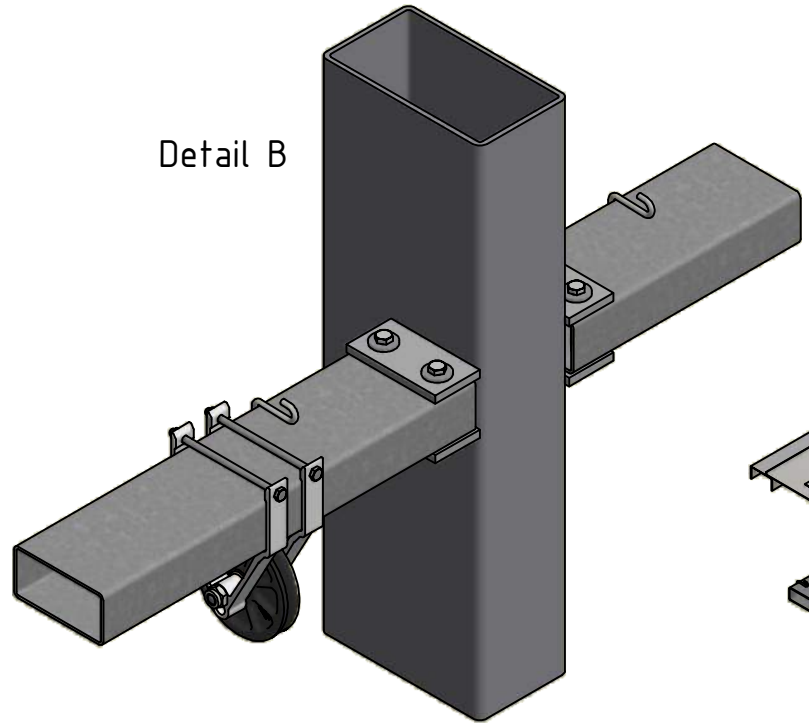
55.3---



55.30.00



Detail B

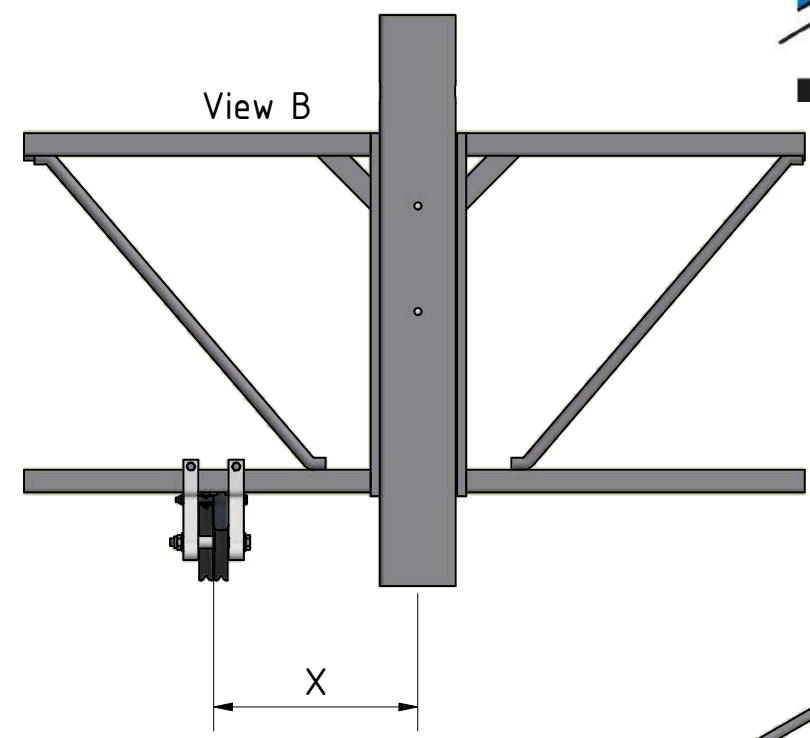
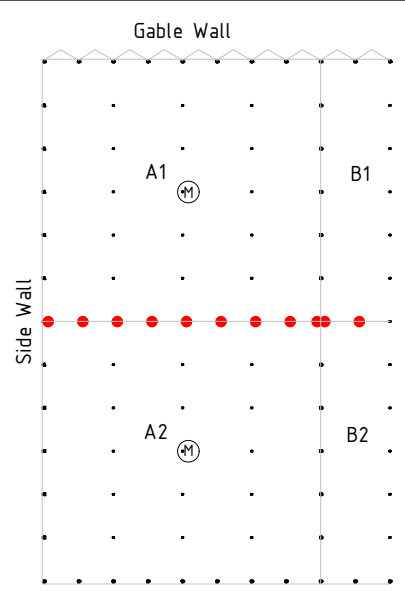




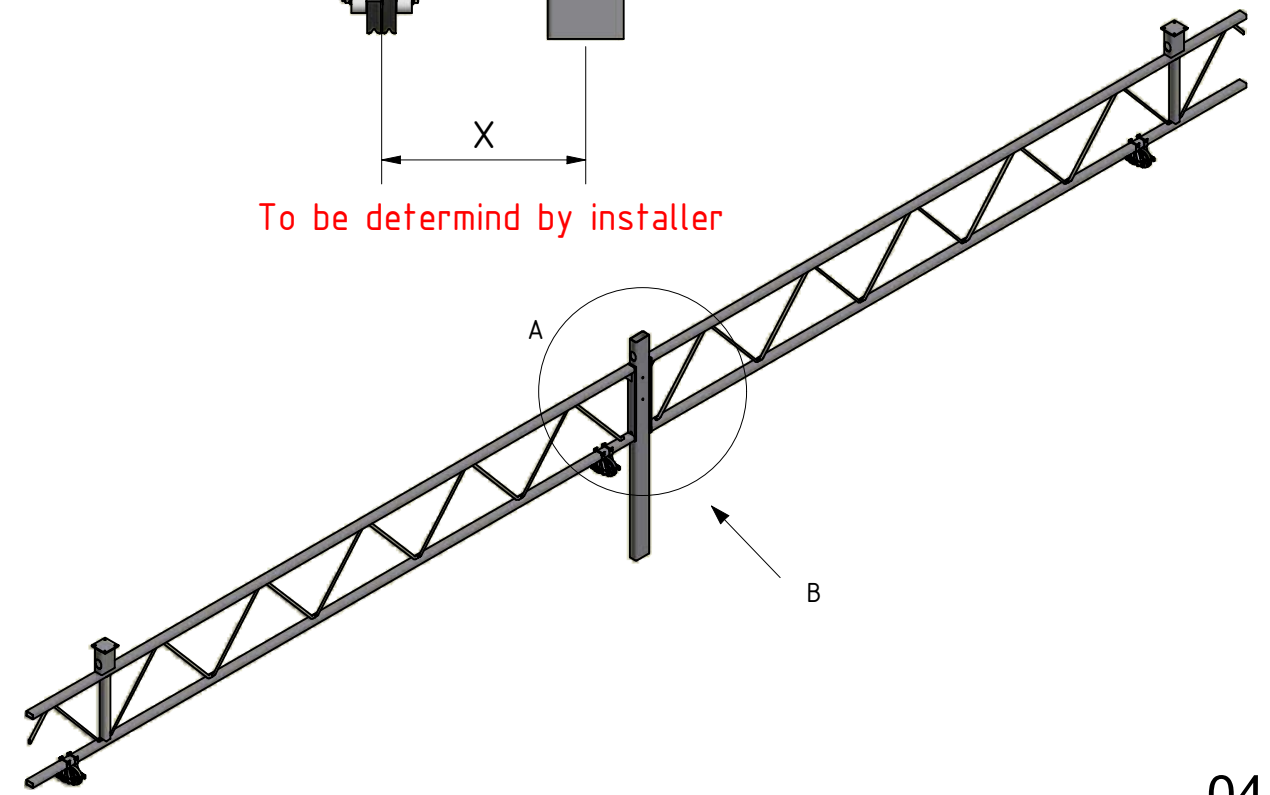
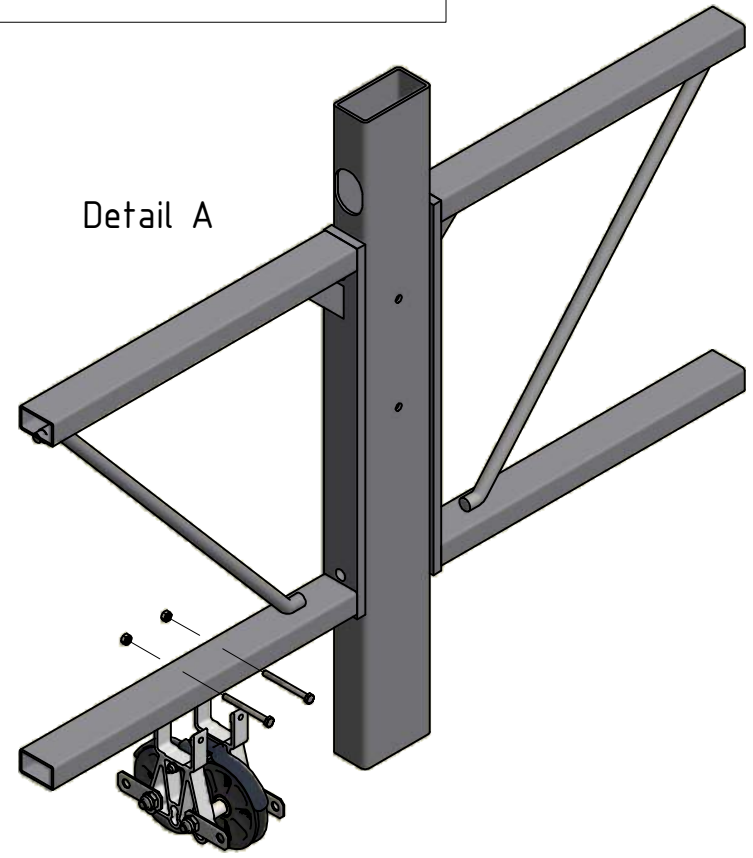
Reversing wheel

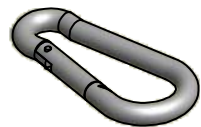
Trellis height
Trellis width
44.740

M6x.. (L=trellis width + 15 mm) 55.30.-
M6 55.30.00

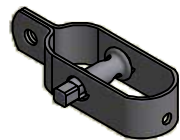


To be determined by installer





48.80.40



48.80.12



48.80.30



48.80.37



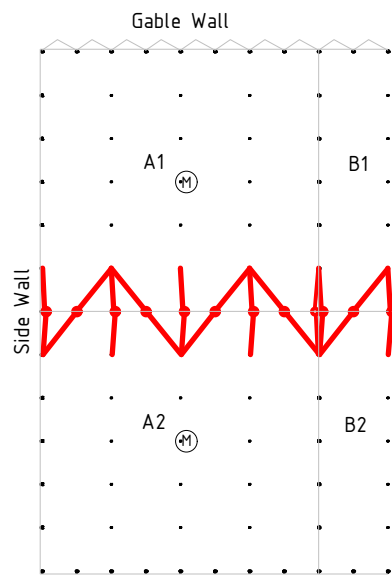
48.10.17

Bracing reversing wheels

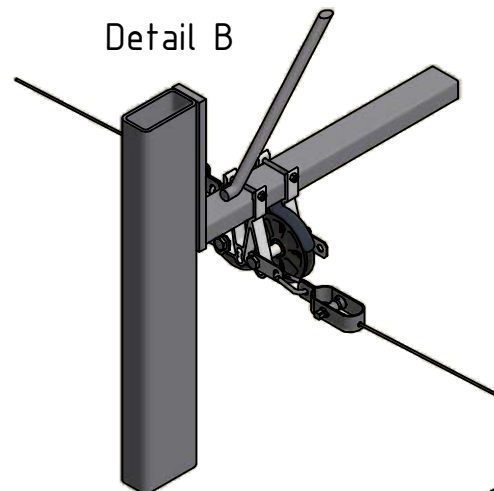
VAN DER VALK



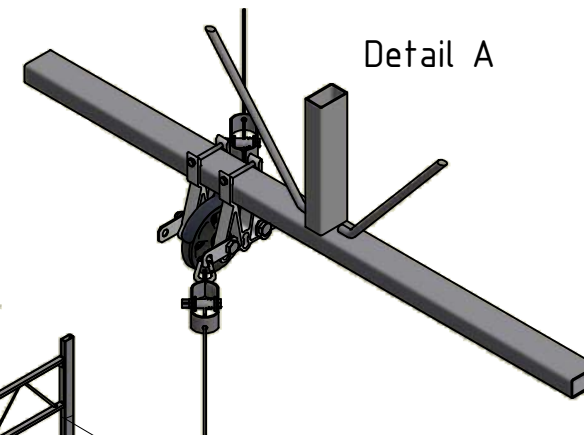
HORTI SYSTEMS



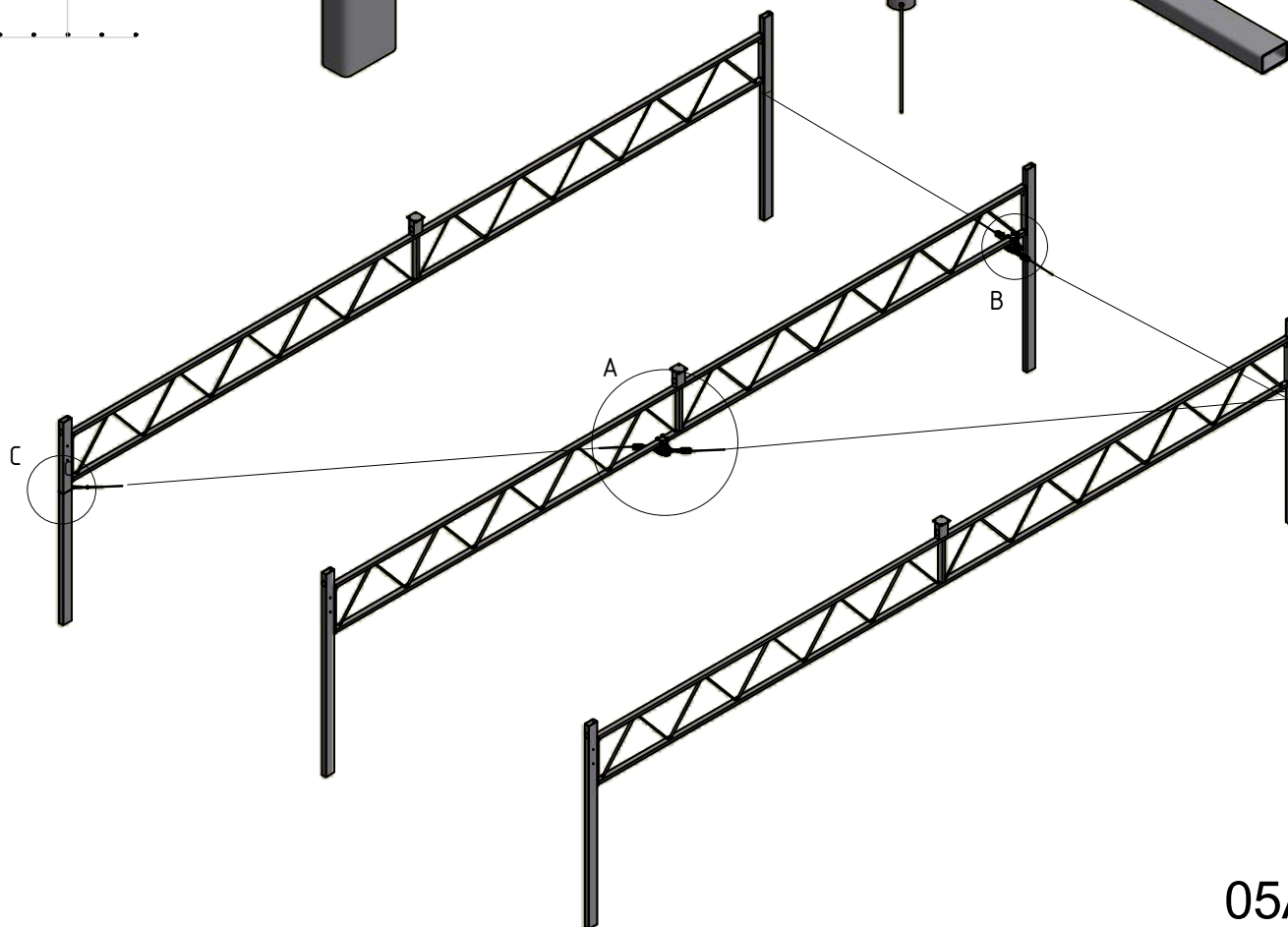
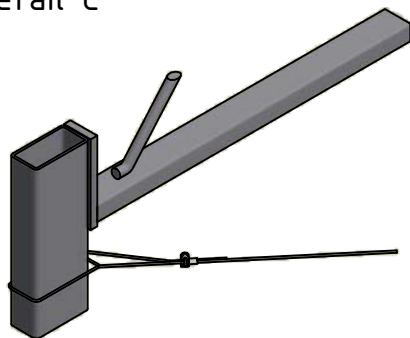
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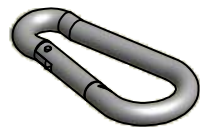


Detail A

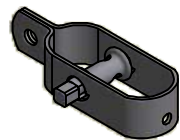


Detail C





48.80.40



48.80.12



48.80.30



48.80.37



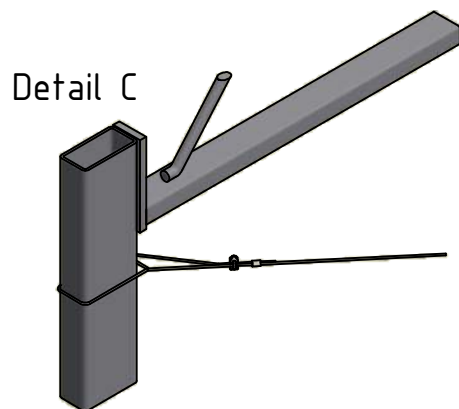
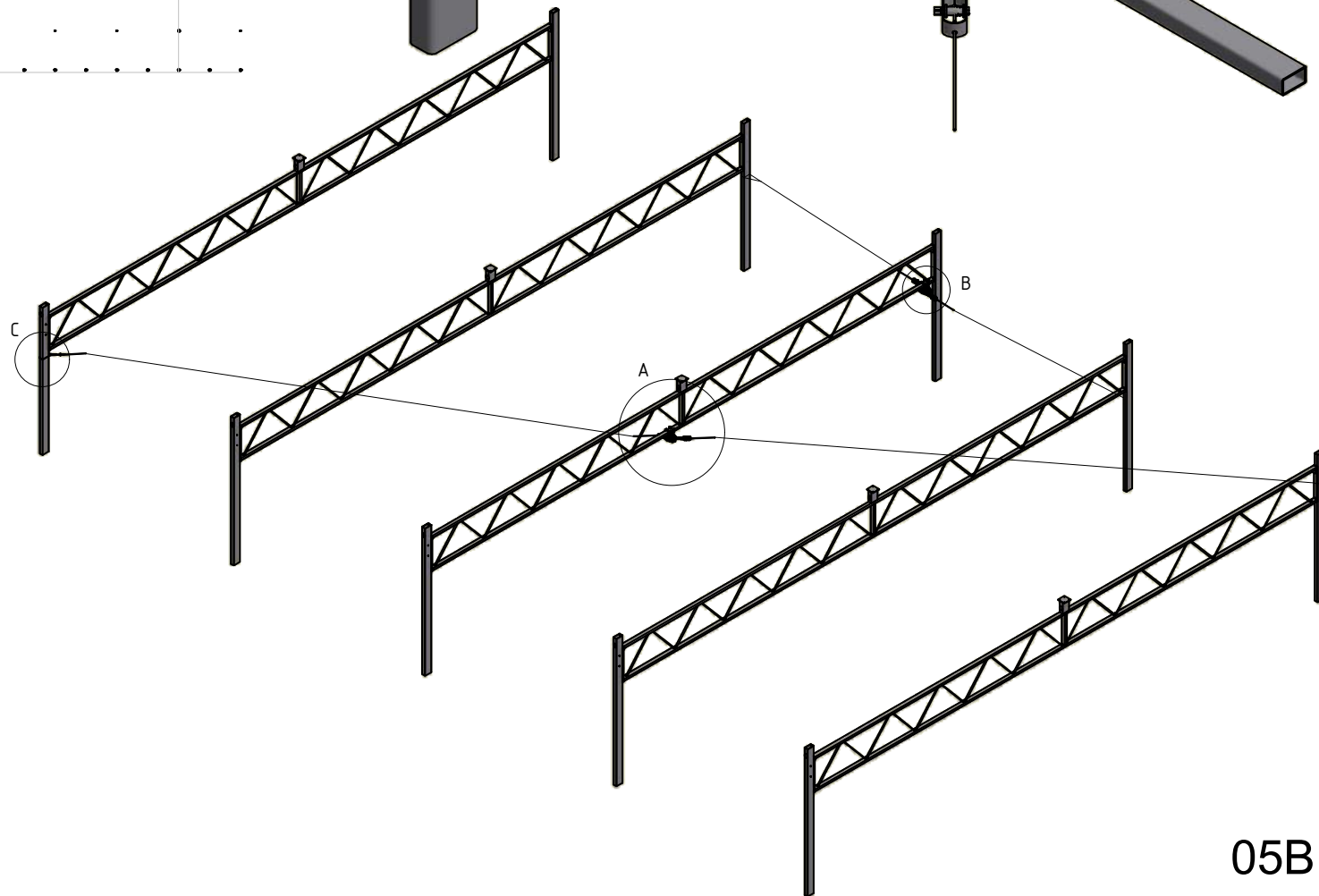
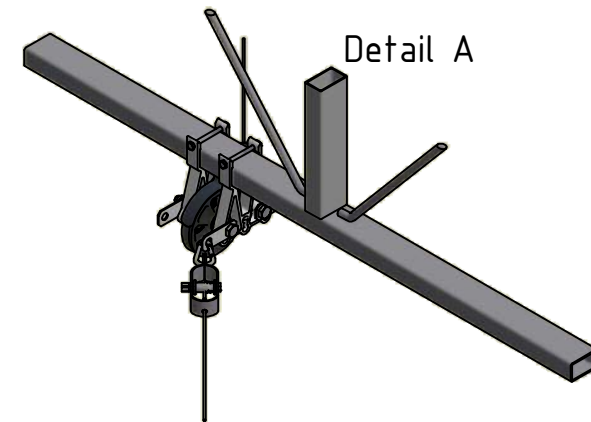
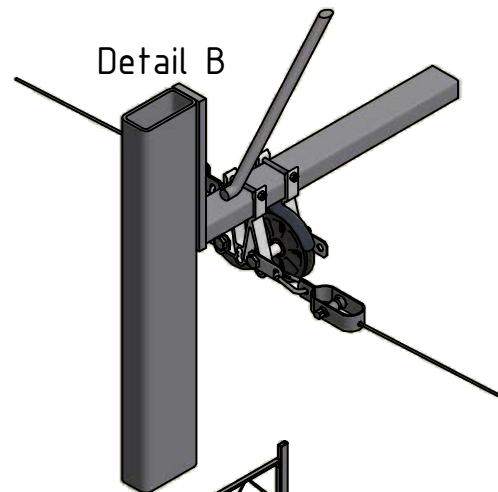
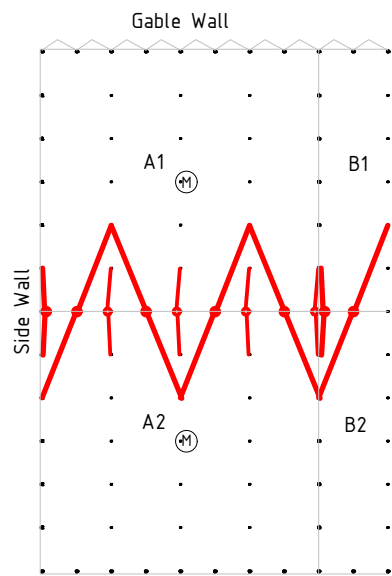
48.10.17

Bracing reversing wheels

VAN DER VALK

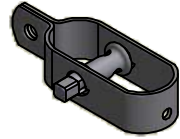


HORTI SYSTEMS





48.80.40



48.80.12



48.80.30



48.80.37



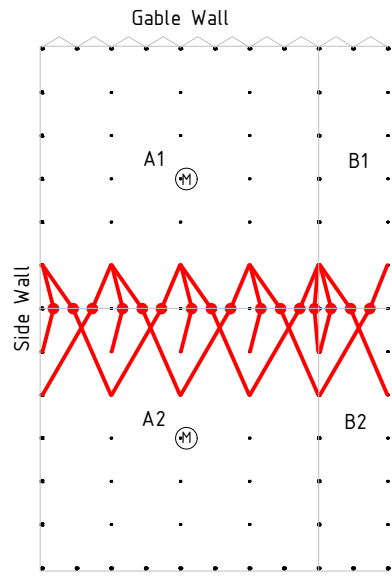
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Bracing reversing wheels

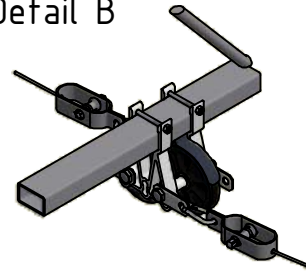
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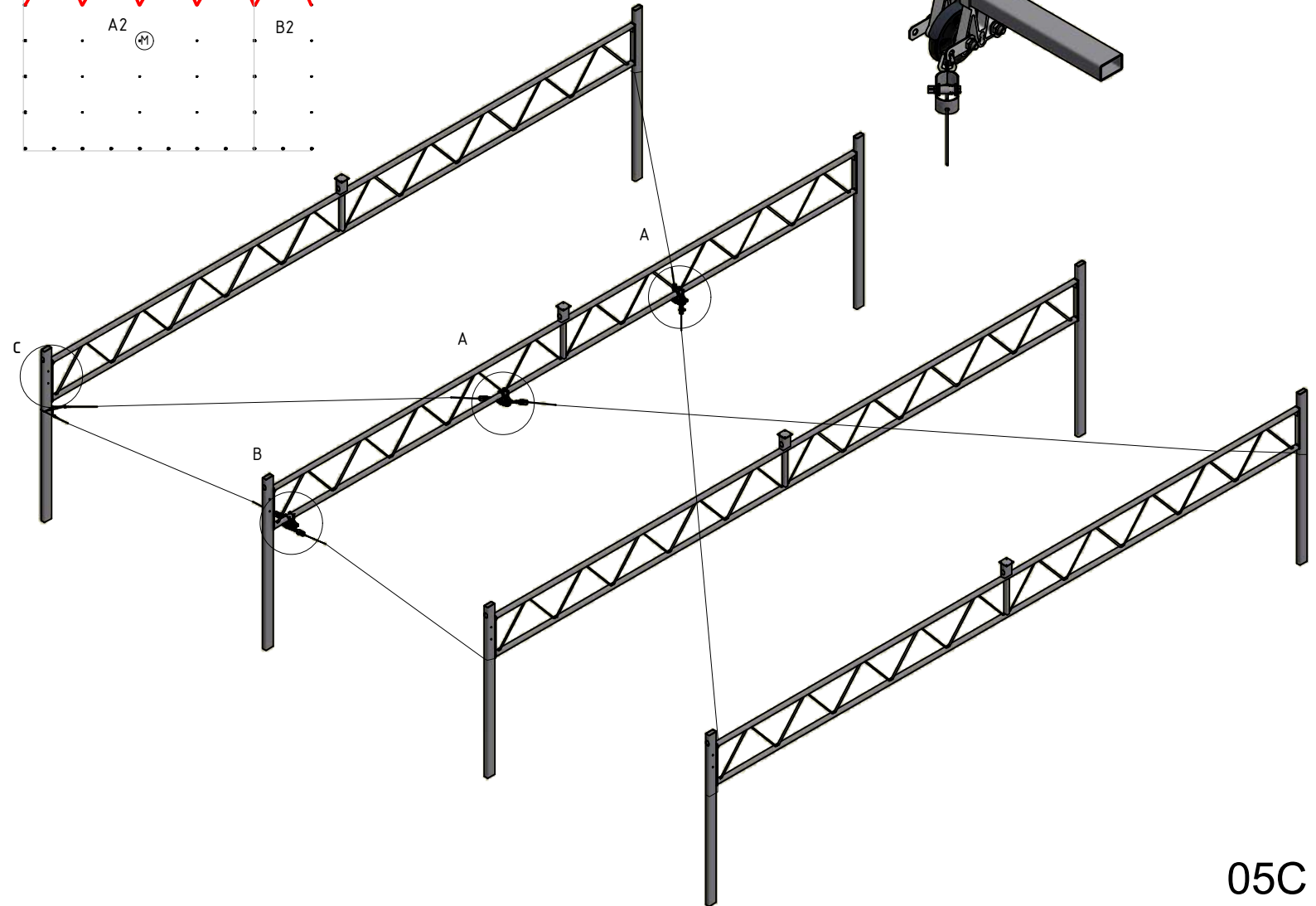
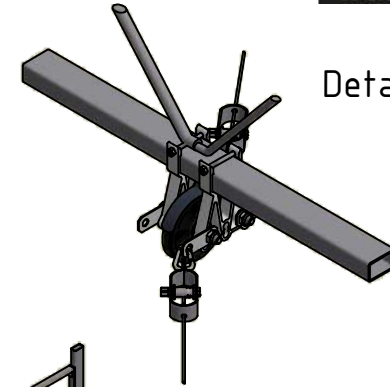
HORTI SYSTEMS



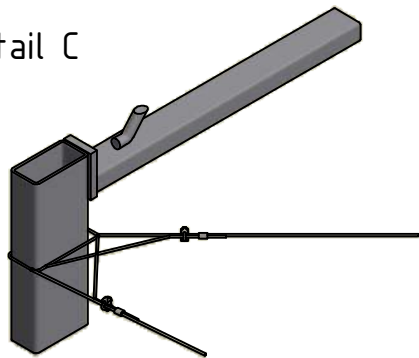
Detail B



Detail A

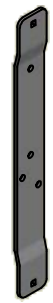


Detail C



Bracing reversing wheels - Side Wall

VAN DER VALK



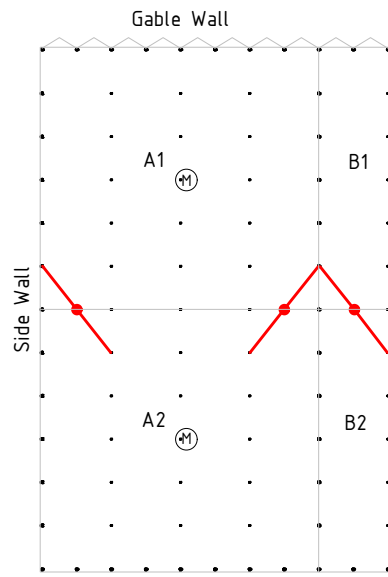
44.82.10.--- (L [mm])



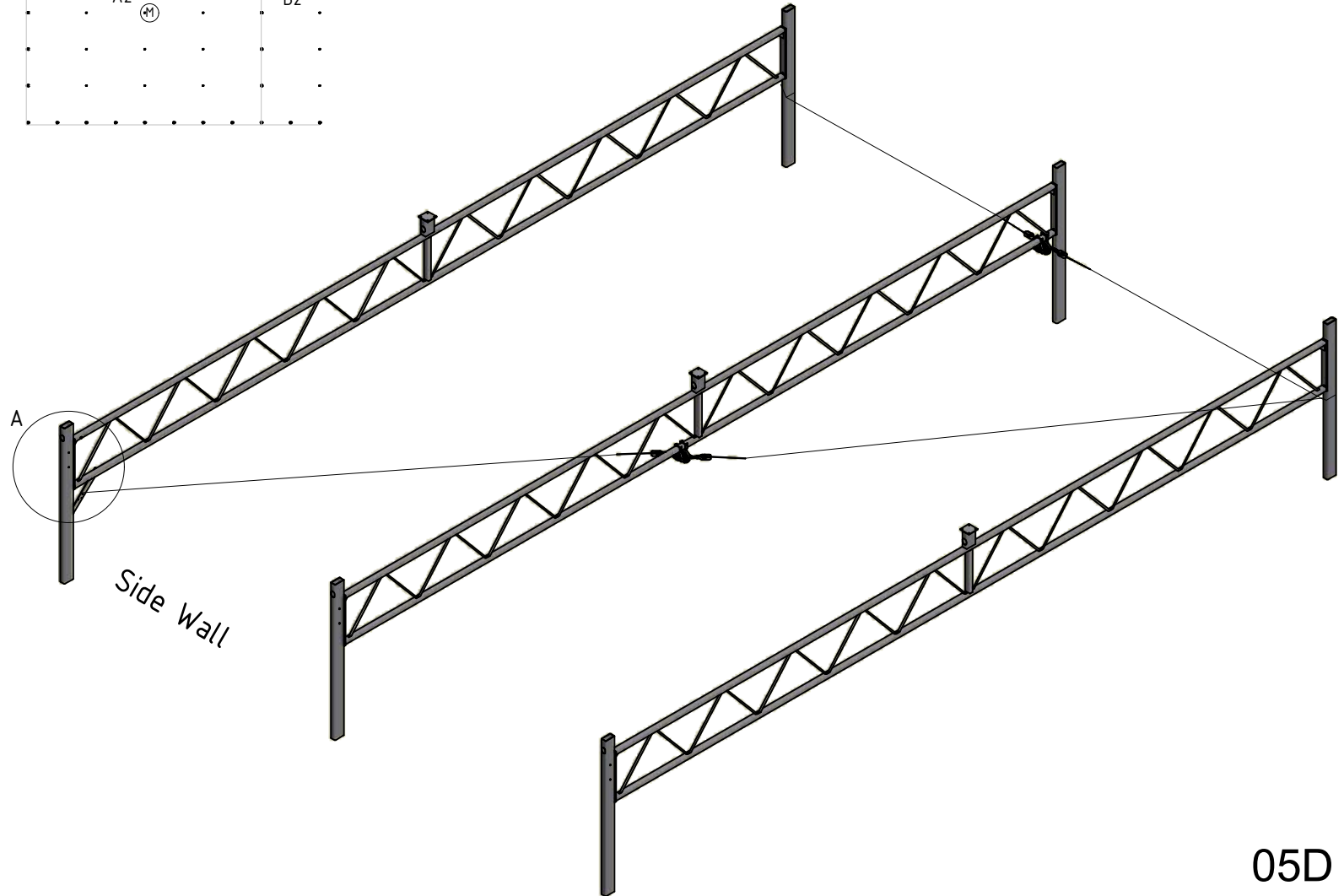
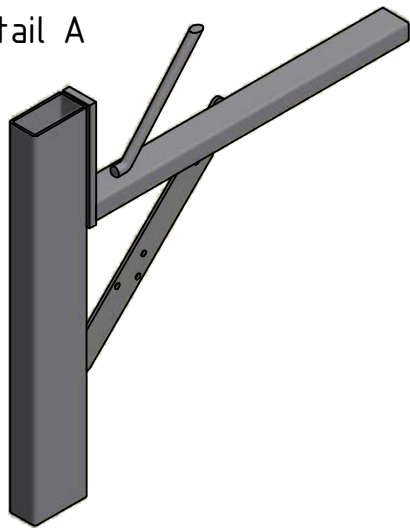
53.57.20



48.10.17

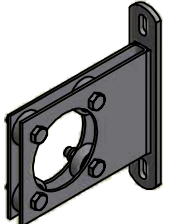





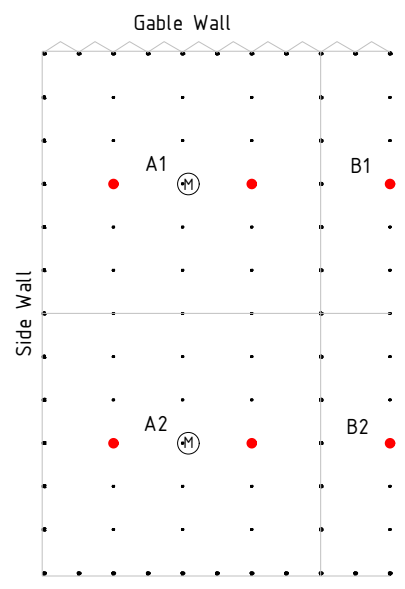
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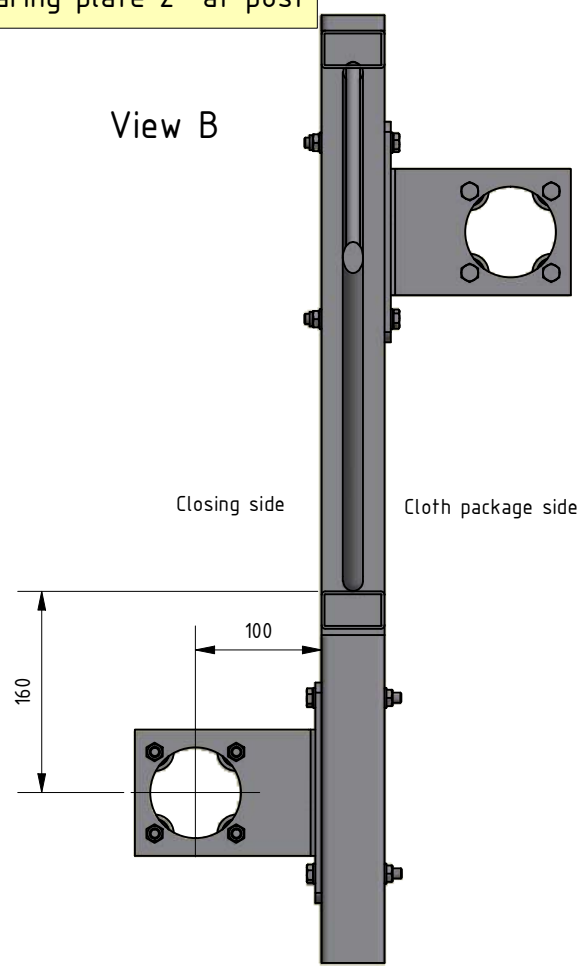


Bearing plate 2" at post

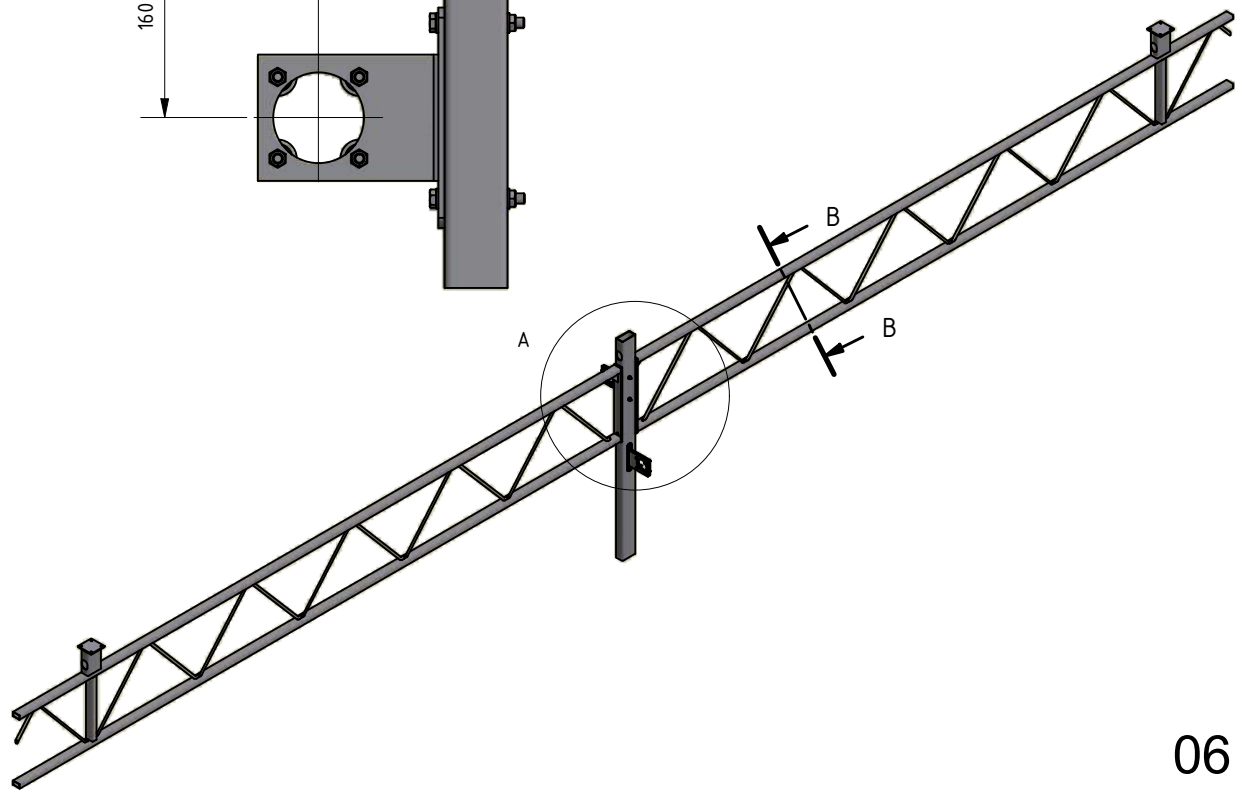
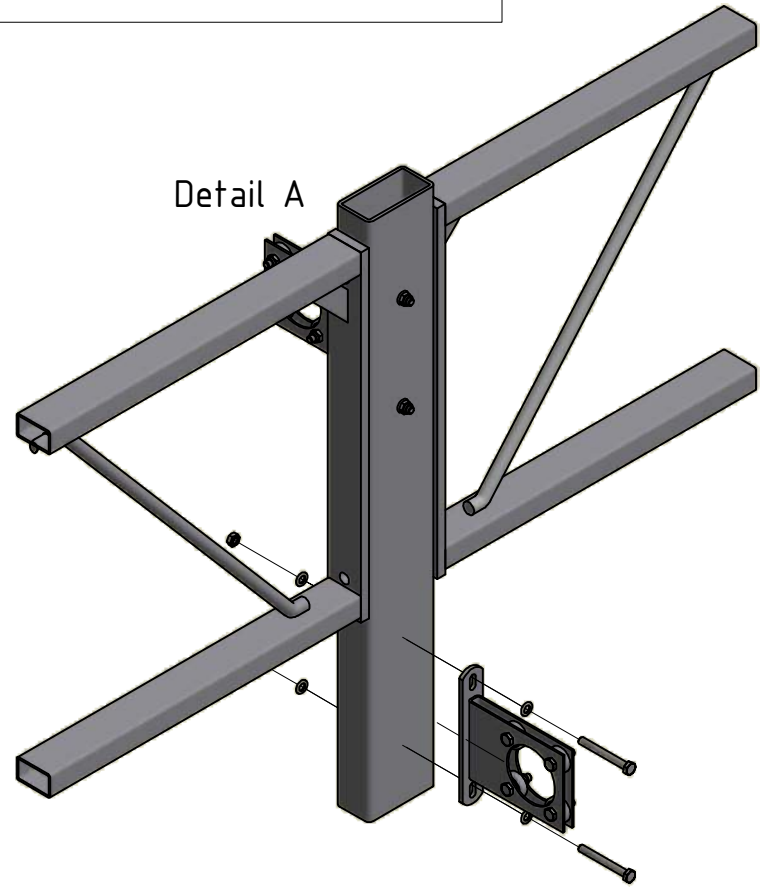
	44.82.15
M8x-- 	(kolom width + 20 mm) 55.40.--
M8 	55.40.00
M8 	53.55.17



View B

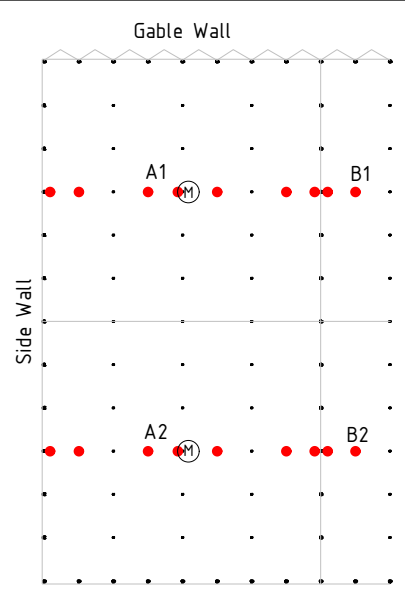


Detail A

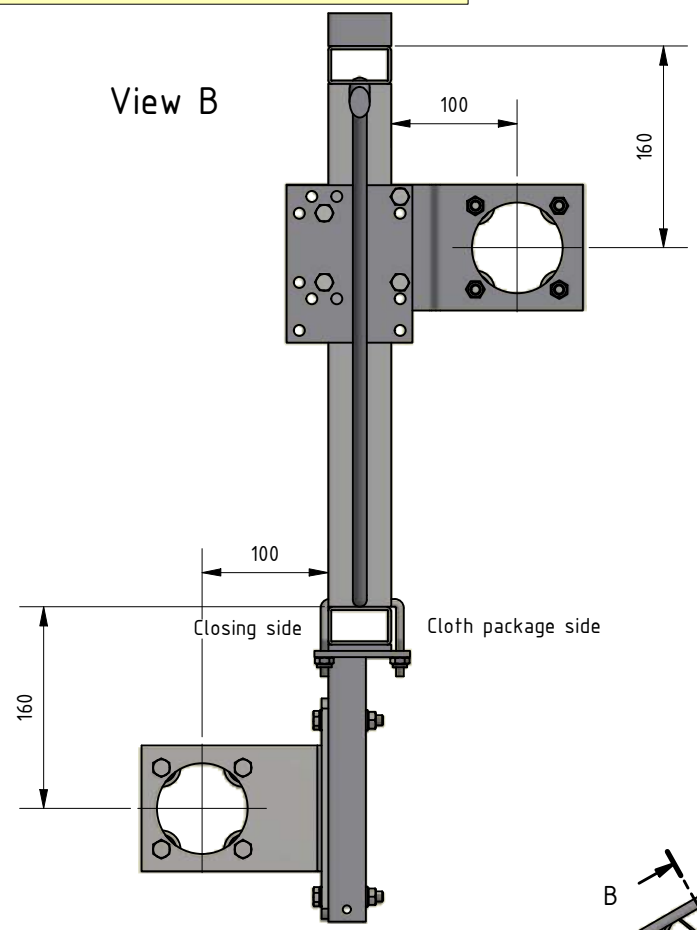




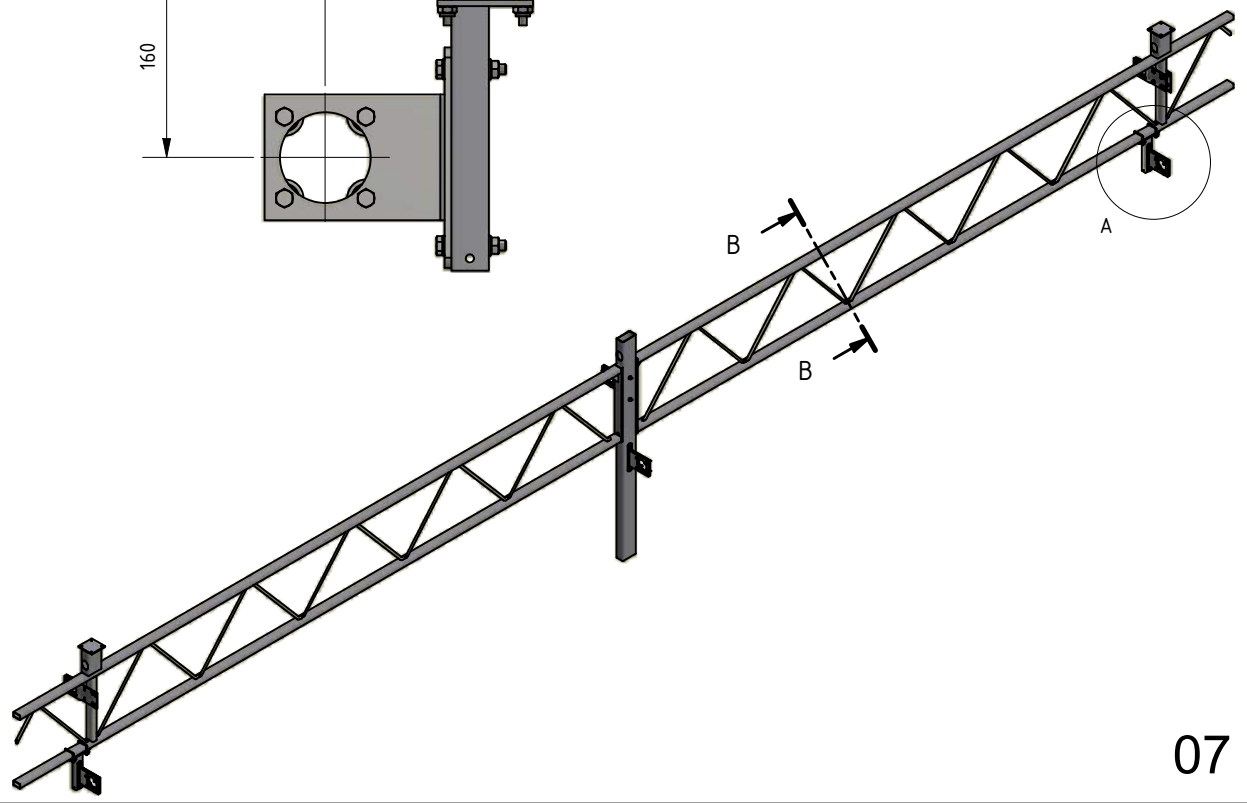
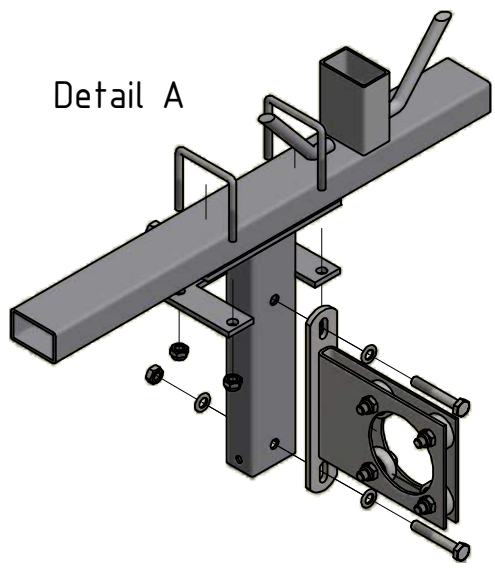
	44.82.20
	44.82.21
	44.82.15
M8x50	55.40.50
M8	55.40.00
M8	53.55.17



Bearing plate 2" at Floating gutter

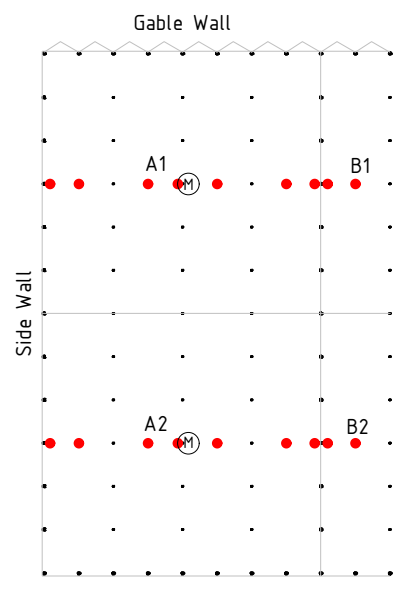


Detail A



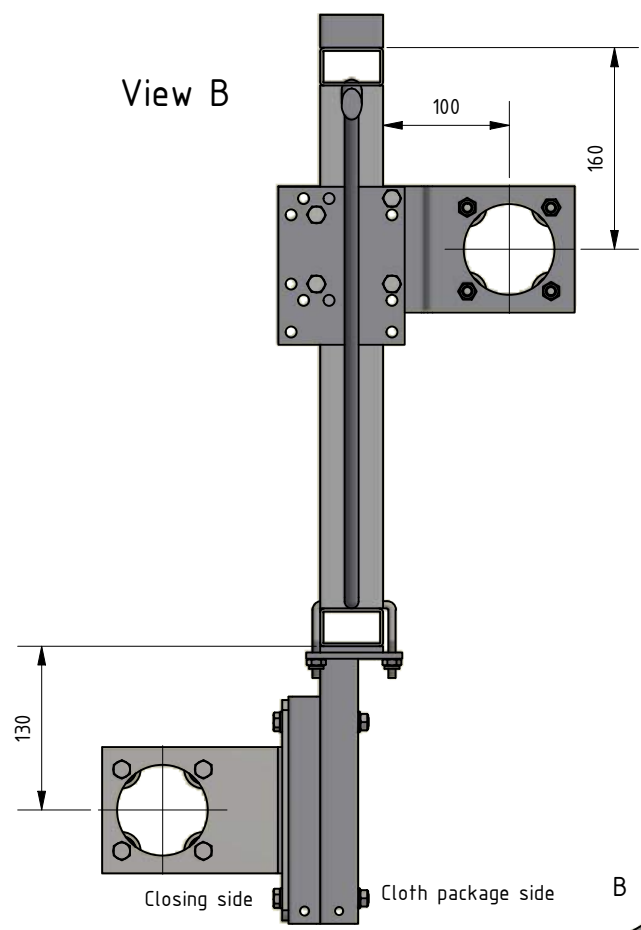


	44.82.20
	44.82.19
	44.82.21 50mm
	44.82.22 60mm
	44.82.15
M8x70	55.40.70
M8	55.40.00
M8	53.55.17

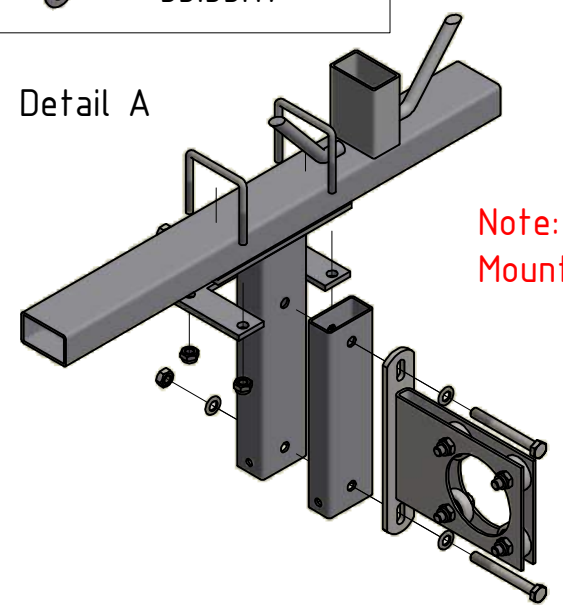


Bearing plate 2" at floating gutter

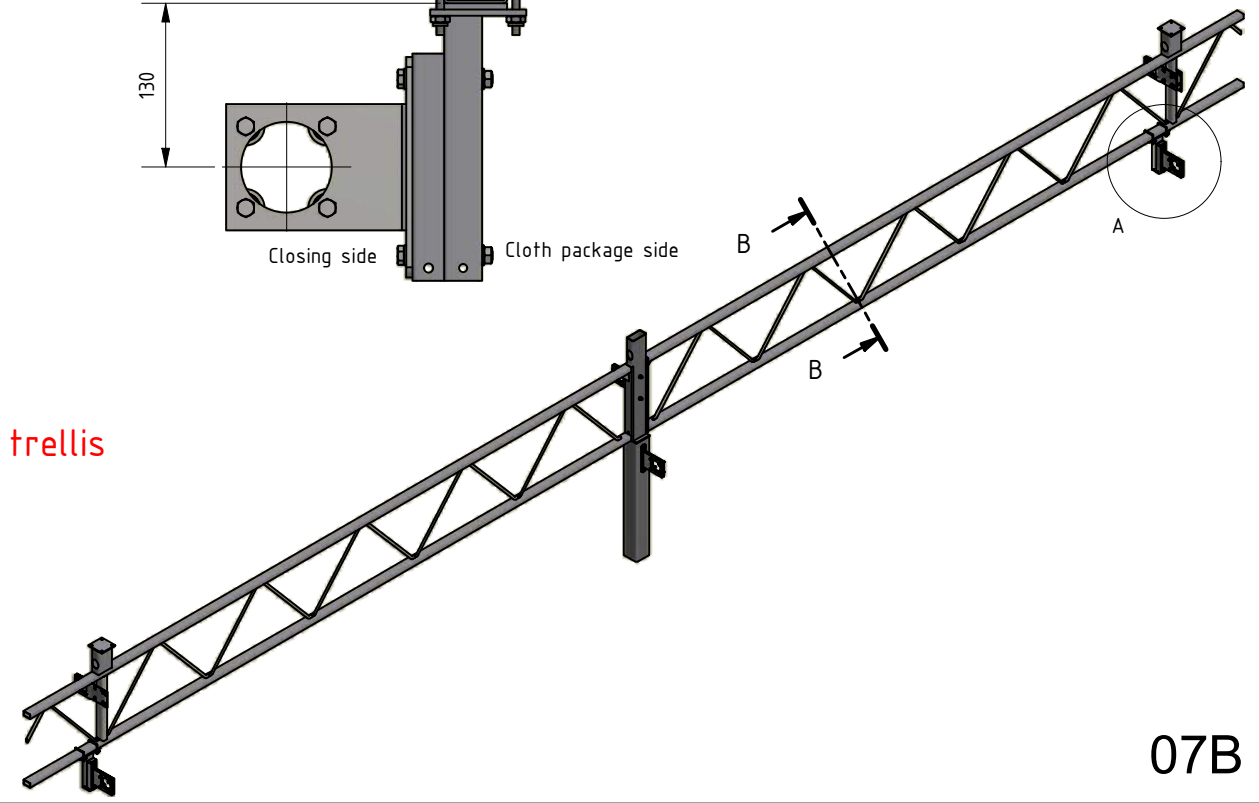
View B



Detail A

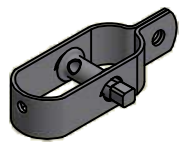







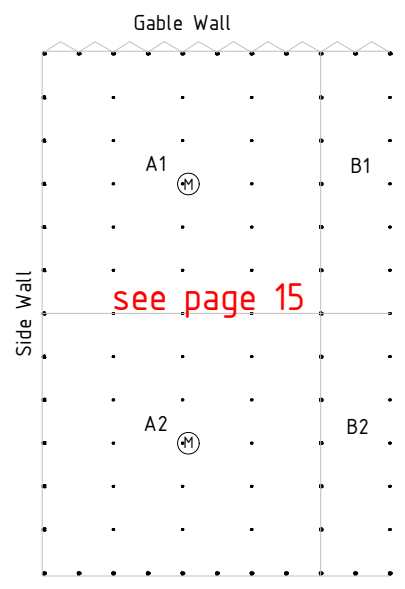
Note:
Mount even with trellis



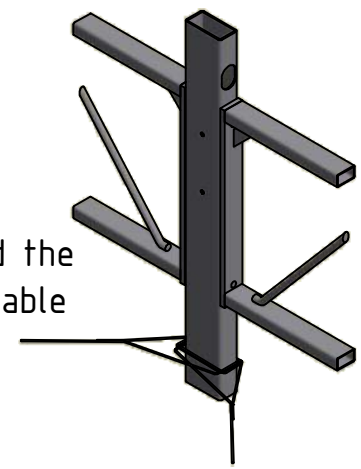


bracing of bearing plates

-  48.80.12
- M6x65  55.30.65
- M6  55.30.00
-  48.80.30
-  48.80.37
-  48.10.17

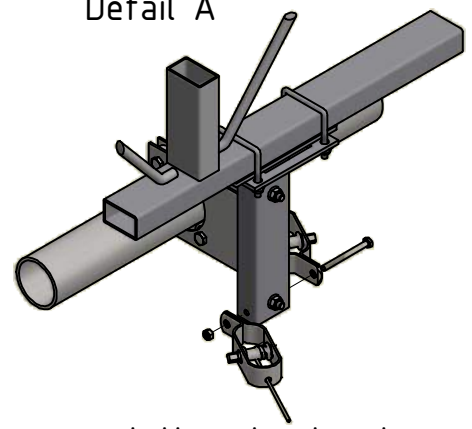


Detail B

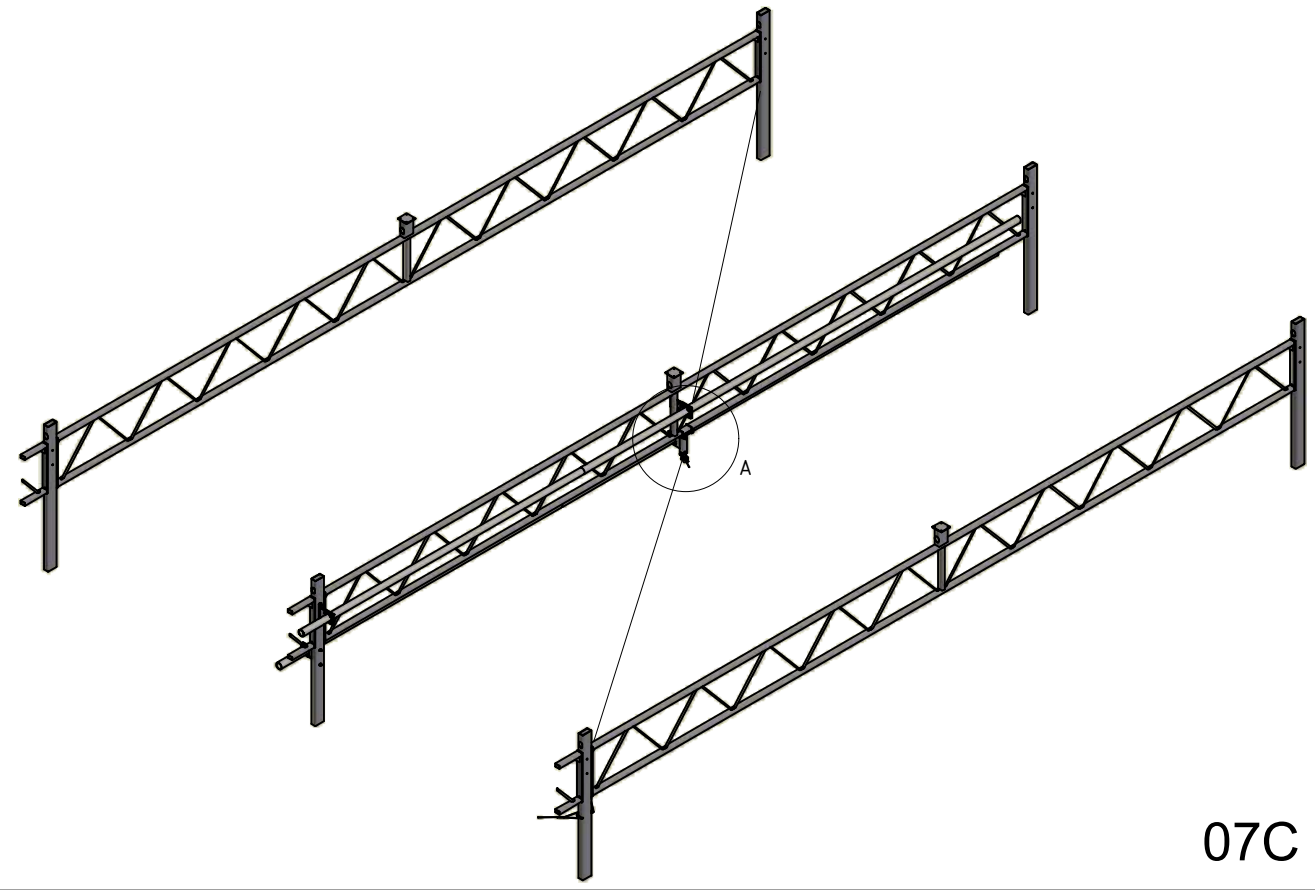


Fix the end around the column using the cable clamps.

Detail A

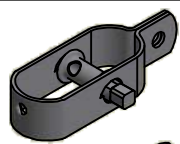


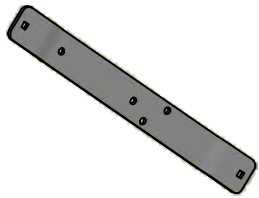





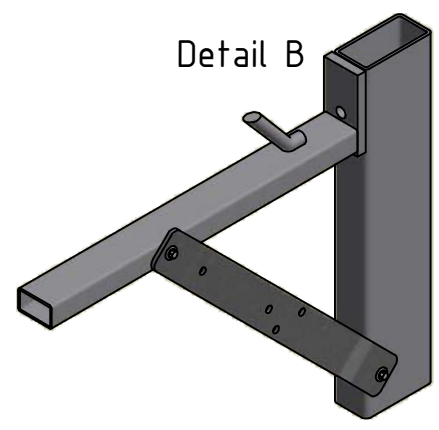
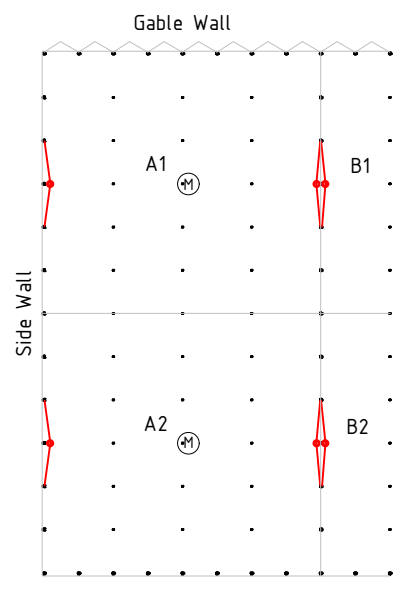
mount the wire tensioners to the brackets of the bearing plates



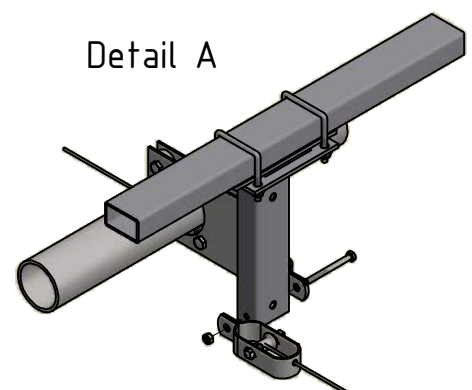


bracing of bearing plates

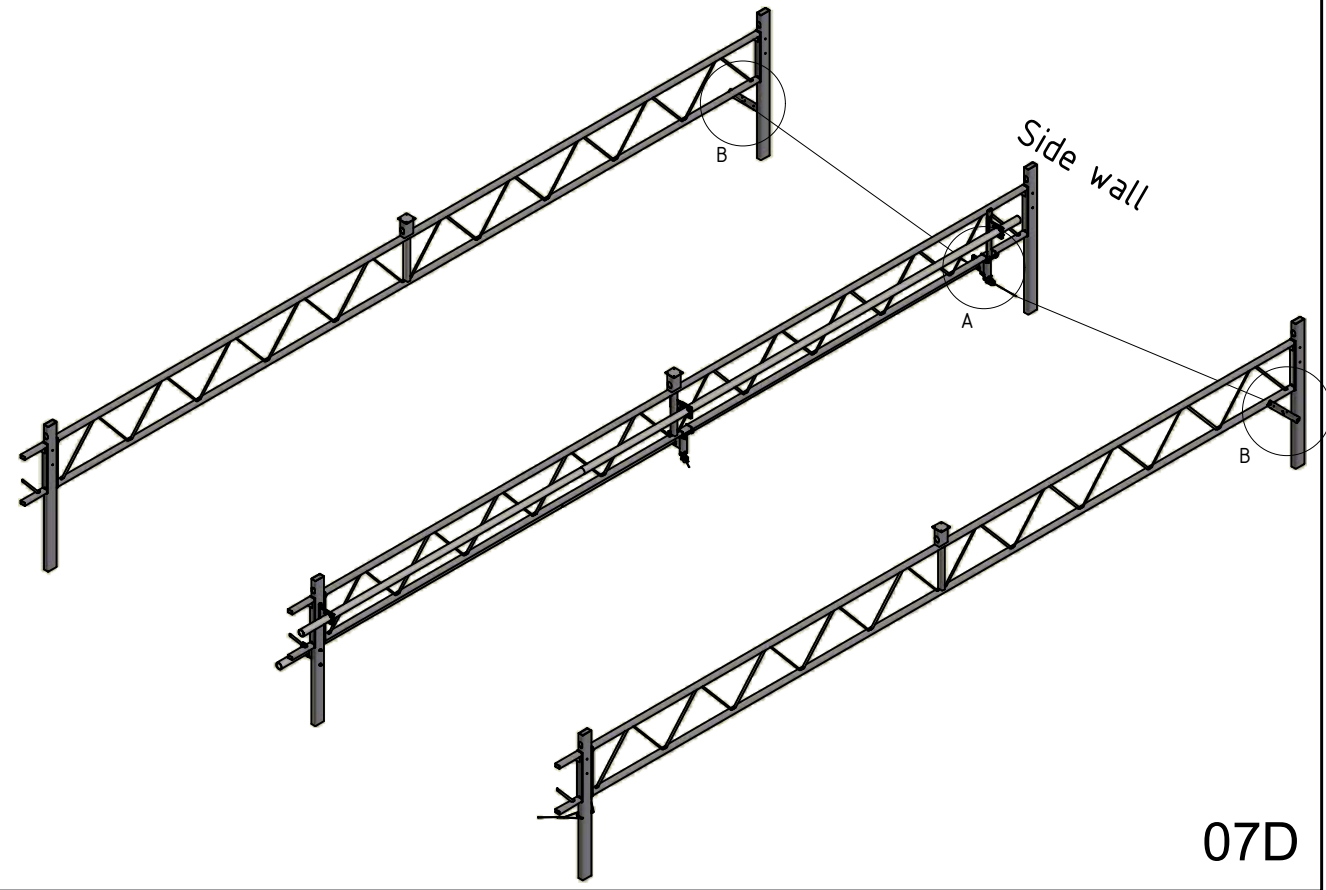
-  48.80.12
- M6x65  55.30.65
- M6  55.30.00
-  44.82.10. (L [mm])
-  53.57.20
-  53.55.17
-  48.10.17

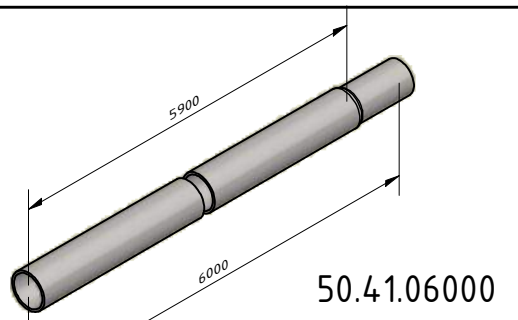


Mount the strip to the column and trellis using the supertex. Fix the cable to the strip using a knot.



mount the wire tensioners to the brackets of the bearing plates

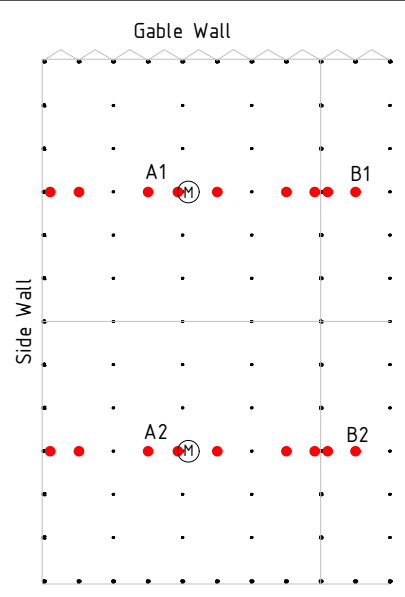




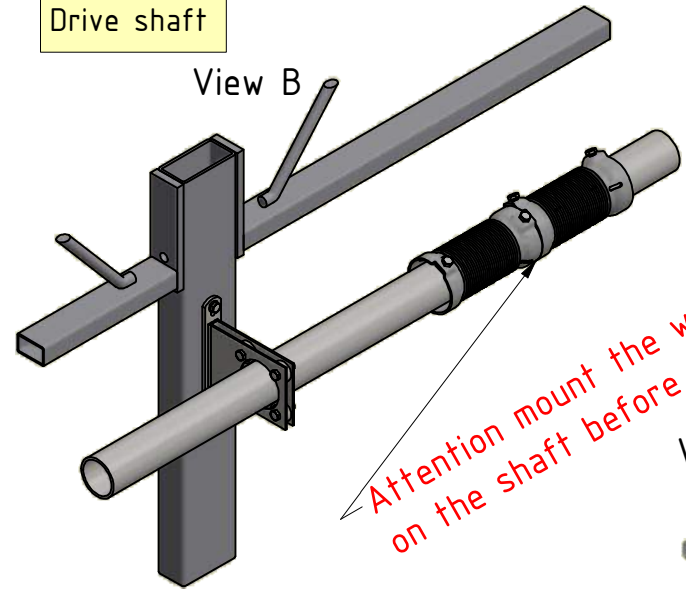
M8  53.25.20

M8x16  55.40.16

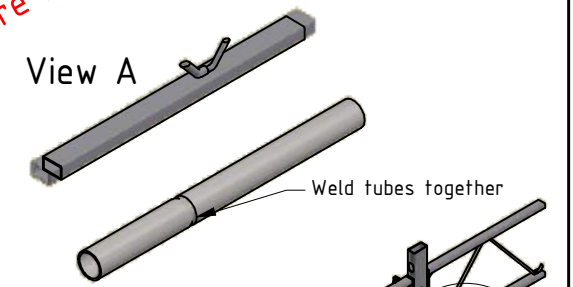
 44.16.60



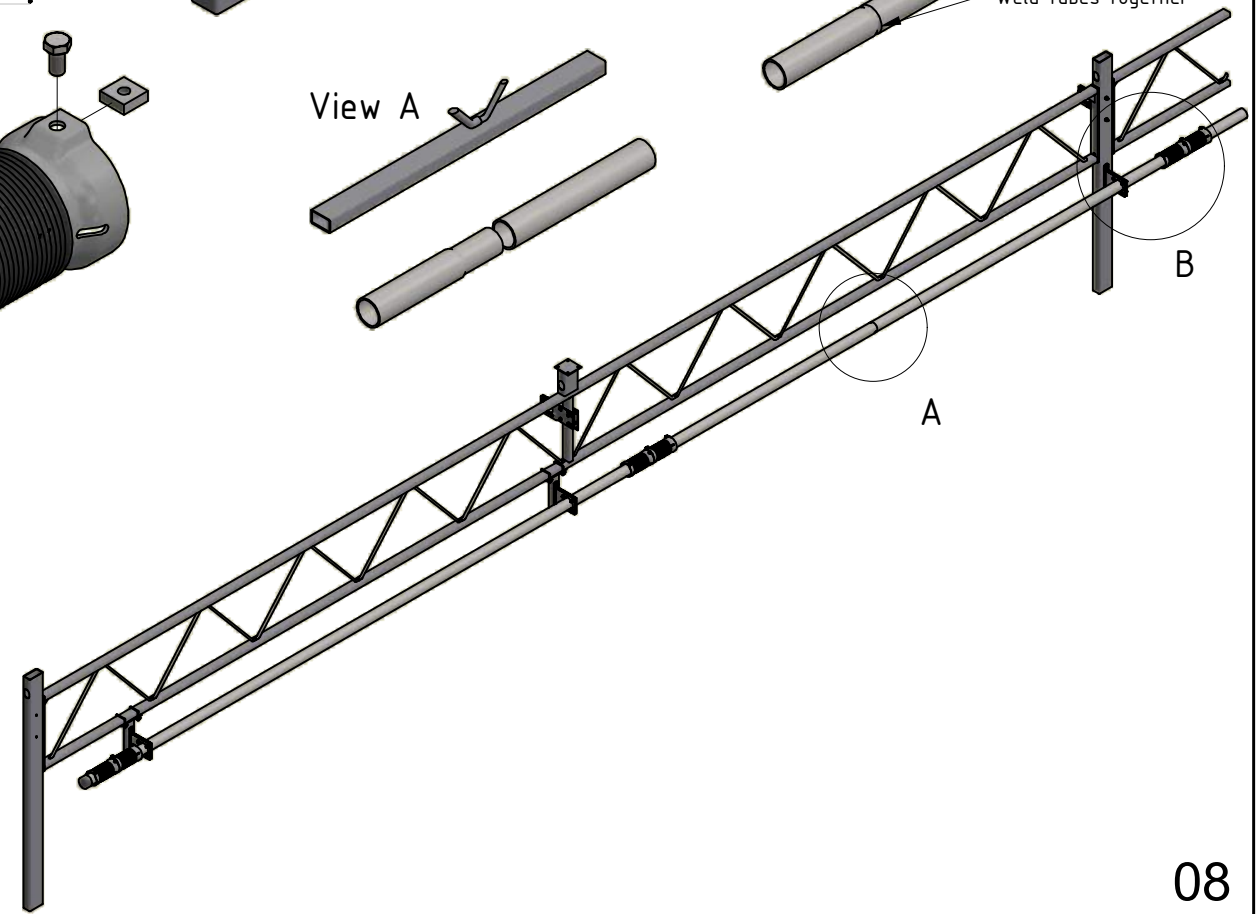
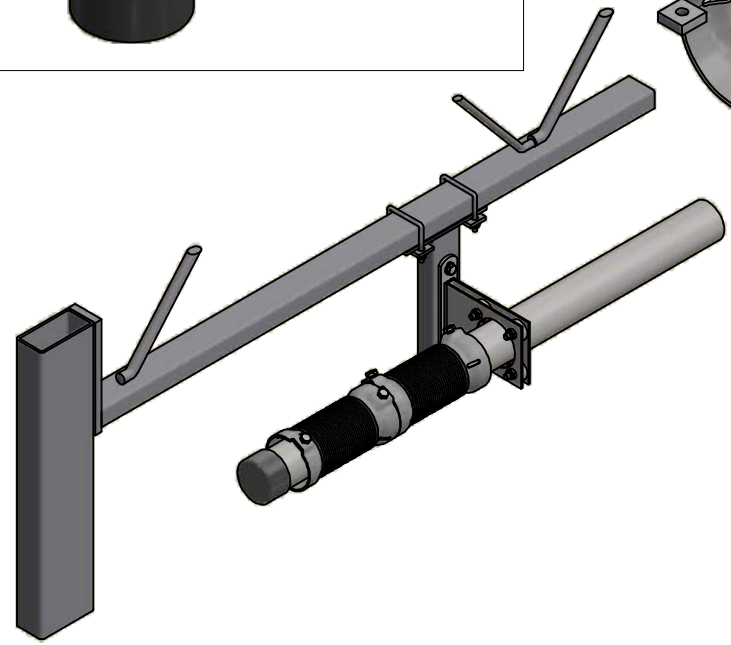
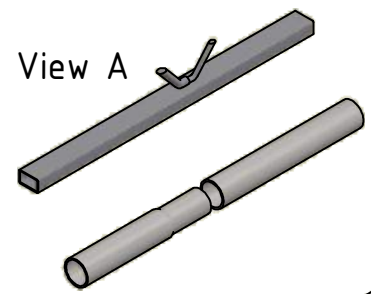
Drive shaft

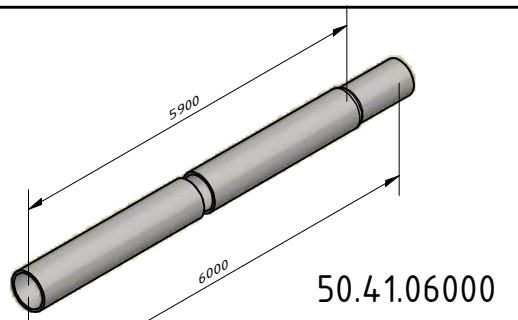


Attention mount the wire tensioner on the shaft before installation

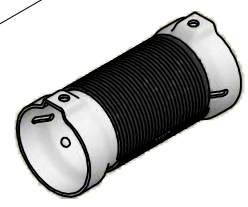


Weld tubes together





50.41.06000



44.80.34-W

M8



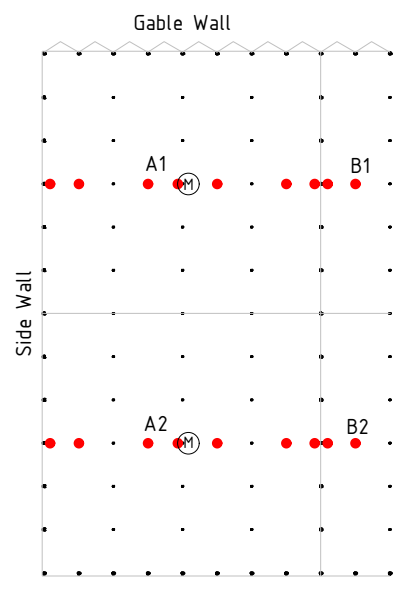
53.25.20

M8x16

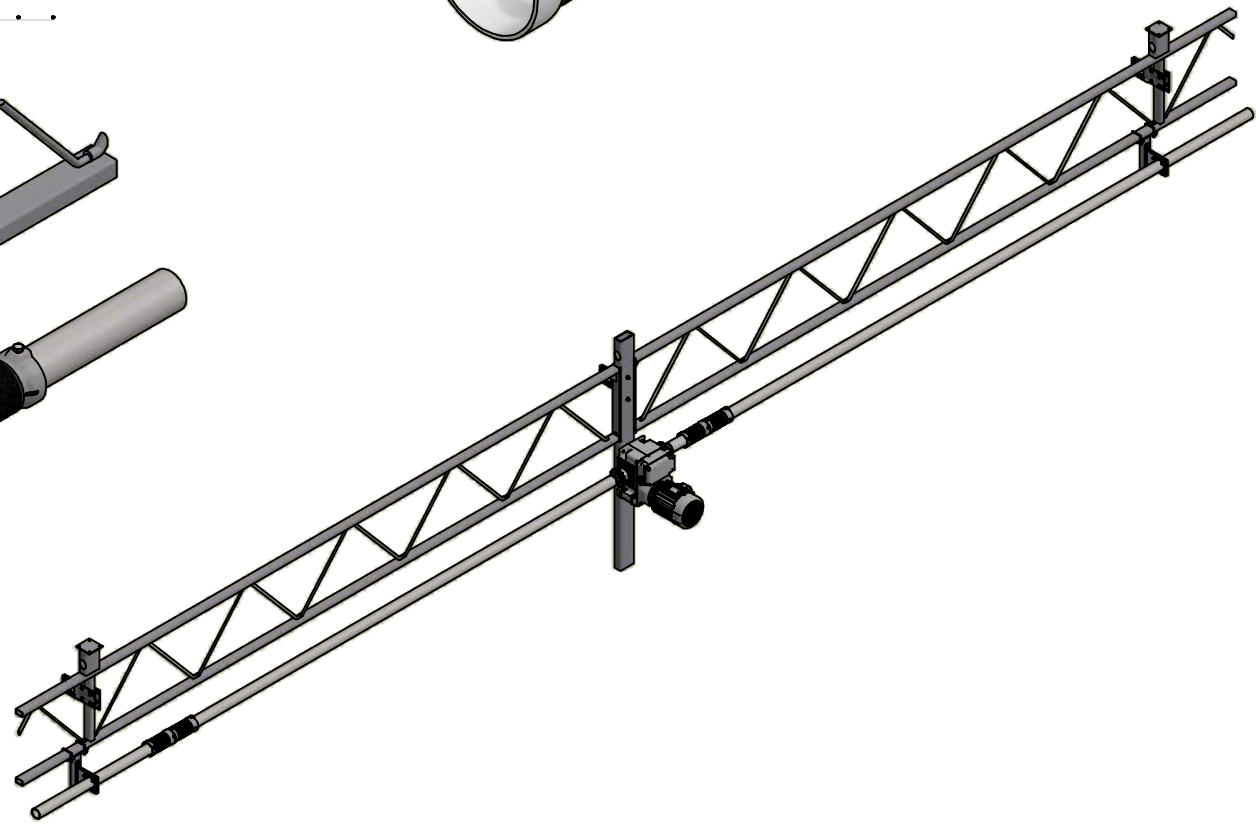
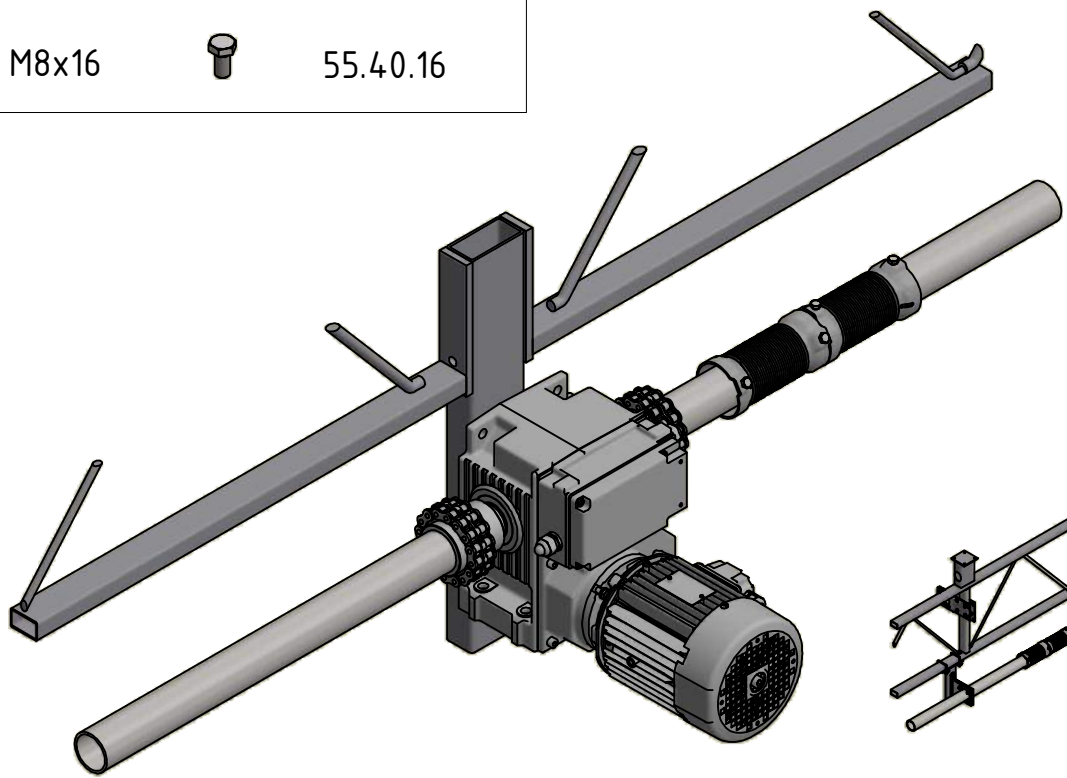


55.40.16

Drive shaft

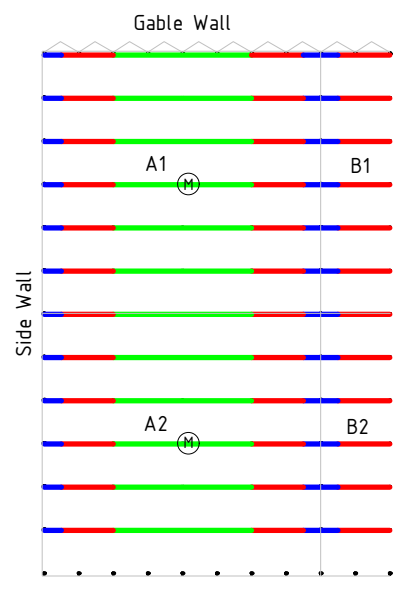
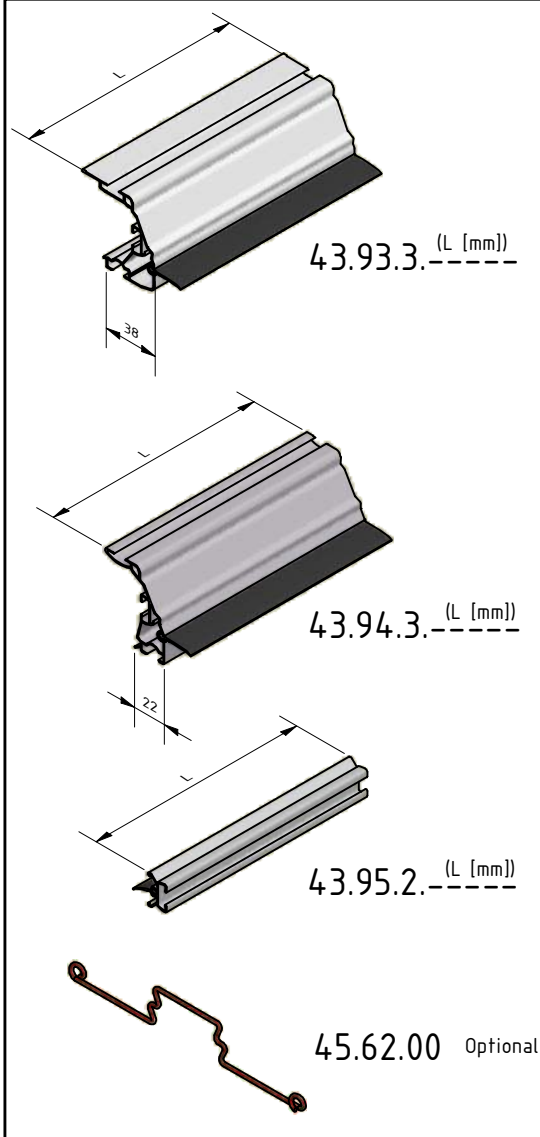


View B



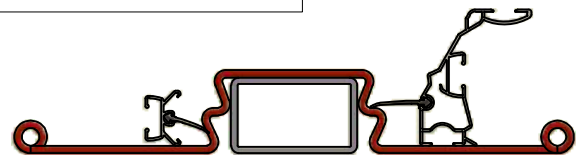
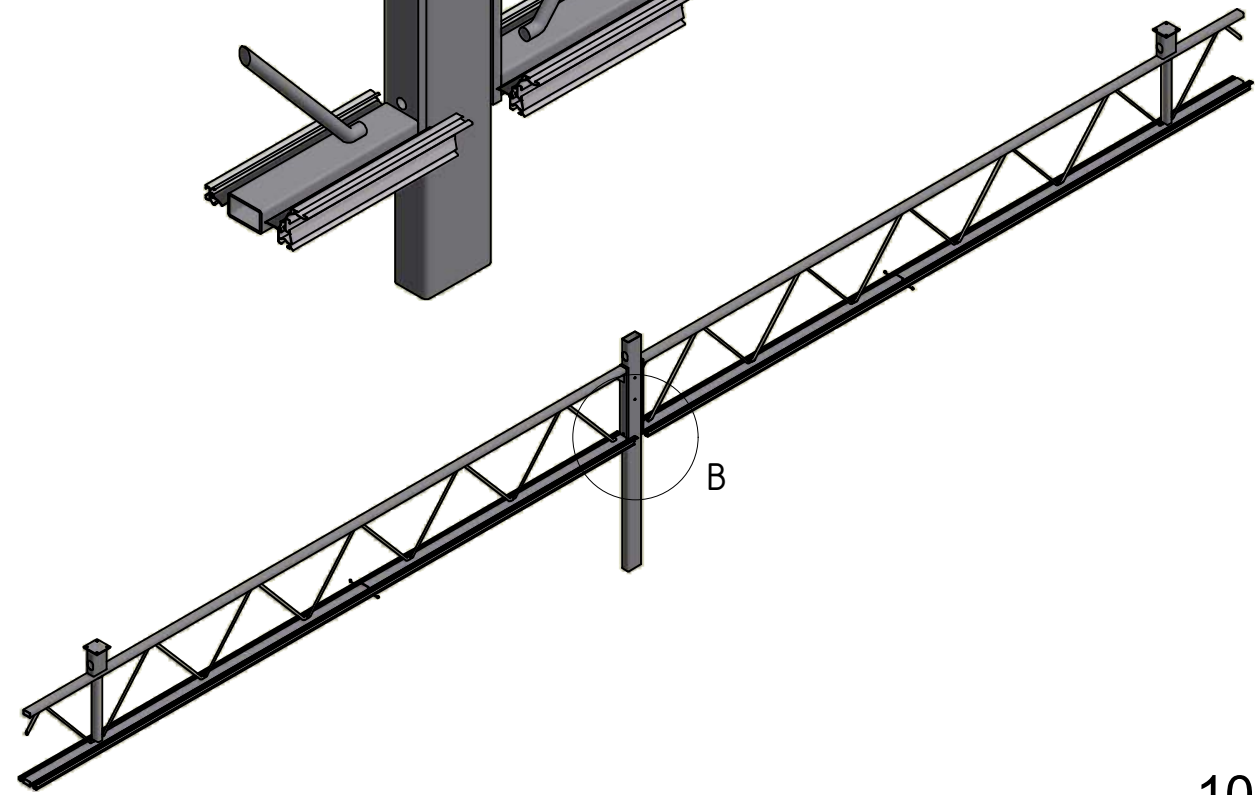
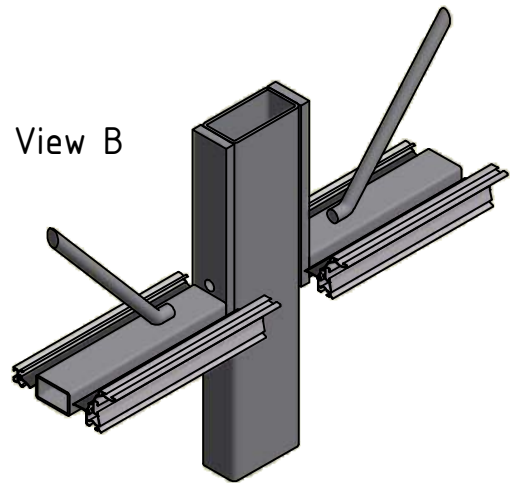


placing screen profiles



At the Side wall and the section separations shorter profiles are used. (see mini map)

- Short profile 1600mm profile
- Long profile 6400mm profile
- Normal profile 8000mm profile



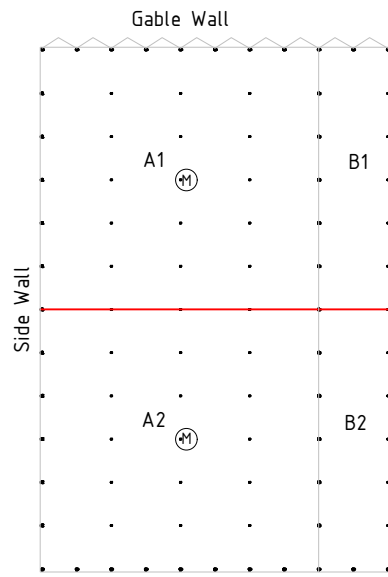
Fix the screen profile temporarily to the trellis using a our screen profile mounting bracket. for example



45.20.^(H+3) [mm]

Mount one measure row of truss clips

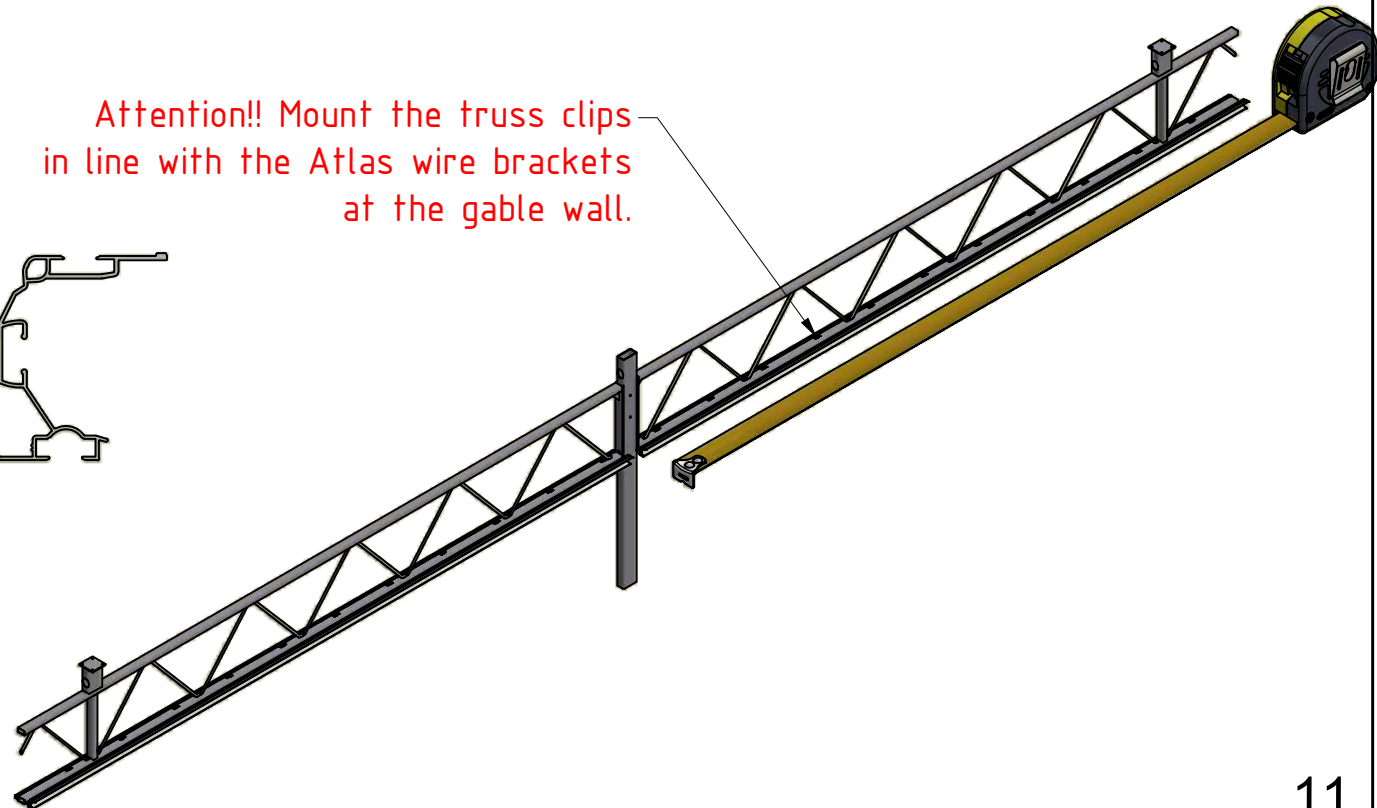
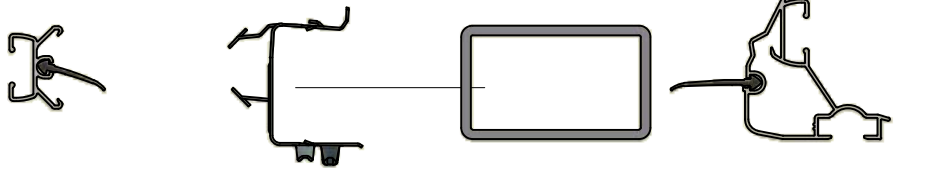
VAN DER VALK



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

cloth package side

closing side





48.20.15



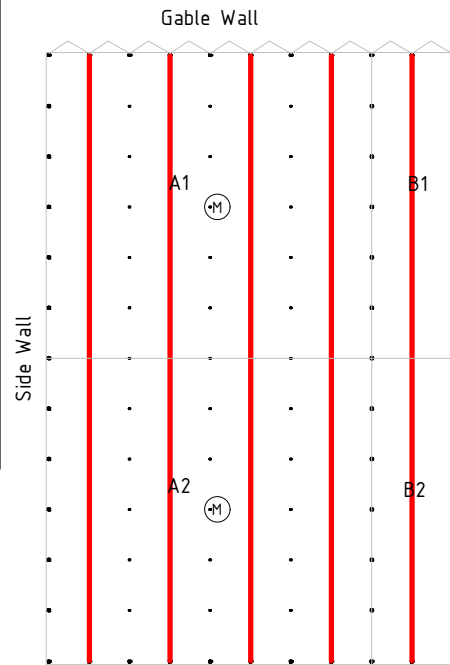
48.80.10



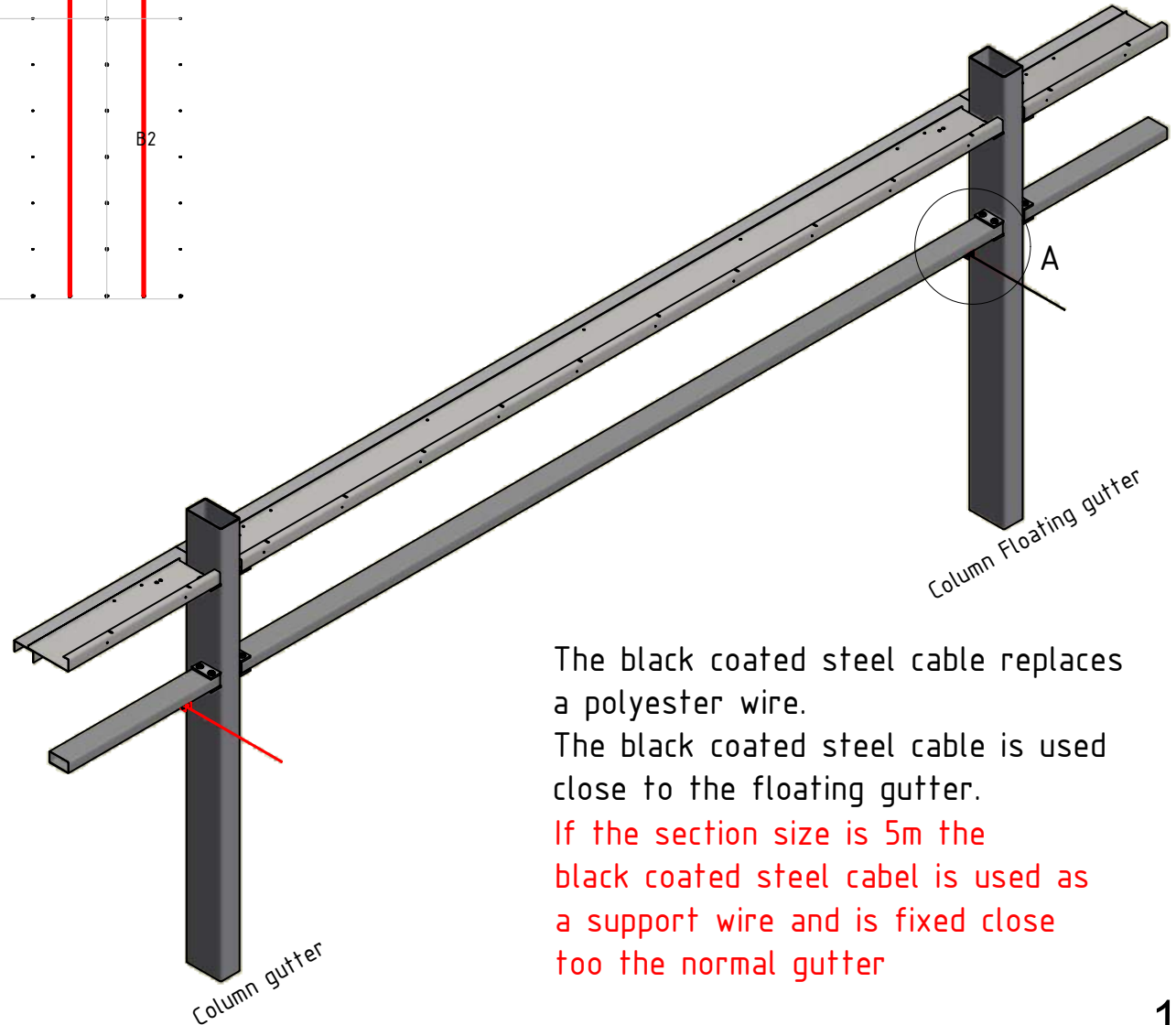
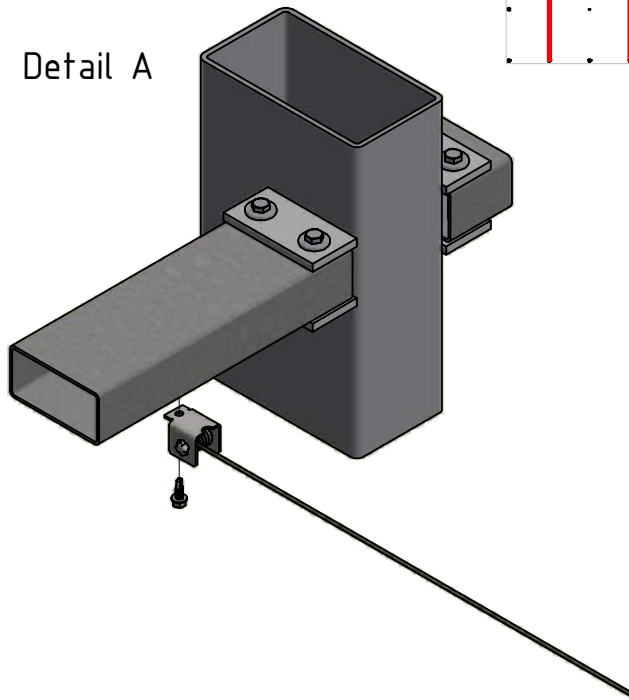
53.57.20

Black coated steel cable

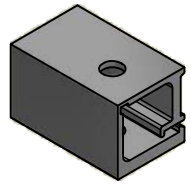
VAN DER VALK



Detail A



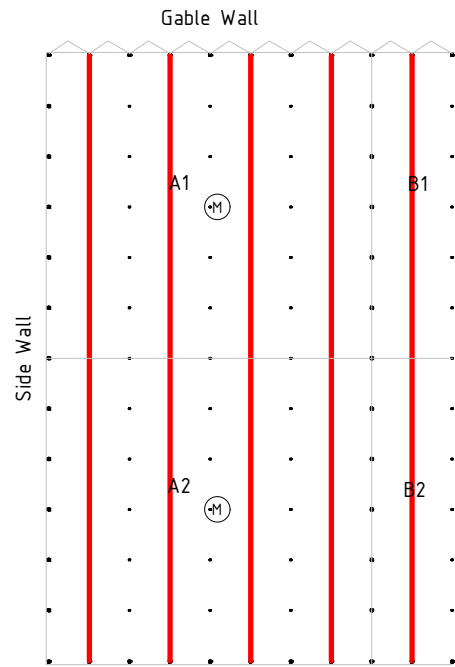
The black coated steel cable replaces a polyester wire.
 The black coated steel cable is used close to the floating gutter.
 If the section size is 5m the black coated steel cable is used as a support wire and is fixed close to the normal gutter



44.30.10

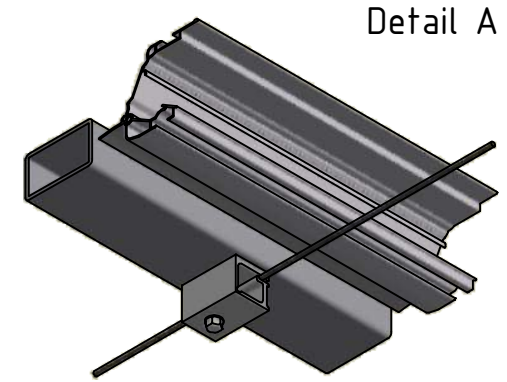
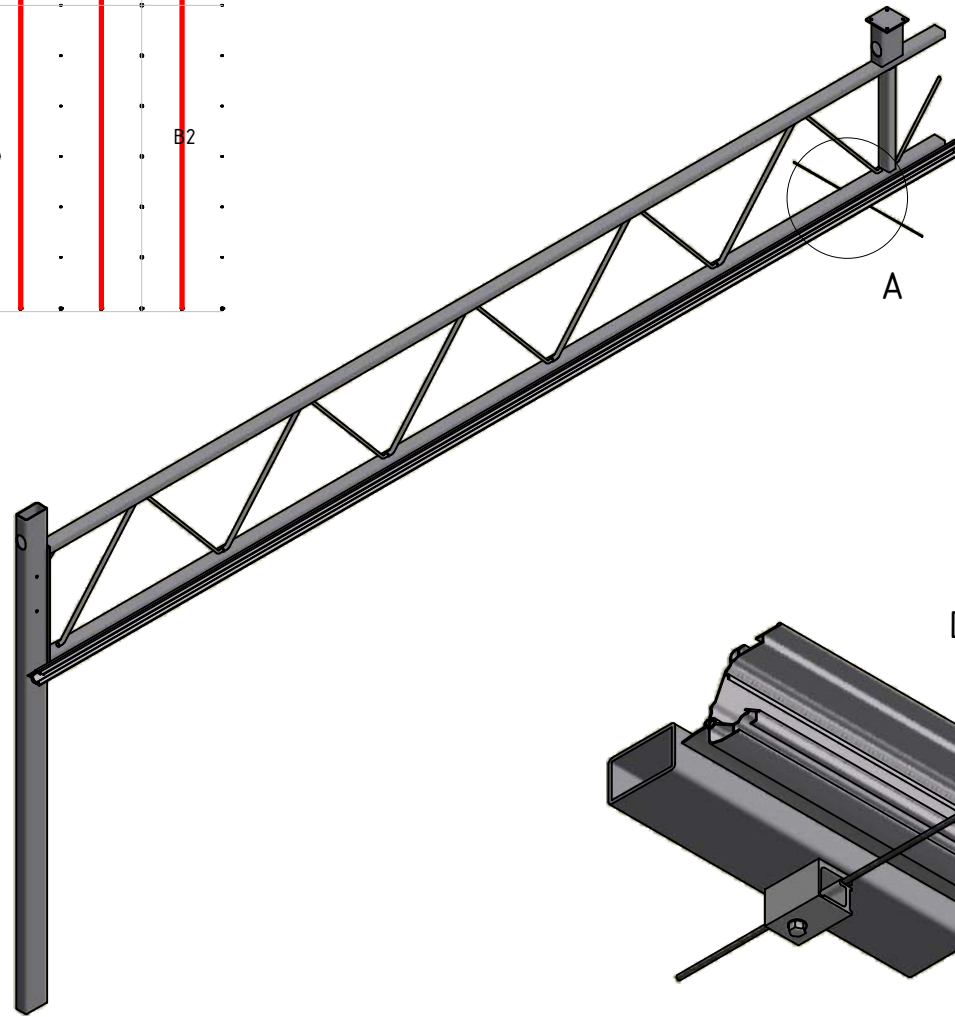


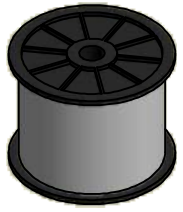
53.57.15



Black coated steel cable

VAN DER VALK

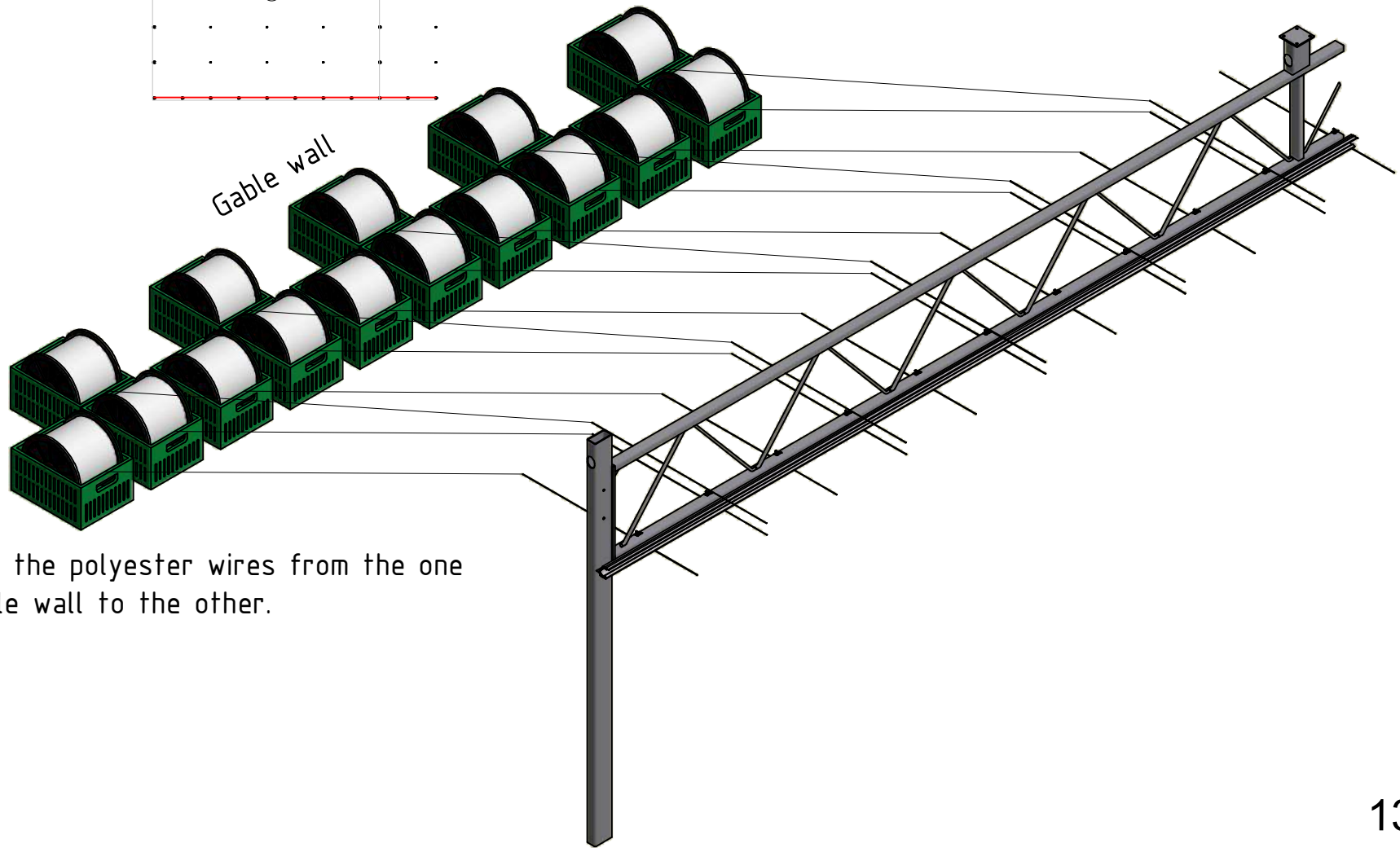
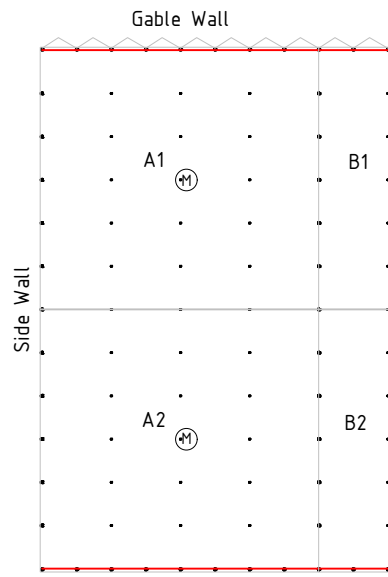




48.50.30

Polyester wires

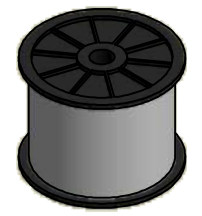
VAN DER VALK



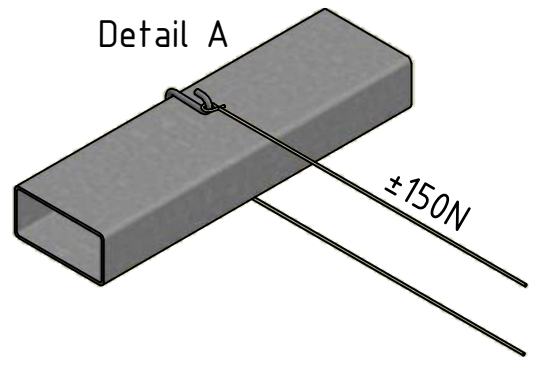
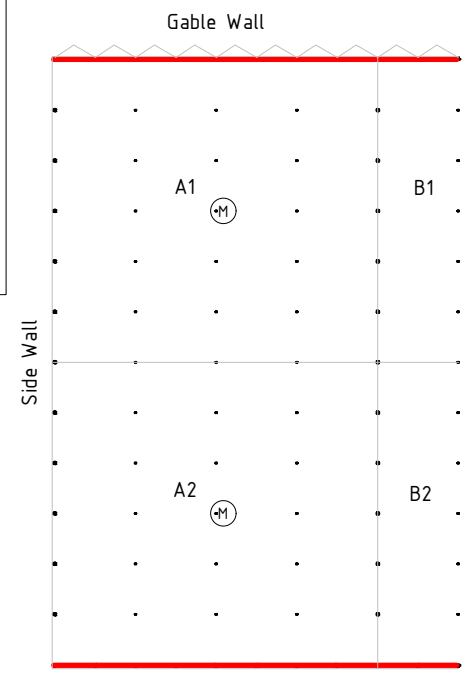
Pull the polyester wires from the one gable wall to the other.



Polyester wires

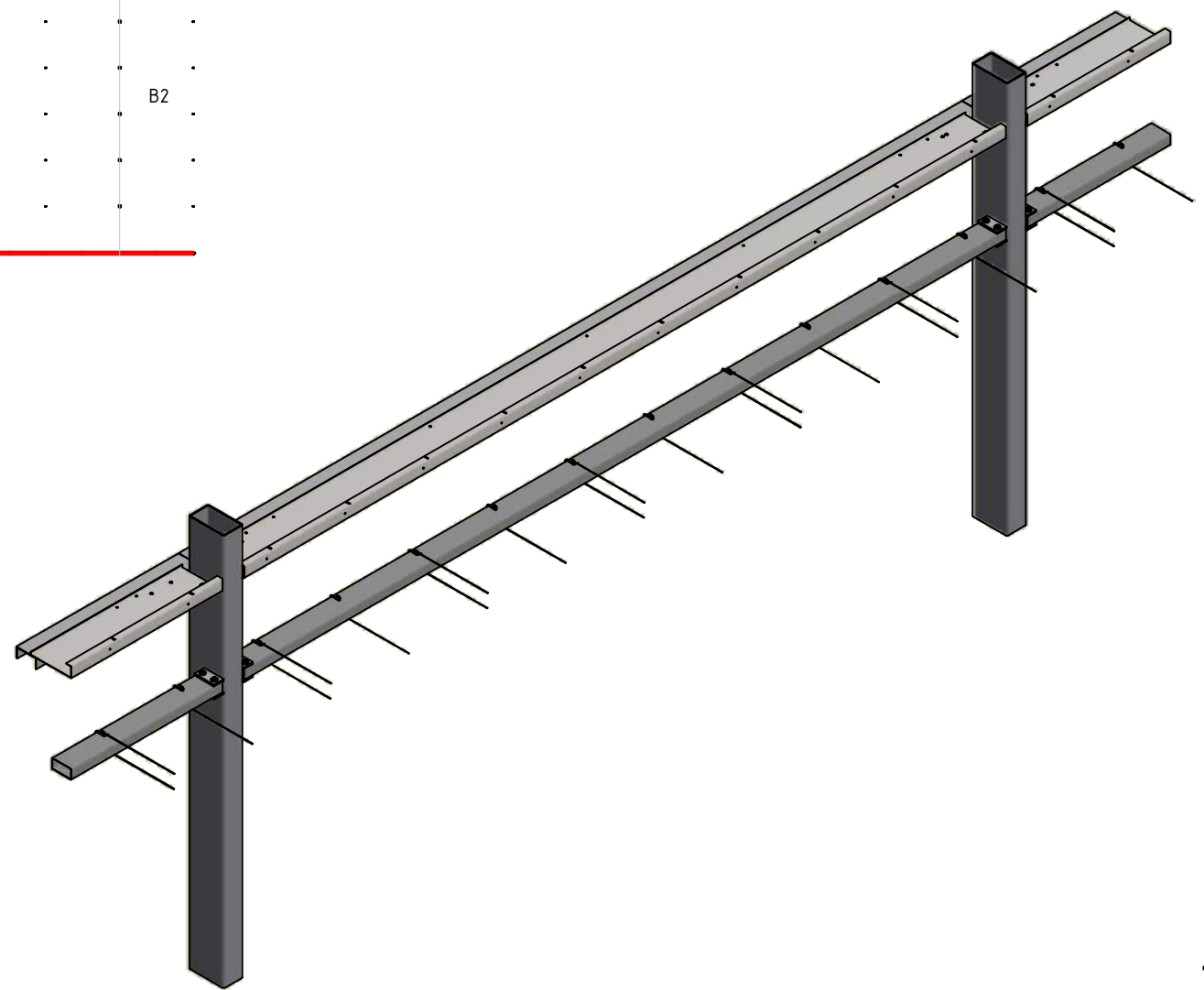


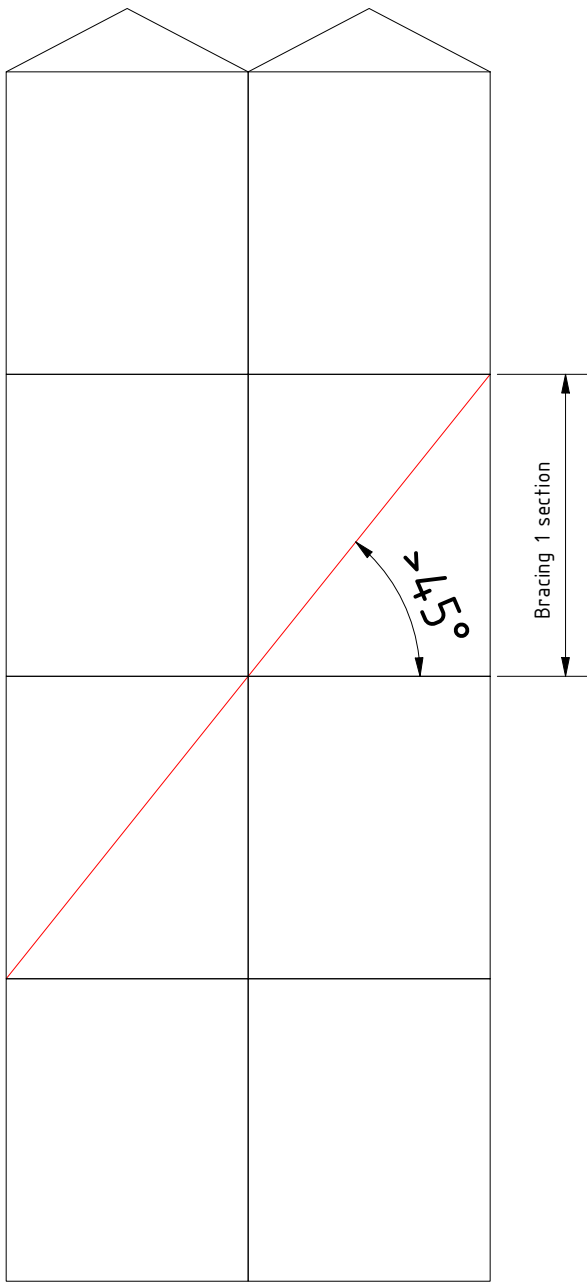
48.50.30



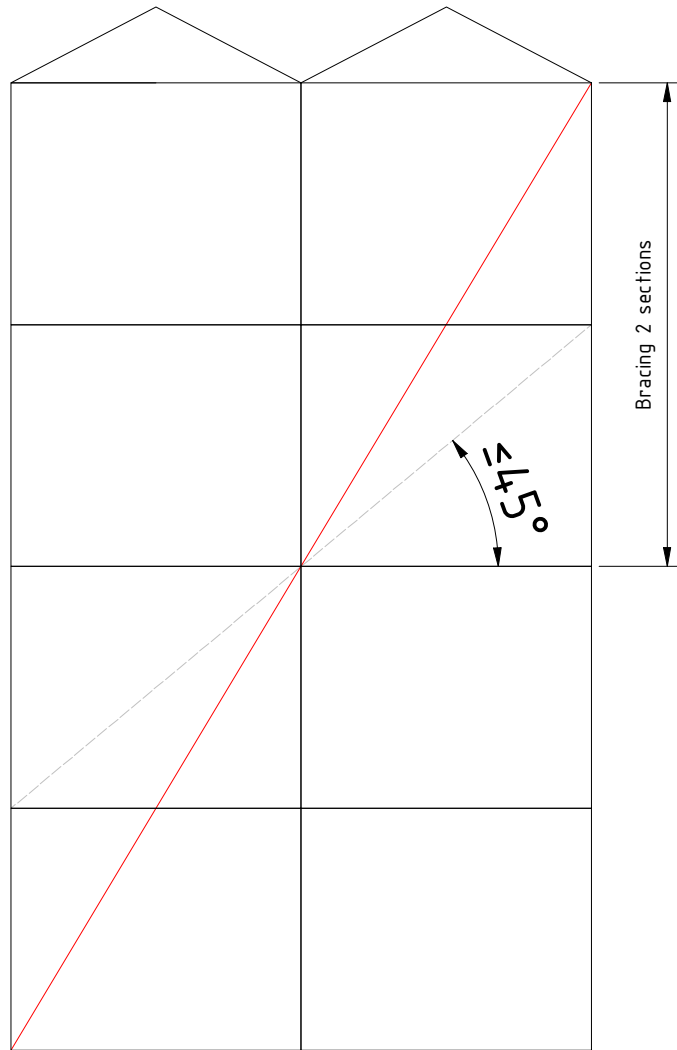
Detail A

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

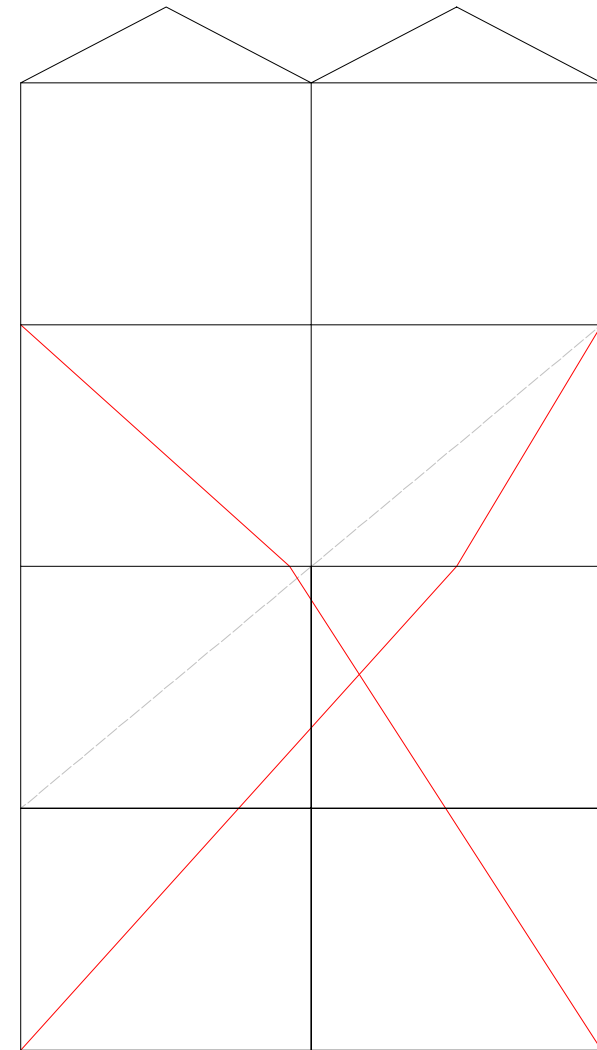




Option A:
Use if bay size is smaller
than the section size.



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.

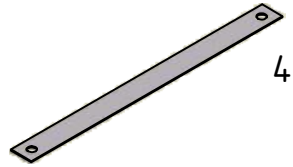
	bay size →			
	3200 mm	4000 mm	4267 mm	4500 mm
section size ↓	4000 mm	Option A	Option B/C	Option B/C
	4500 mm	Option A	Option A	Option B/C
	5000 mm	Option A	Option A	Option A



Mount V-Pulley

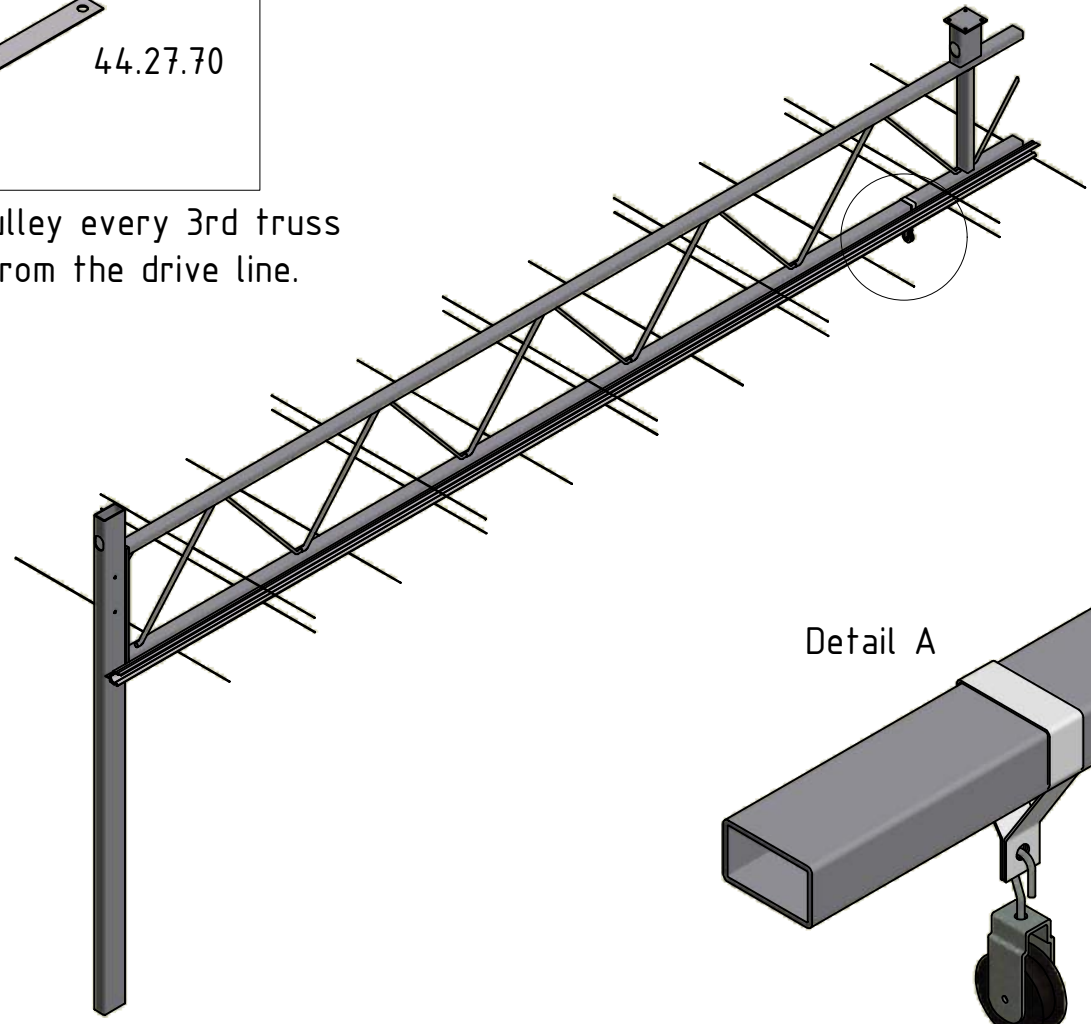
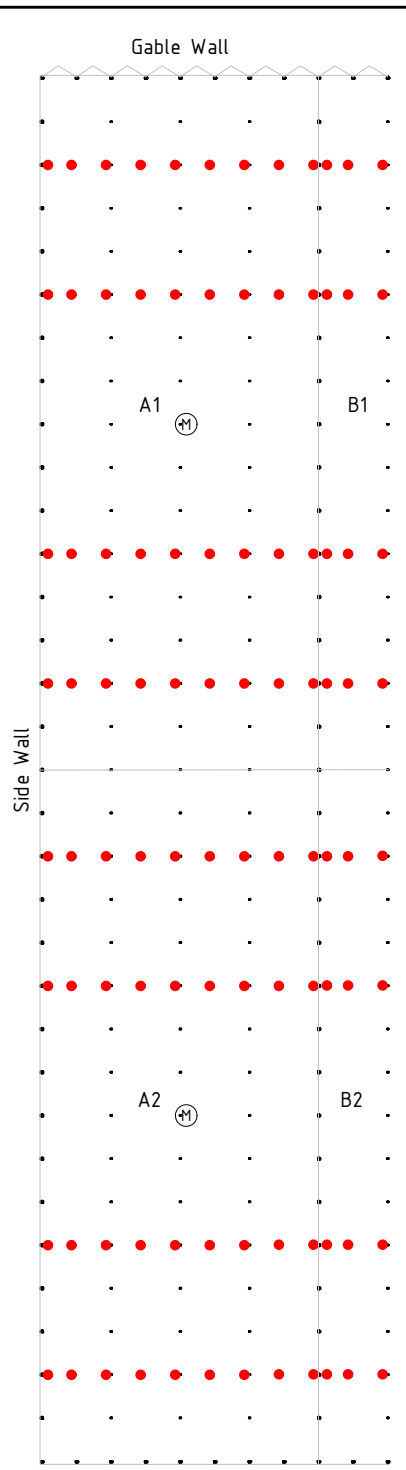


44.27.75

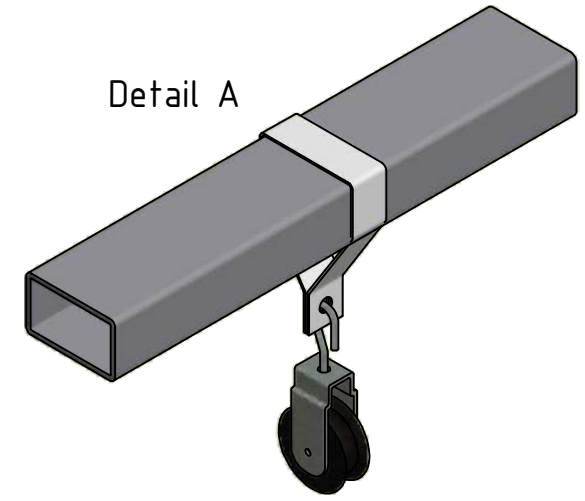


44.27.70

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



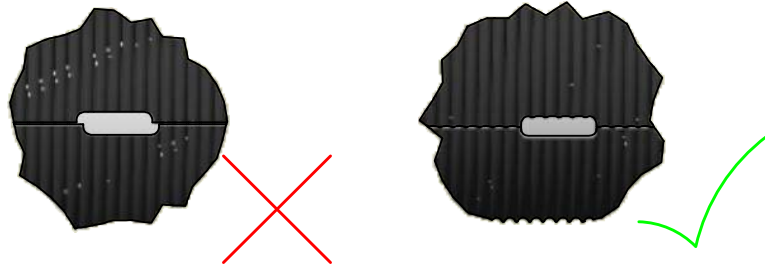
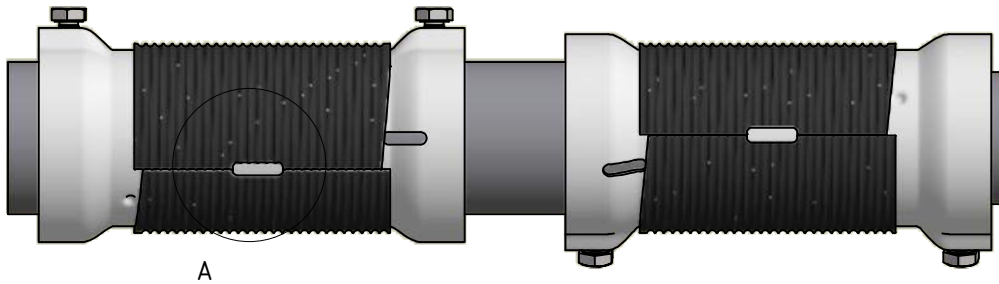
Detail A



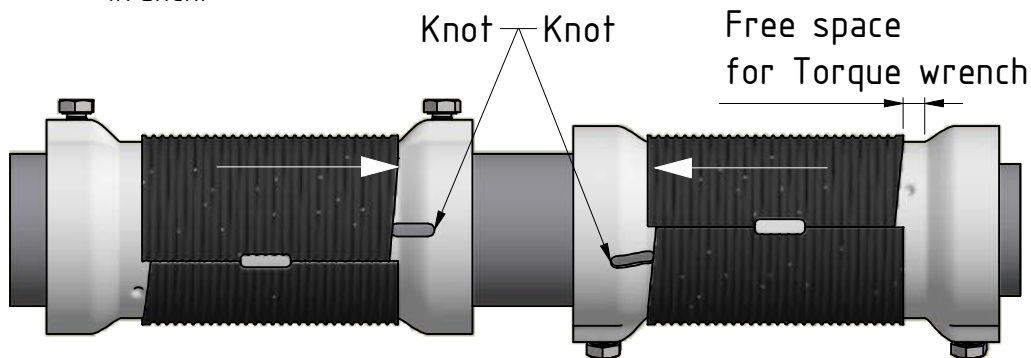
Fold strip around truss.

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.

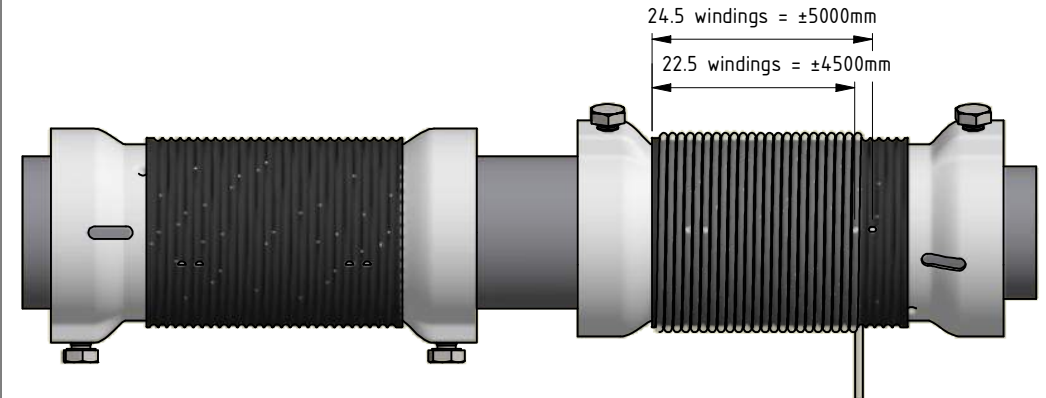


3 The holes in the plastic cable drum stand for how much wire need to be on the wire tensioners at a certain section size.

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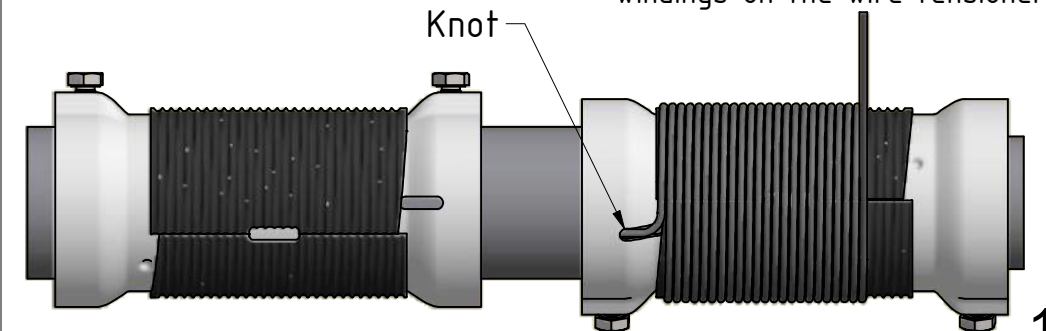


HORTI SYSTEMS



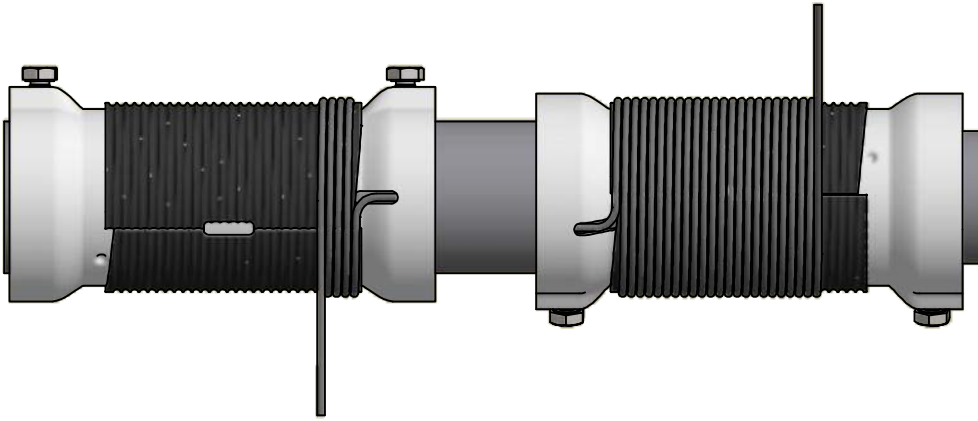
Bay size [mm]	No. of windings on wire tensioner 1	No. of windings on wire tensioner 2
3200	3.5	17.5
3658	3.5	19.5
4000	3.5	20.5
4500	3.5	22.5
5000	3.5	24.5

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

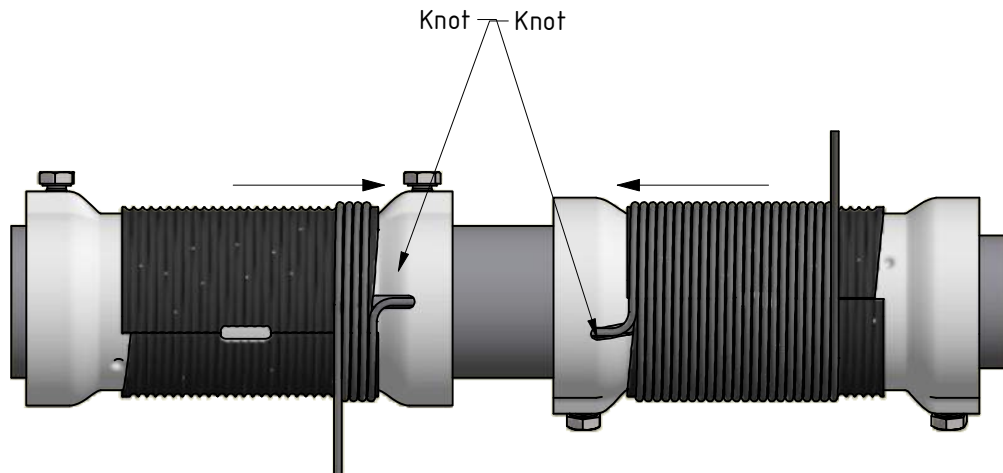


Before mounting the wire on the wire tensioners make sure that everything on page 19/19B is clear and understood.

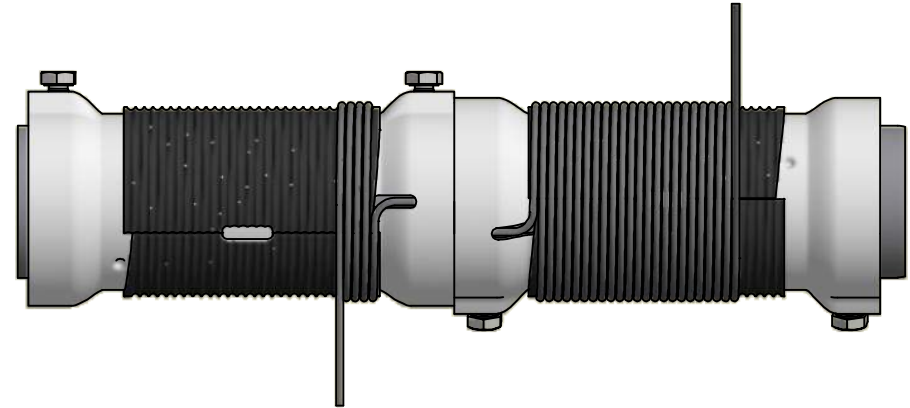
- 5 Make sure that there is ca. one meter extra wire available for the 3,5 windings on the other wire tensioner, as shown below.



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



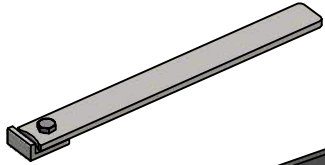
- 7 In the end the wire has to be on the wire tensioners as is shown in the drawing below.



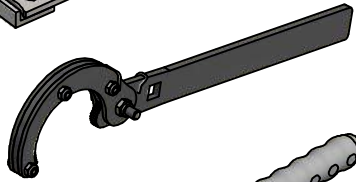
When finished page 19/19B continue to page 20 for tensioning of the wire.



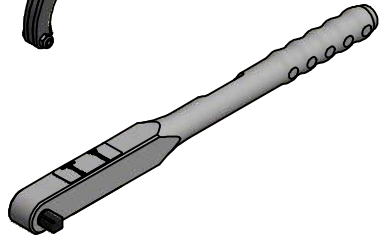
48.10.17



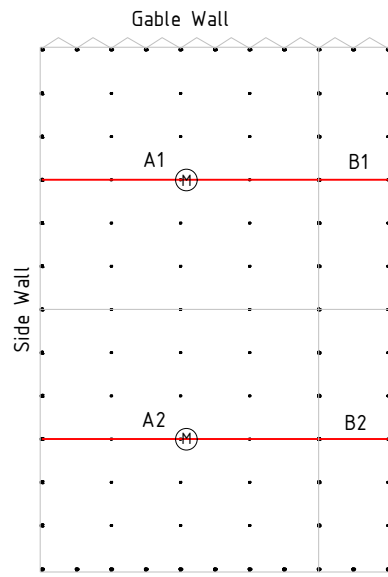
61.16.12



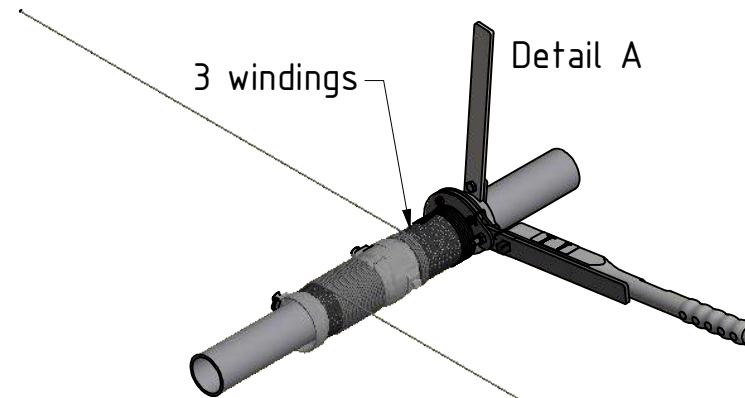
61.16.11



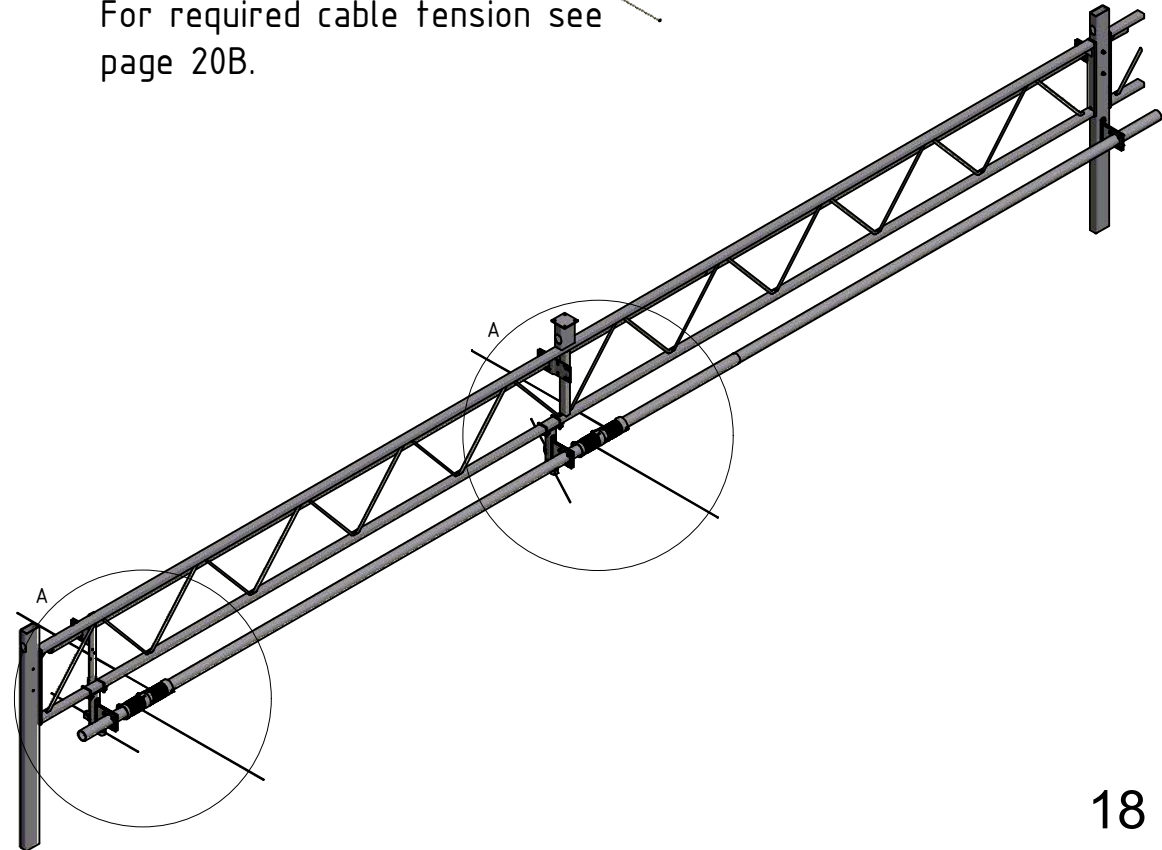
61.16.15



Mount steel cable



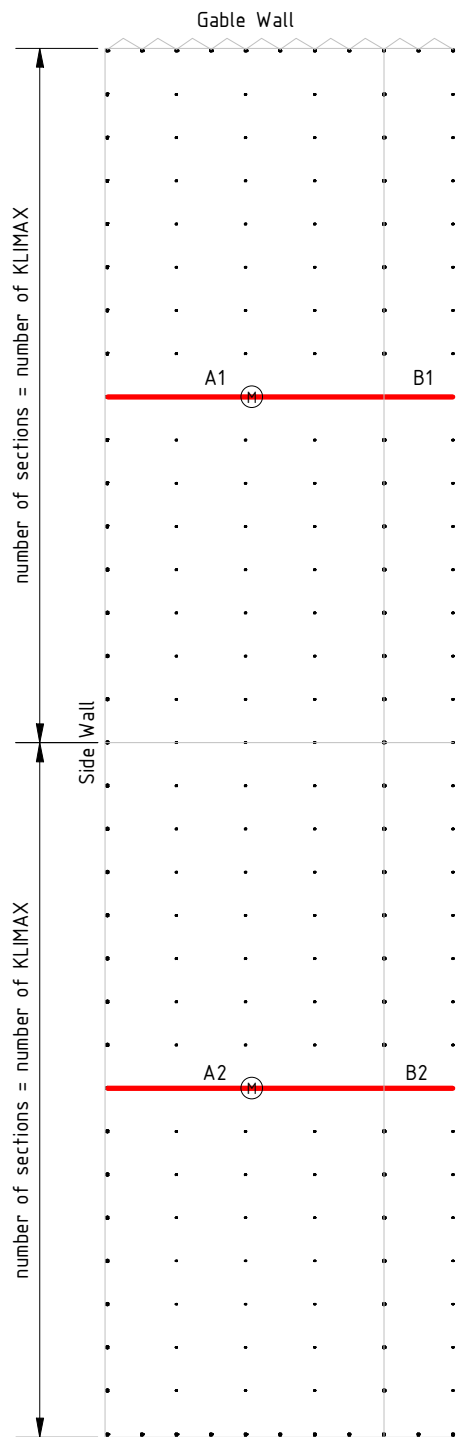
For required cable tension see page 20B.





- 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.



$$\text{(number of KLIMAX x max. skid force)}$$

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

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)

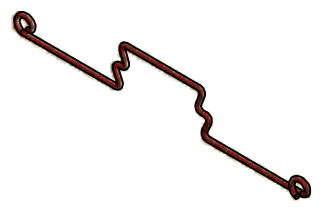
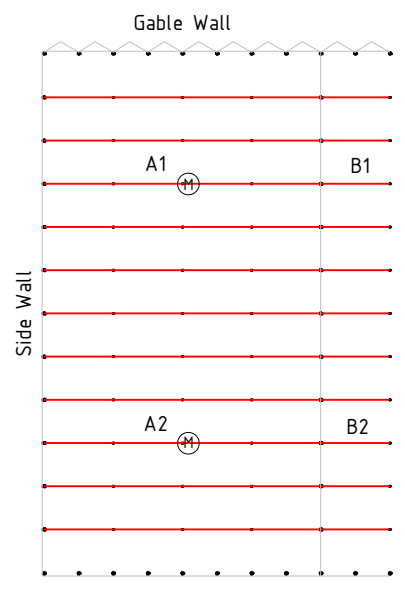
Cable tension	Moment
[kg]	[Nm]
40	20
50	25
60	30
80	40
100	50
130	60



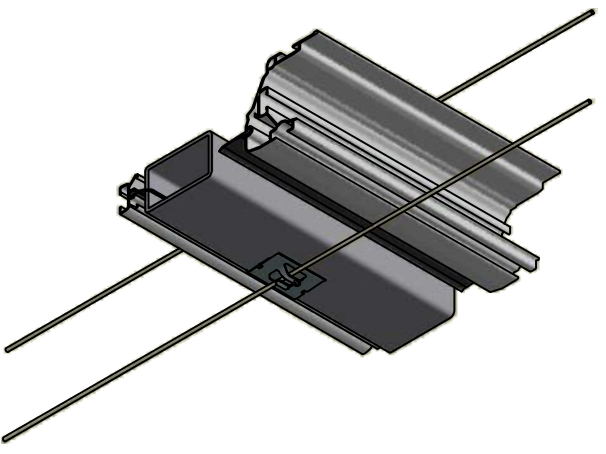
Truss clips



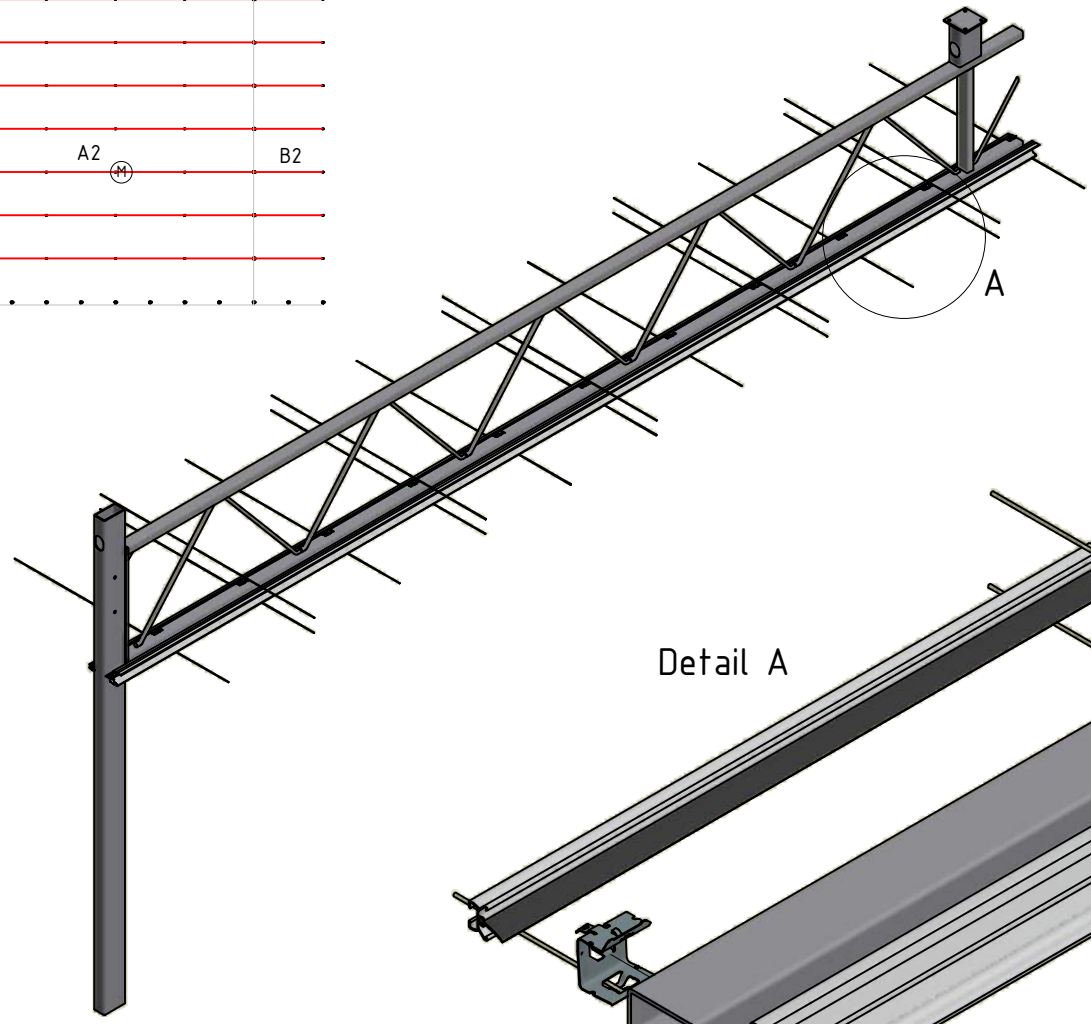
45.20.--- (H+3 [mm])



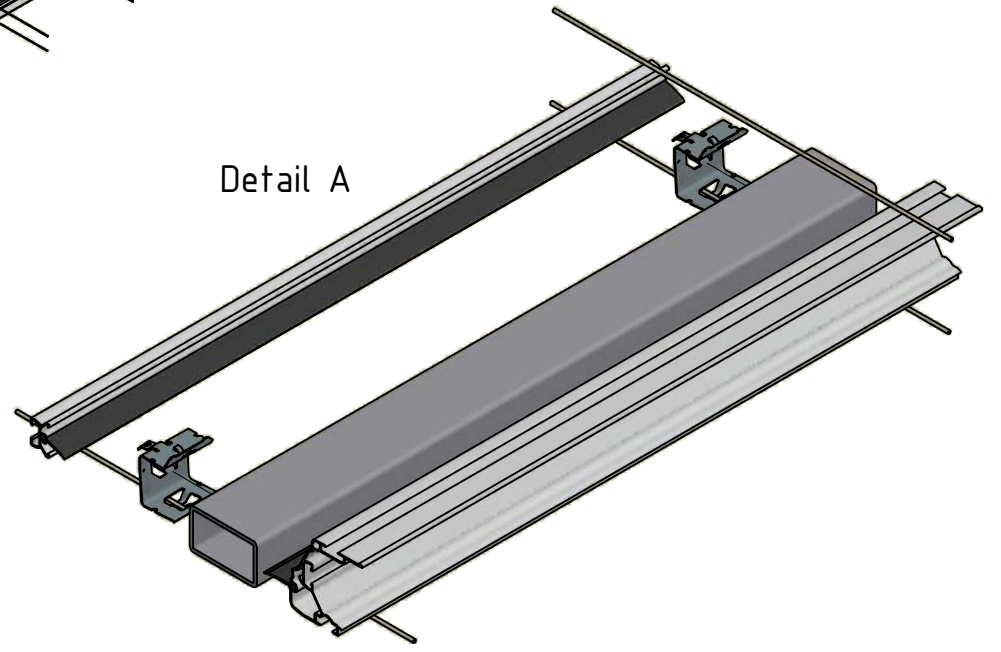
Remove all temporary fixings



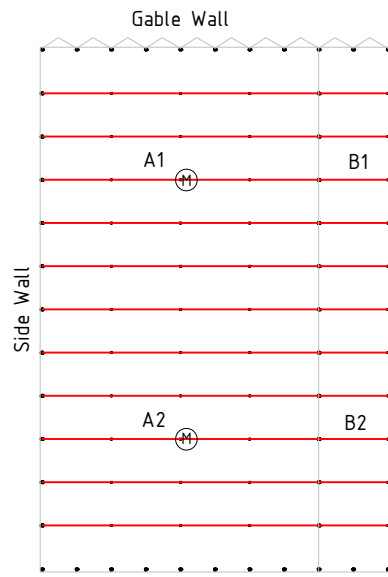
Place the polyester wires in the truss clips.



Detail A

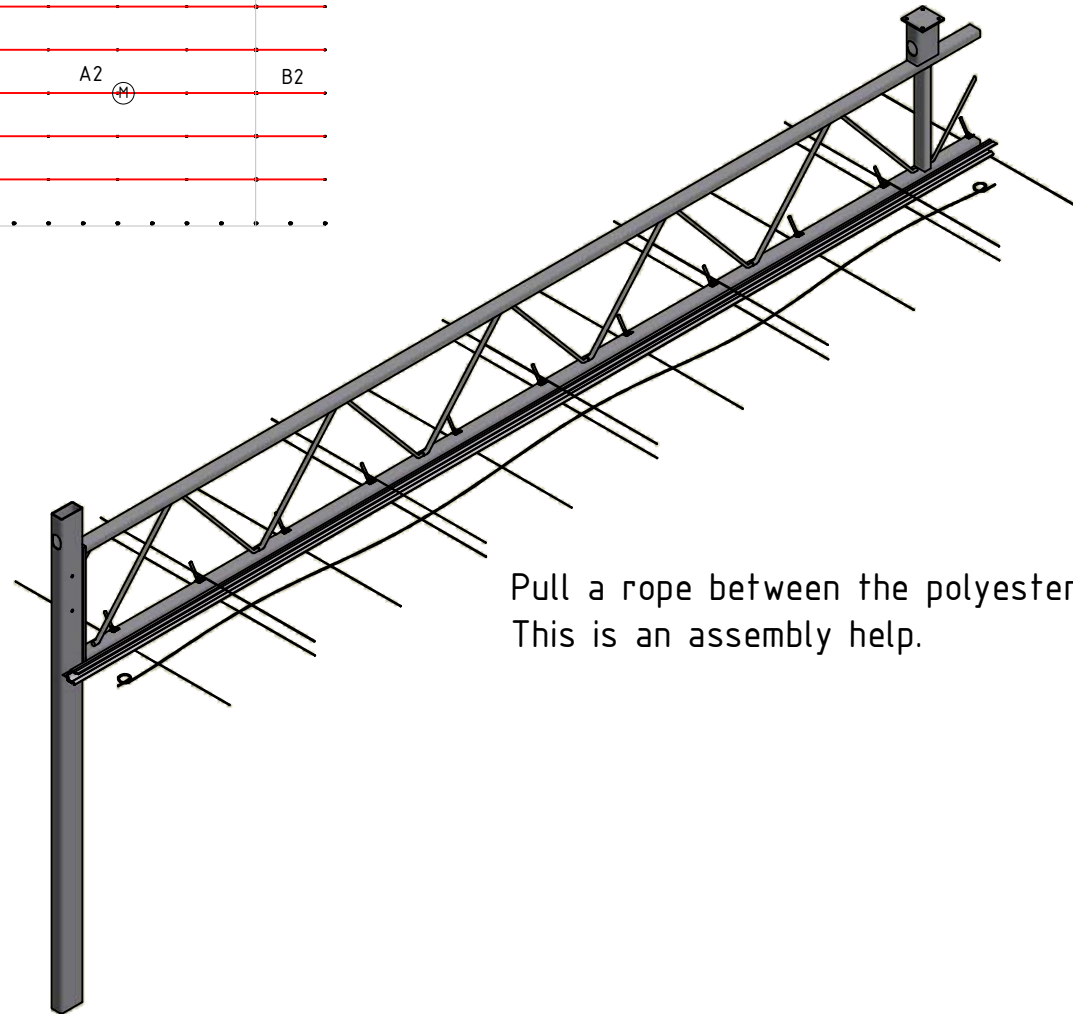


Rope 48.55.03 (optional)



Additional rope

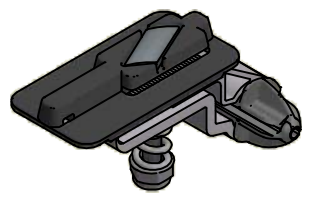
VAN DER VALK



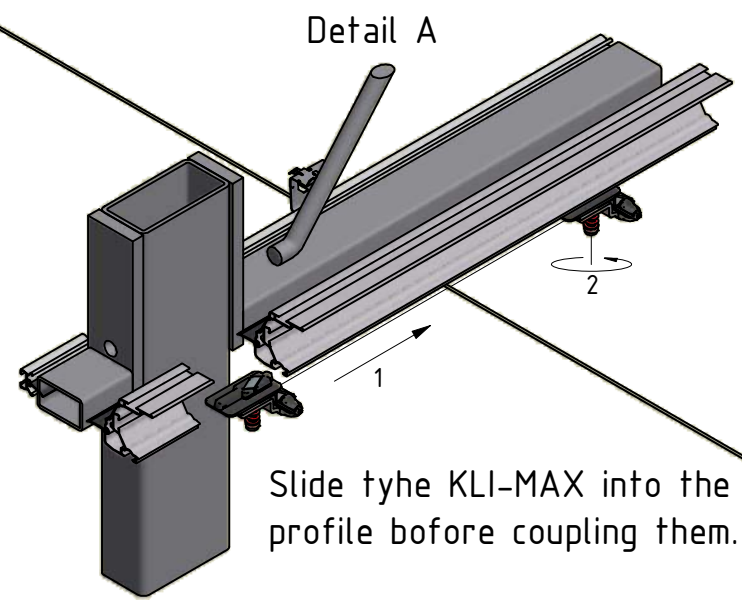
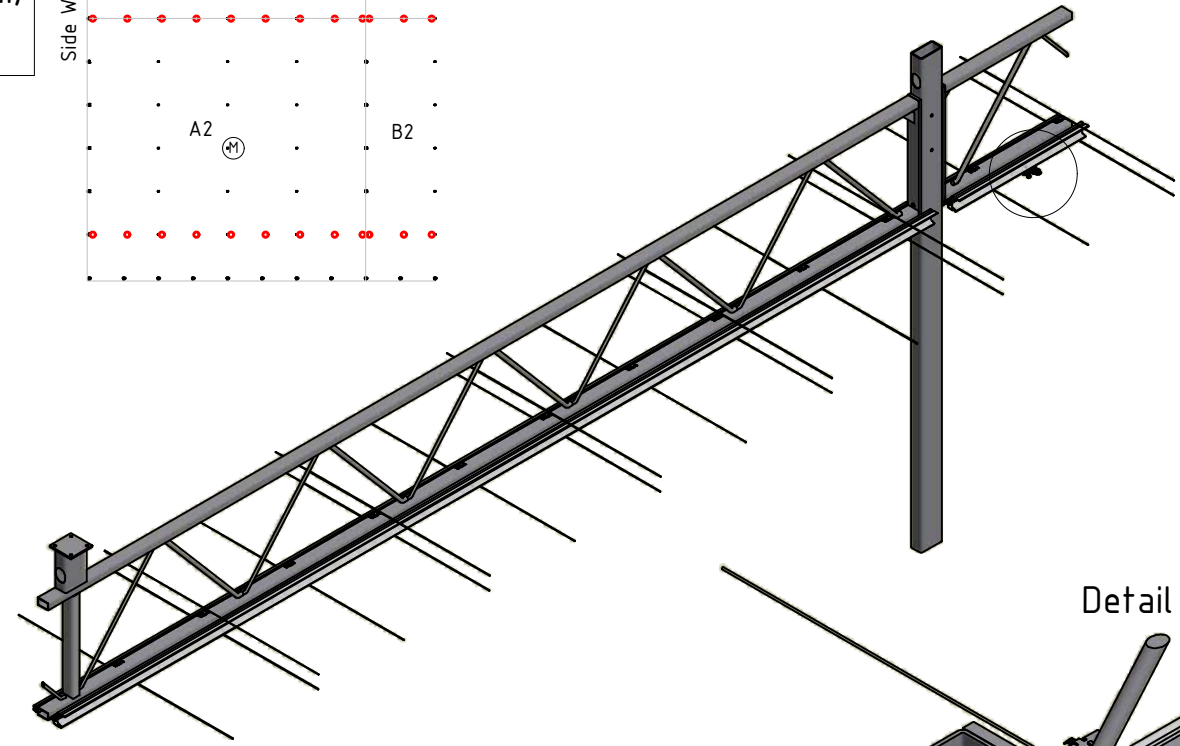
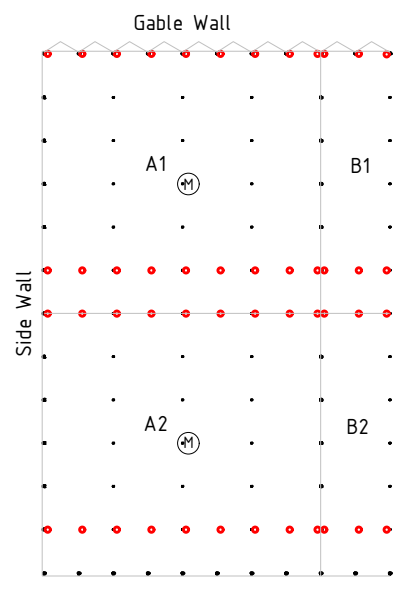
Pull a rope between the polyester wires.
This is an assembly help.



KLI-MAX Slide



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



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



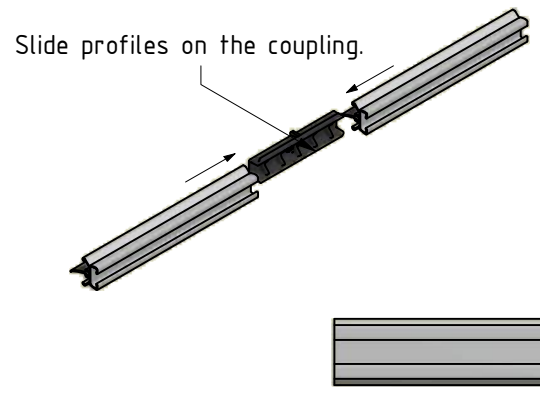
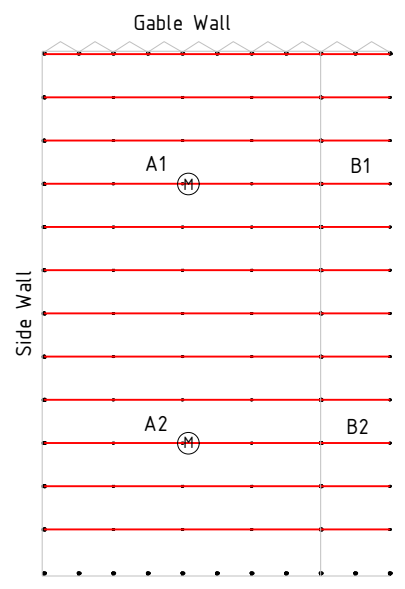
44.05.10

55.30.10

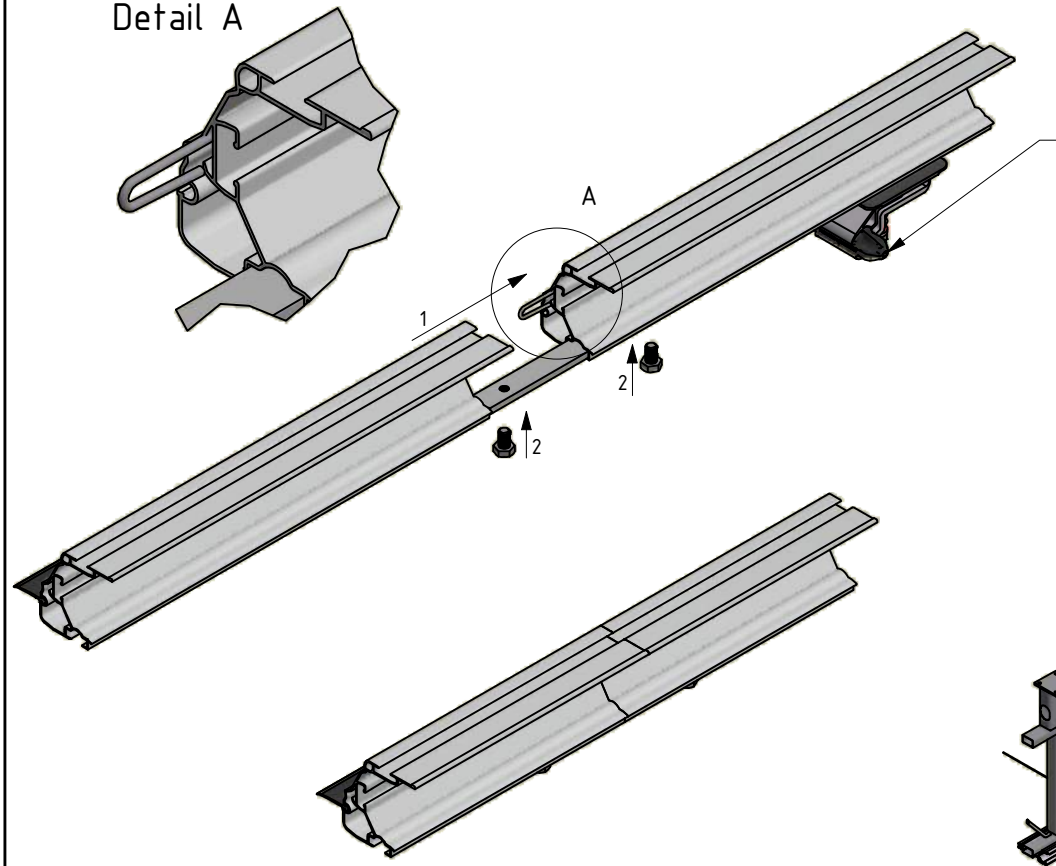
45.22.46

44.15.60

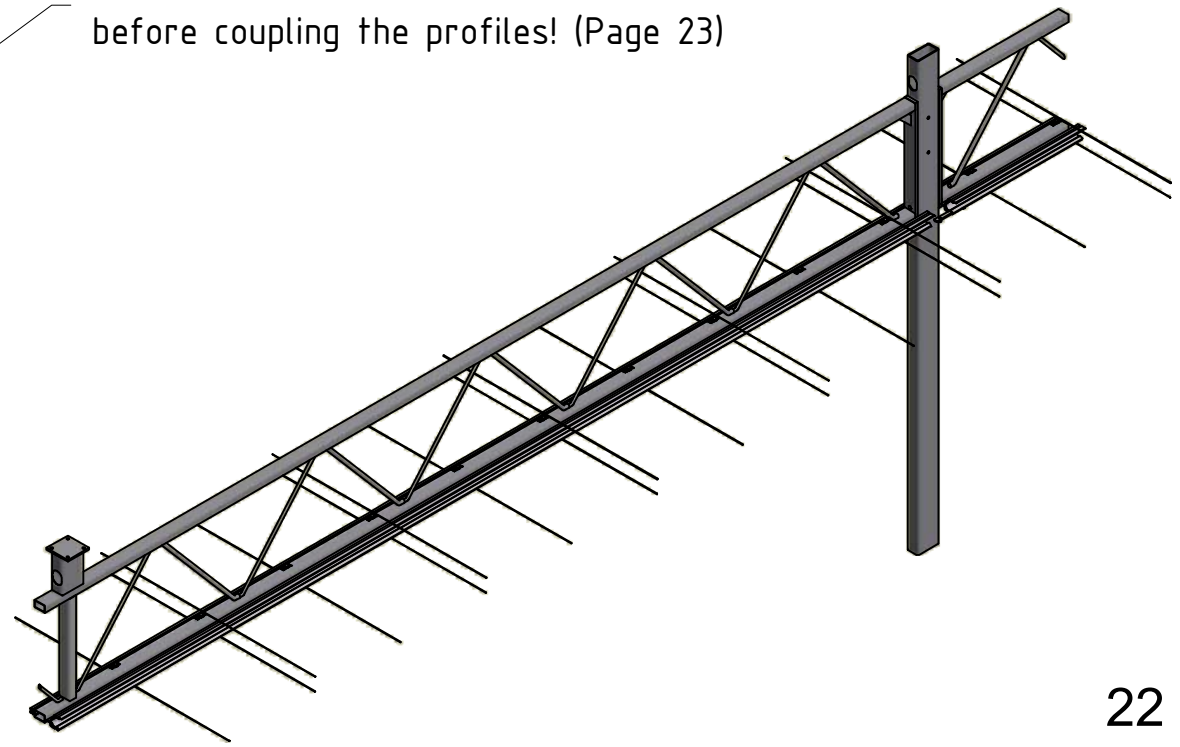
Coupling profiles



Detail A

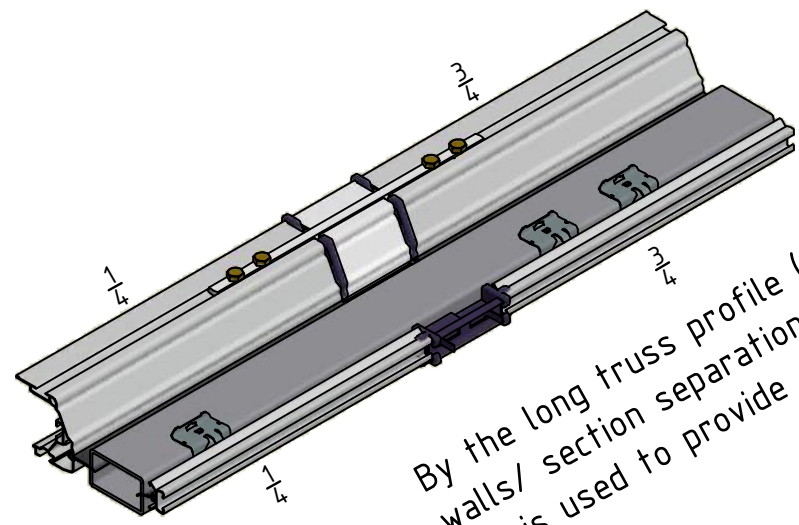
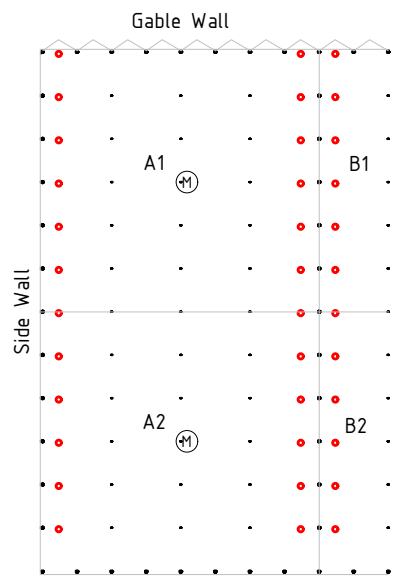


Mount the KLI-MAX slide first before coupling the profiles! (Page 23)

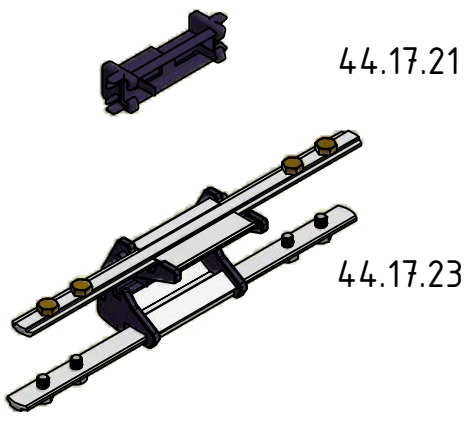




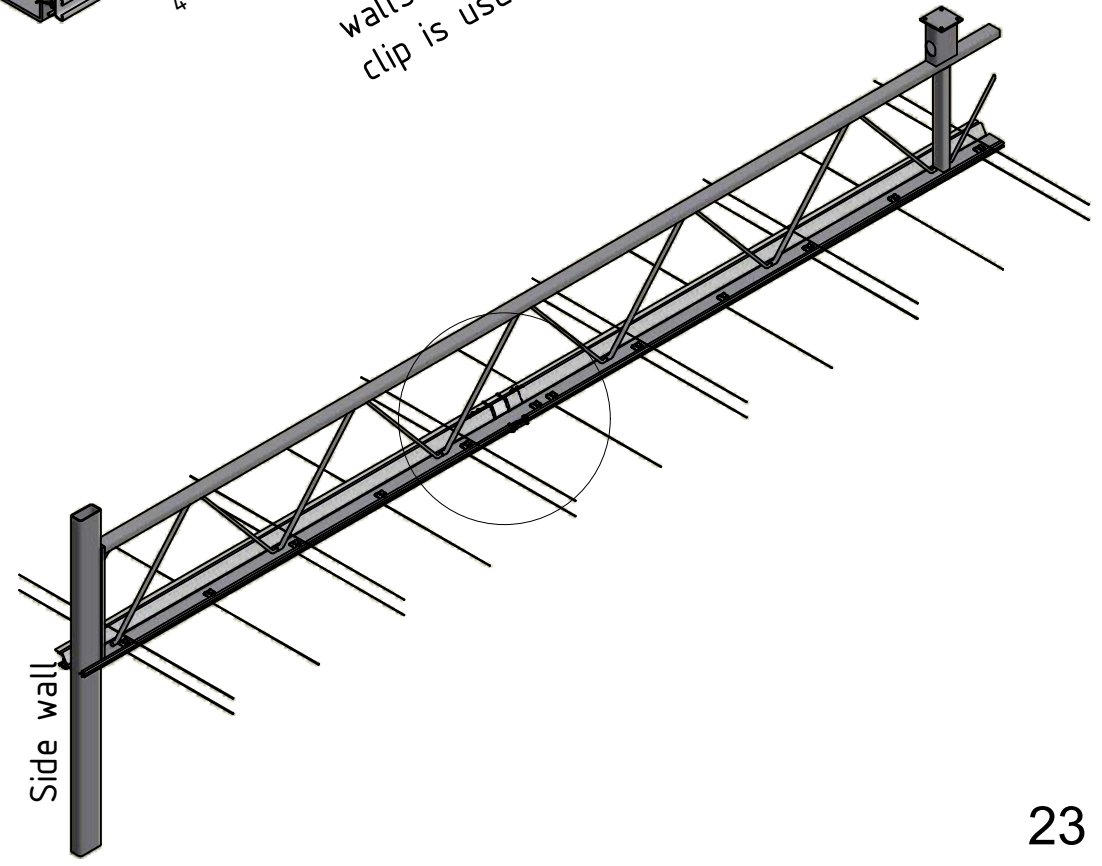
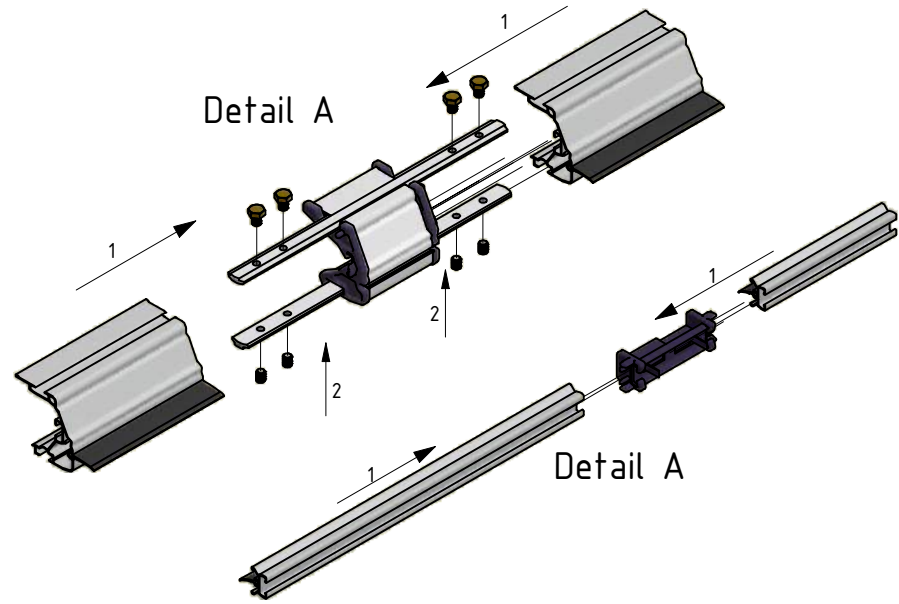
Entry section

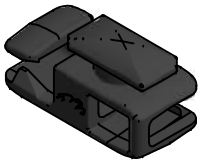


By the long truss profile ($\frac{3}{4}$) at the side walls/ section separations an extra truss clip is used to provide extra strength



Mount the KLI-MAX Slide first before coupling the profiles! (Page 23)

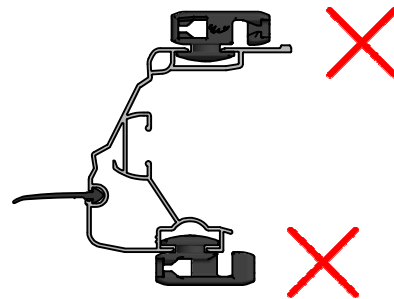
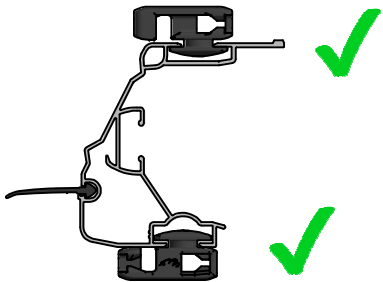
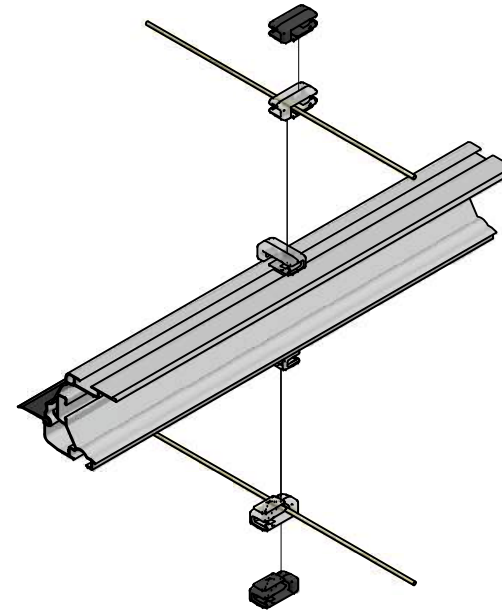
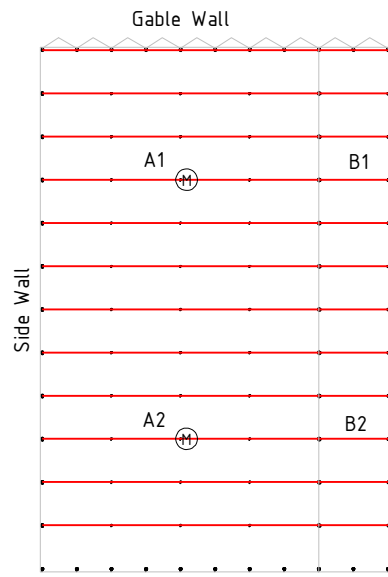




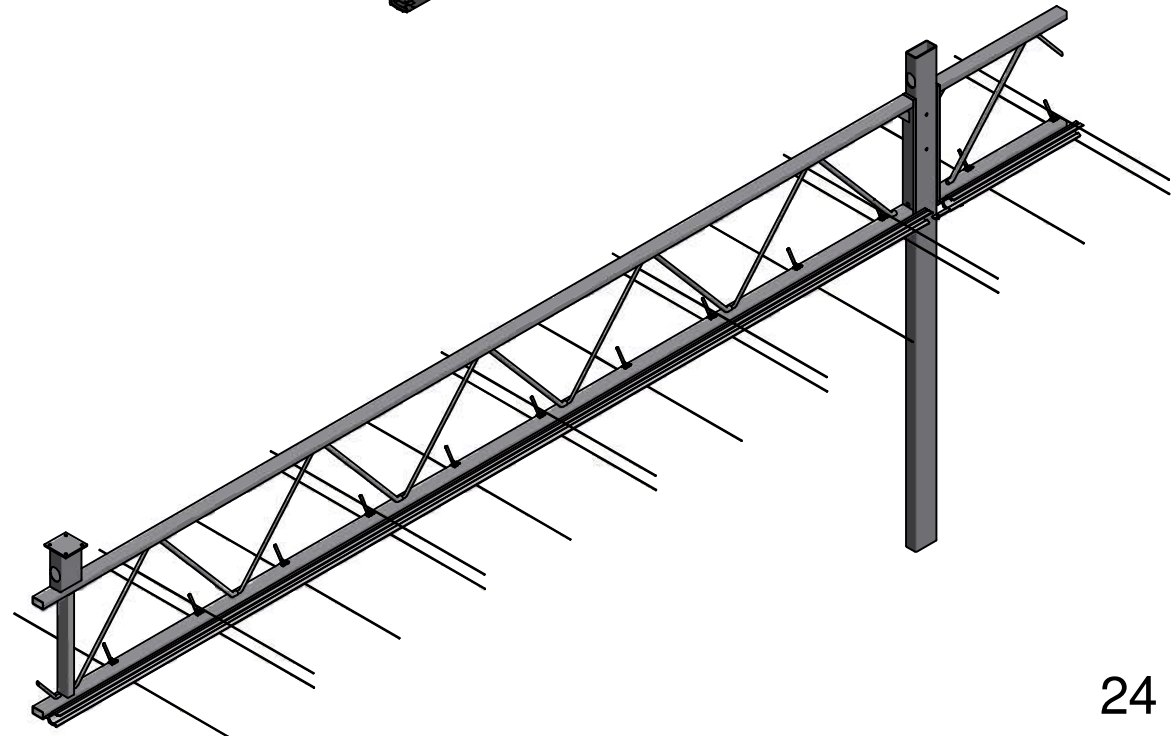
44.15.27

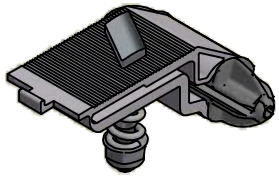
Mount wire guide blocks

VAN DER VALK

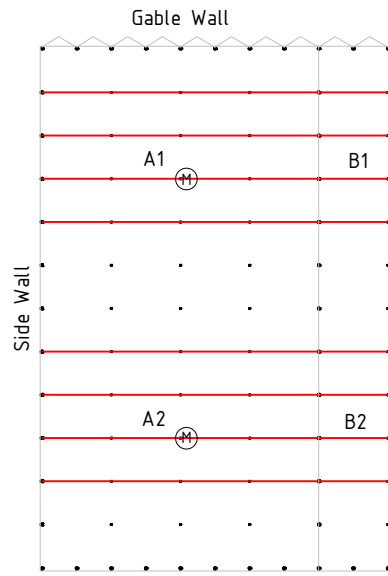


Mount the wire guide blocks with the opening as shown.



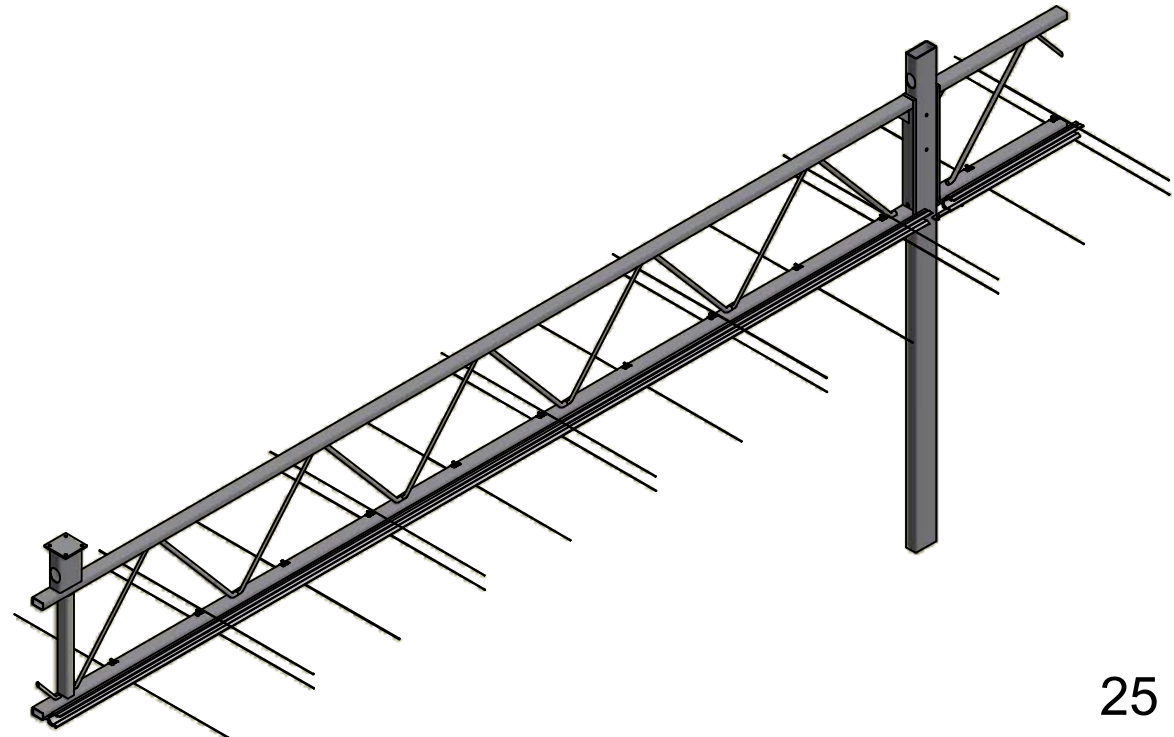
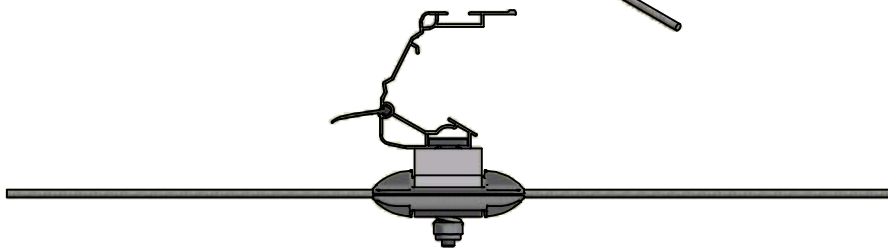
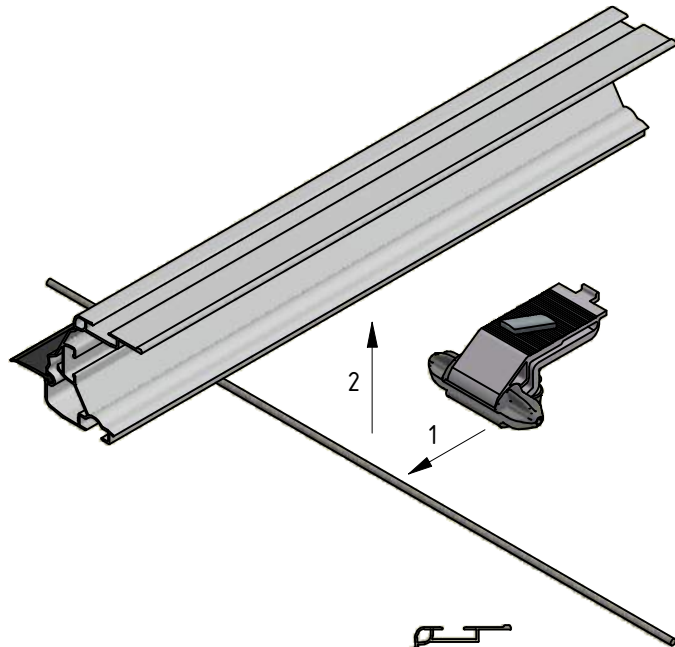
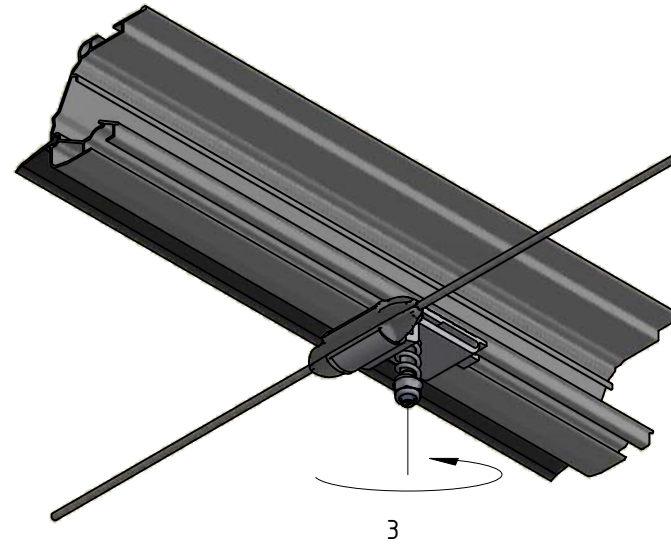


44.40.35 (blank)
44.40.36 (red)

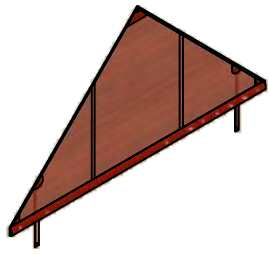


KLI-MAX compact

VAN DER VALK



Installation ValkScreenVision tool



(section size
59.84. --- (mm) ---

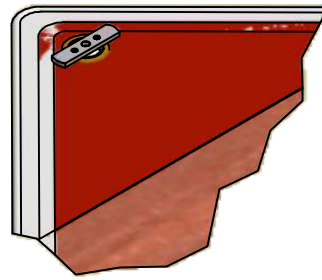


59.79.10



44.17.10

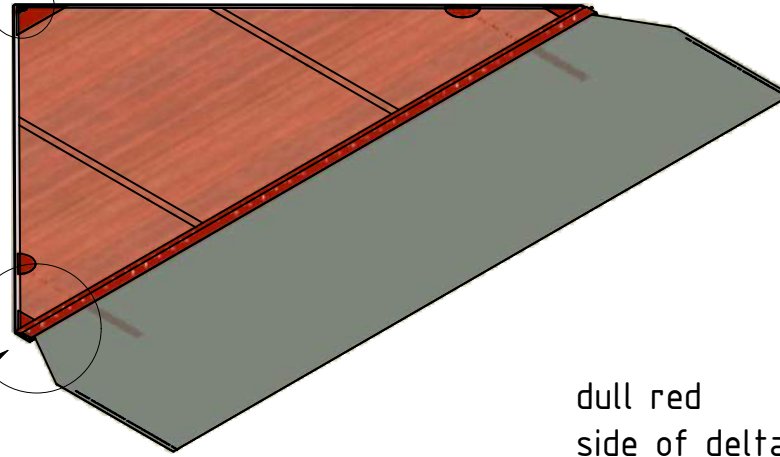
Detail B



B

A

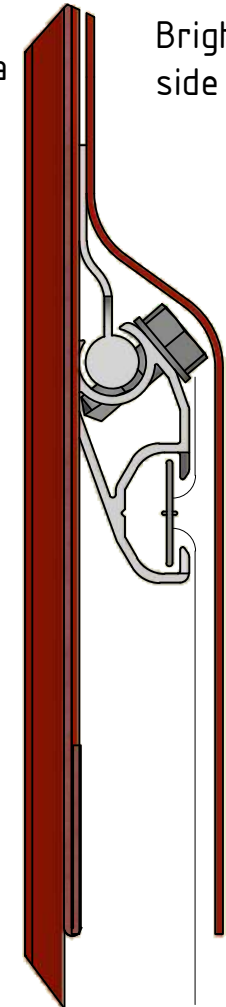
C



Detail A

dull red
side of delta

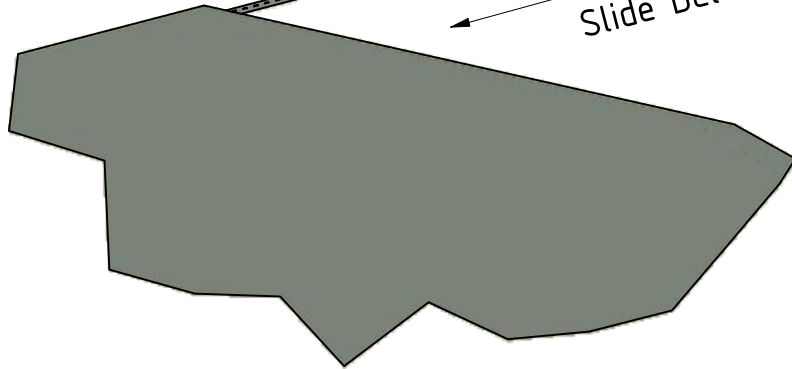
Bright red
side of delta



Detail C

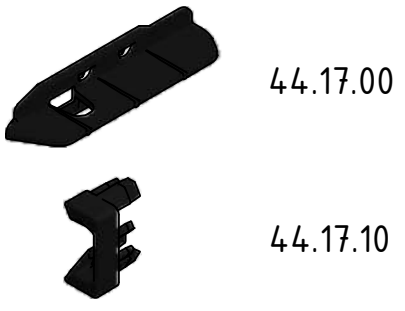
Slide cloth guide on Delta profile

Slide Delta on cloth roll



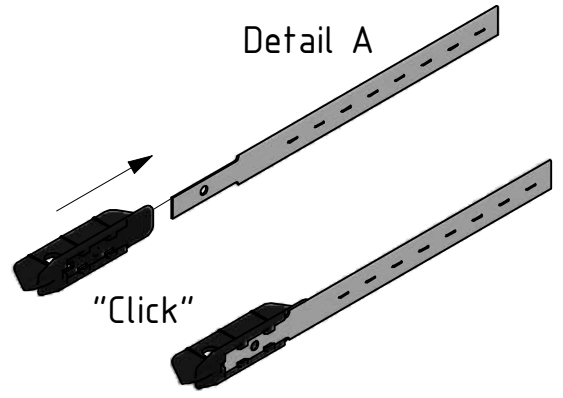


Mount screen in profiles



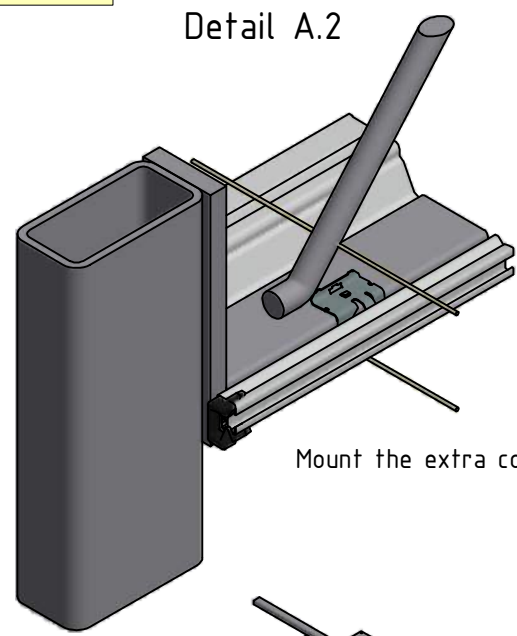
44.17.00

44.17.10



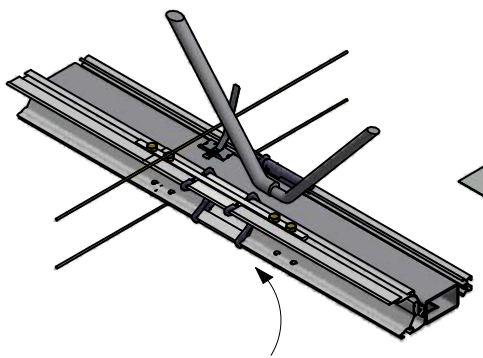
"Click"

Mount the front runner at the begin of the strip for a smooth conduction trough the profiles.



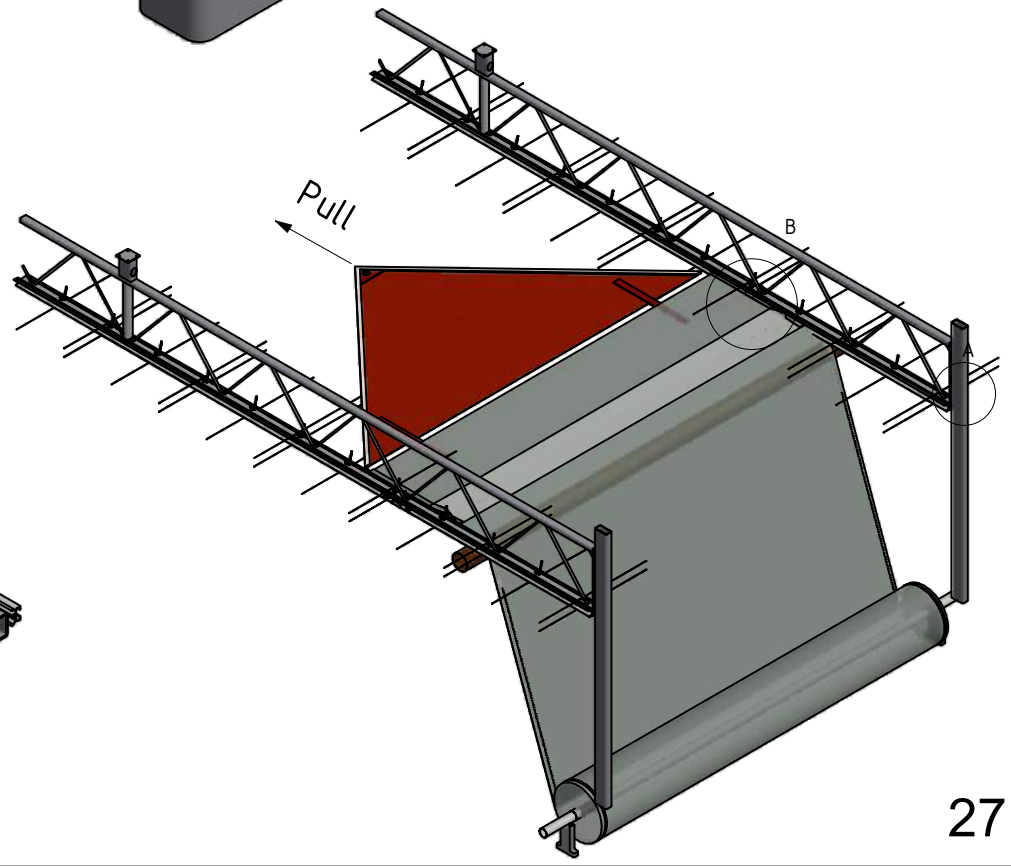
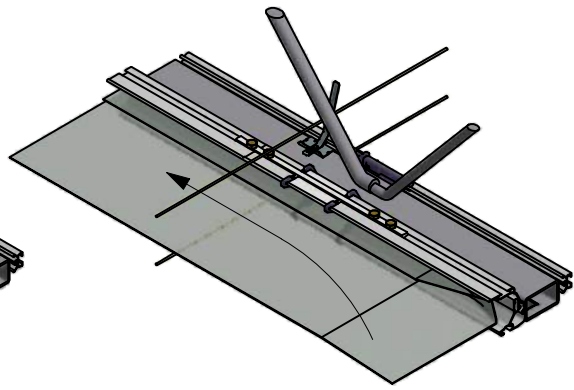
Mount the extra component in the VSV profile.

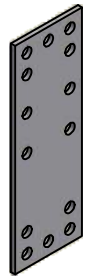
Detail B



Insert screen.

Detail B.2

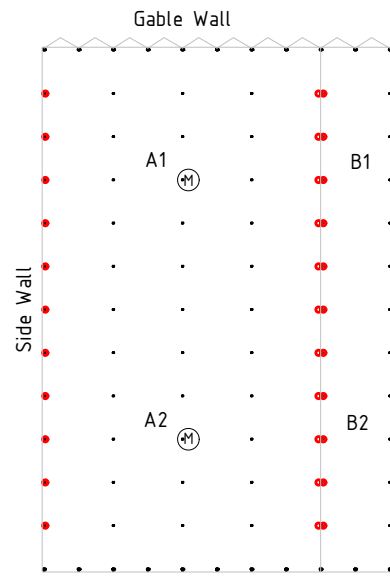




44.27.15



53.57.20



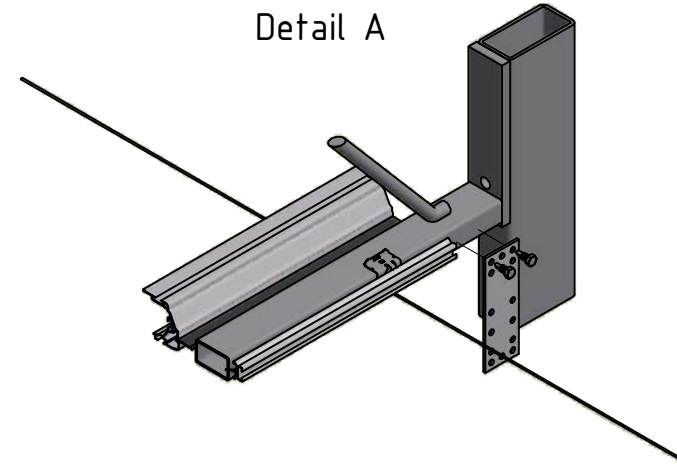
Overhang strip

VAN DER VALK

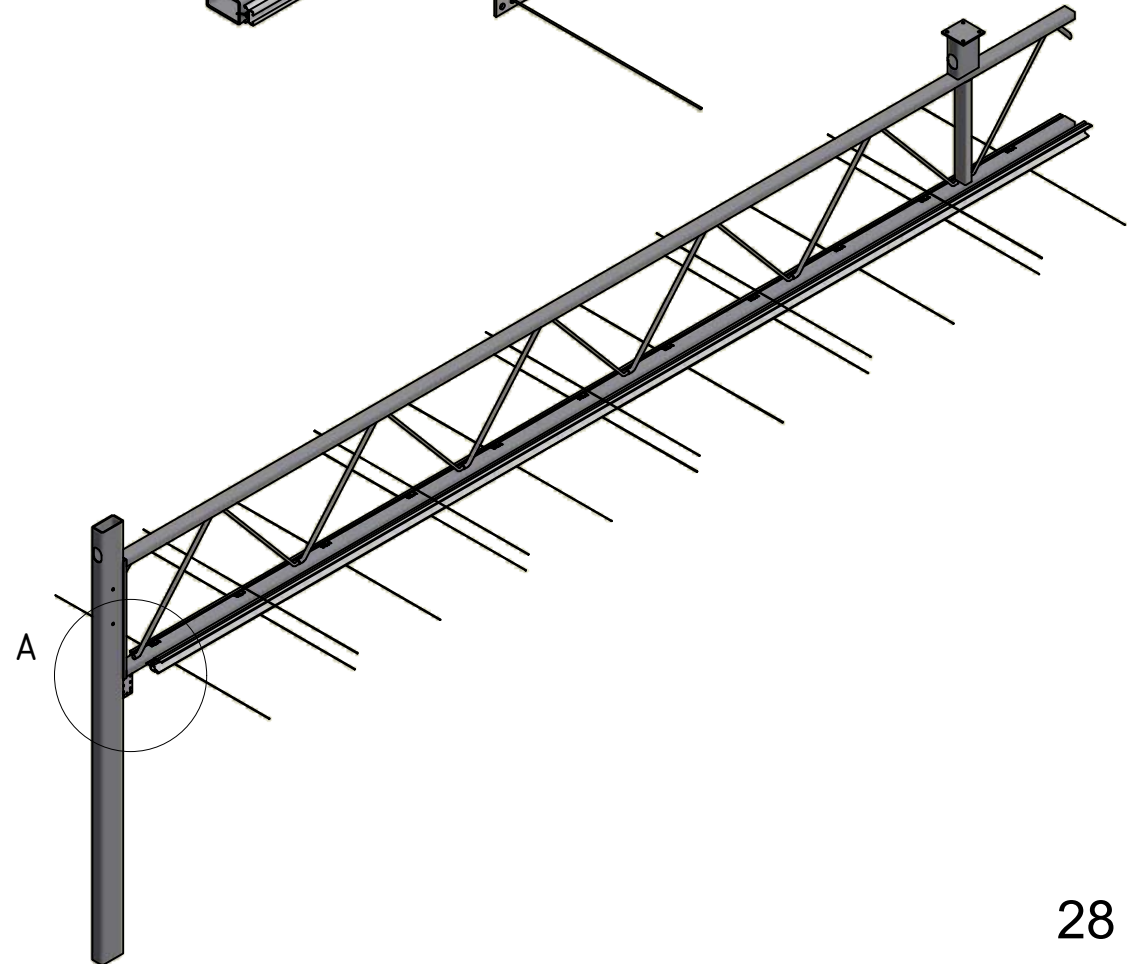
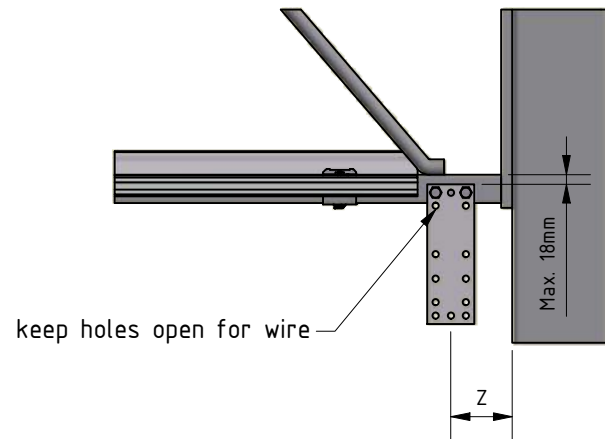


HORTI SYSTEMS

Detail A



Detail A



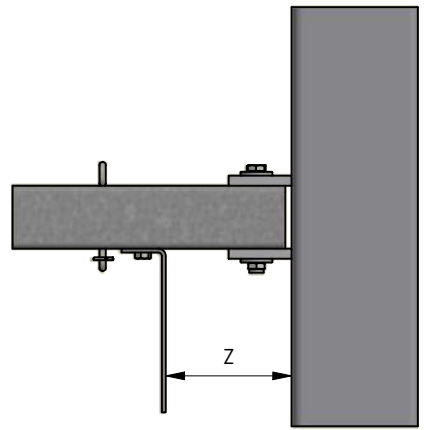
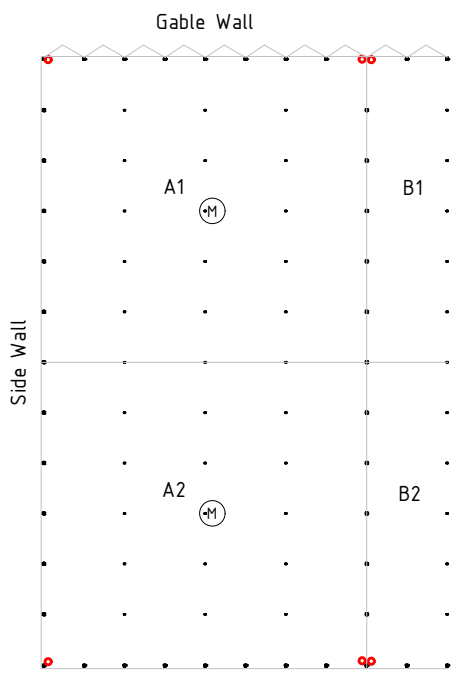


44.84.25

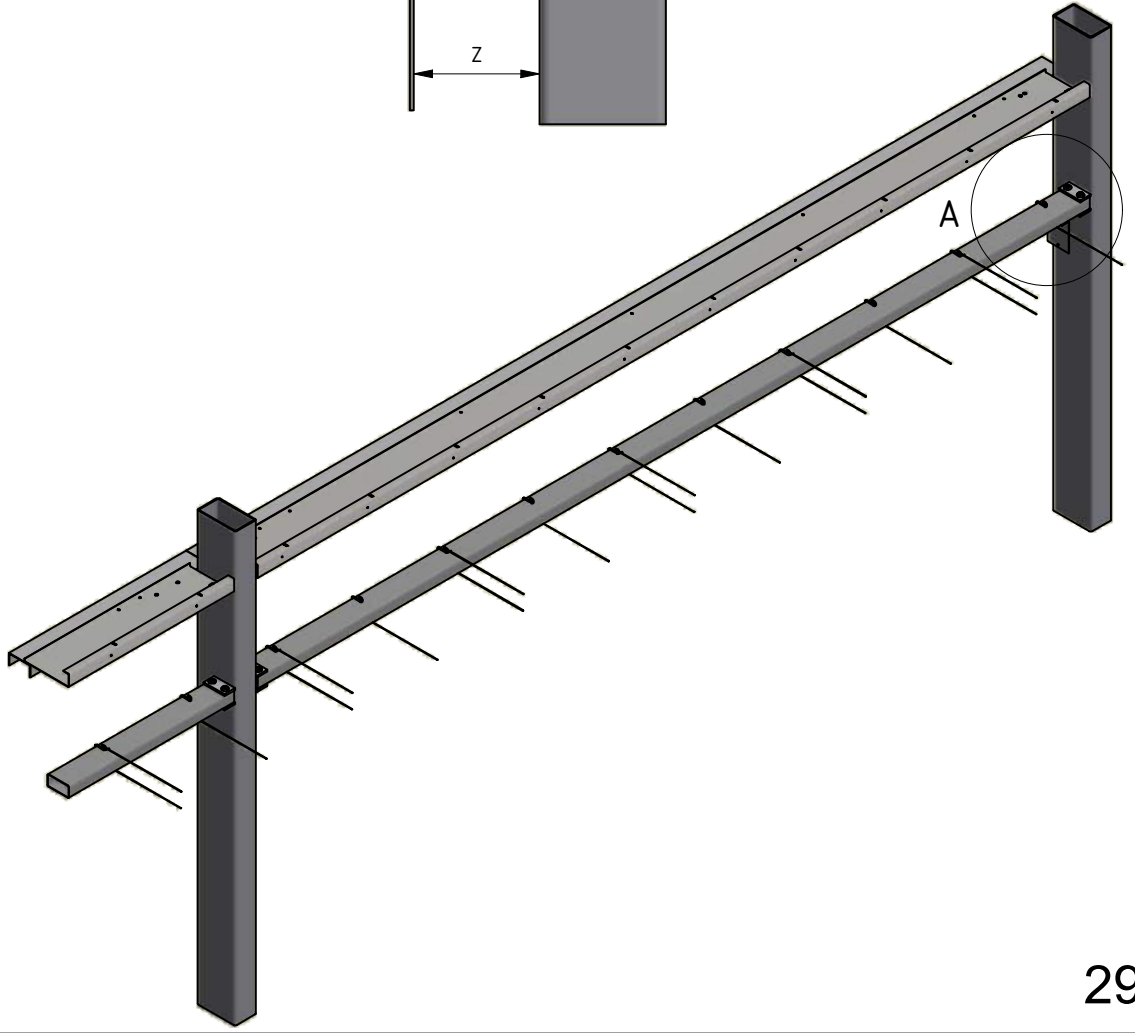
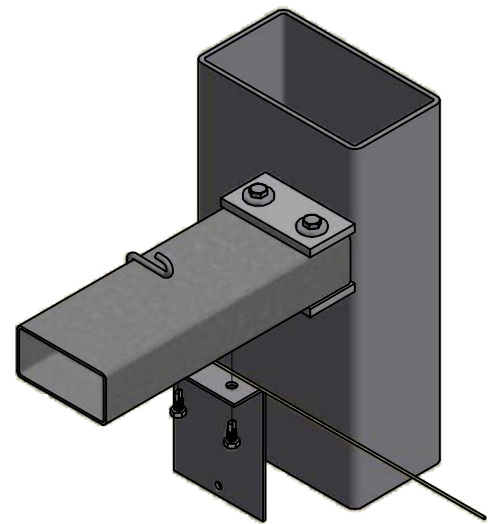


53.57.20

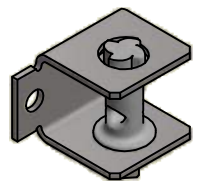
Clamping bracket for side wall



Detail A



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



48.80.10



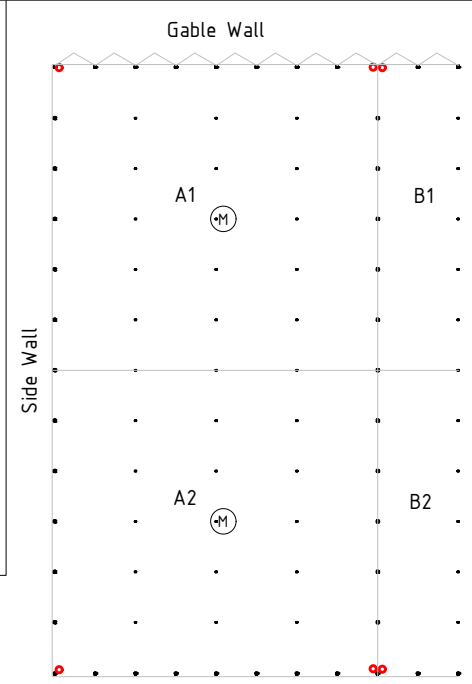
53.57.12



55.30.16

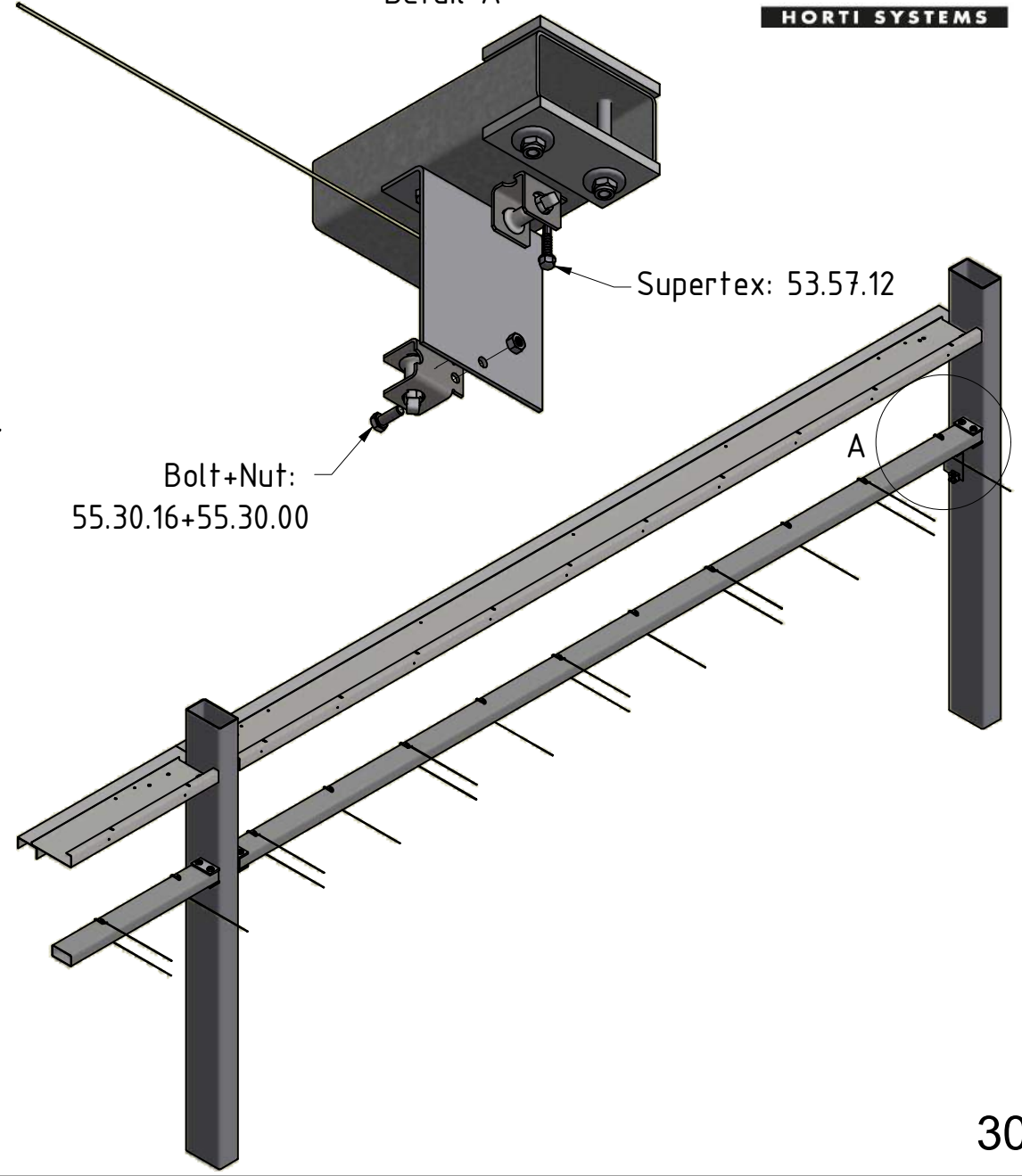


55.30.00

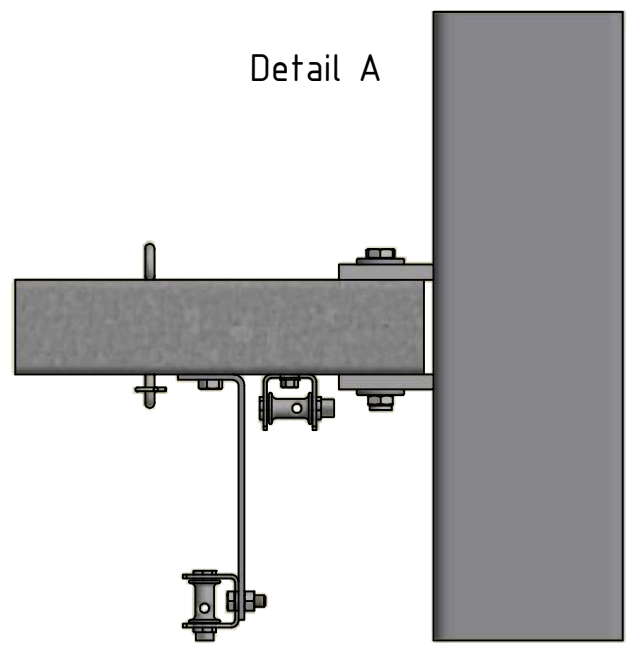


Wire strainer side wall

Detail A



Detail A



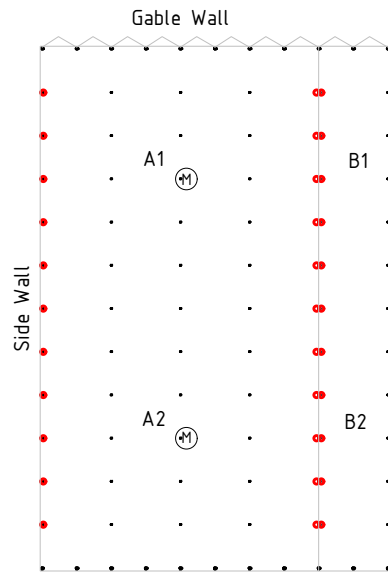


48.20.15



48.60. (L [mm])

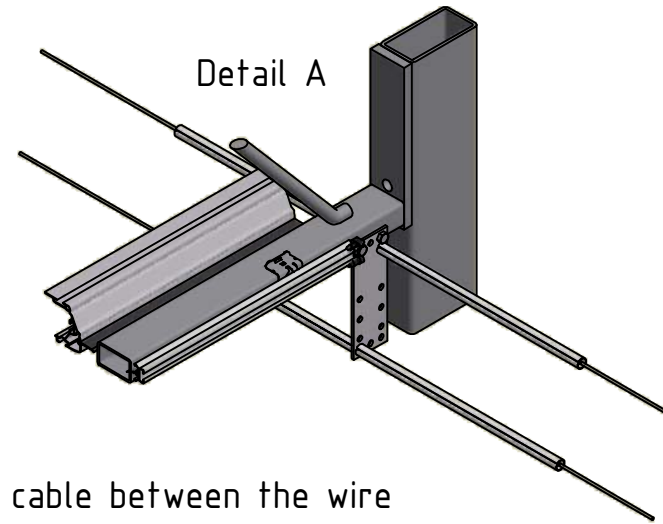
PVC pipes



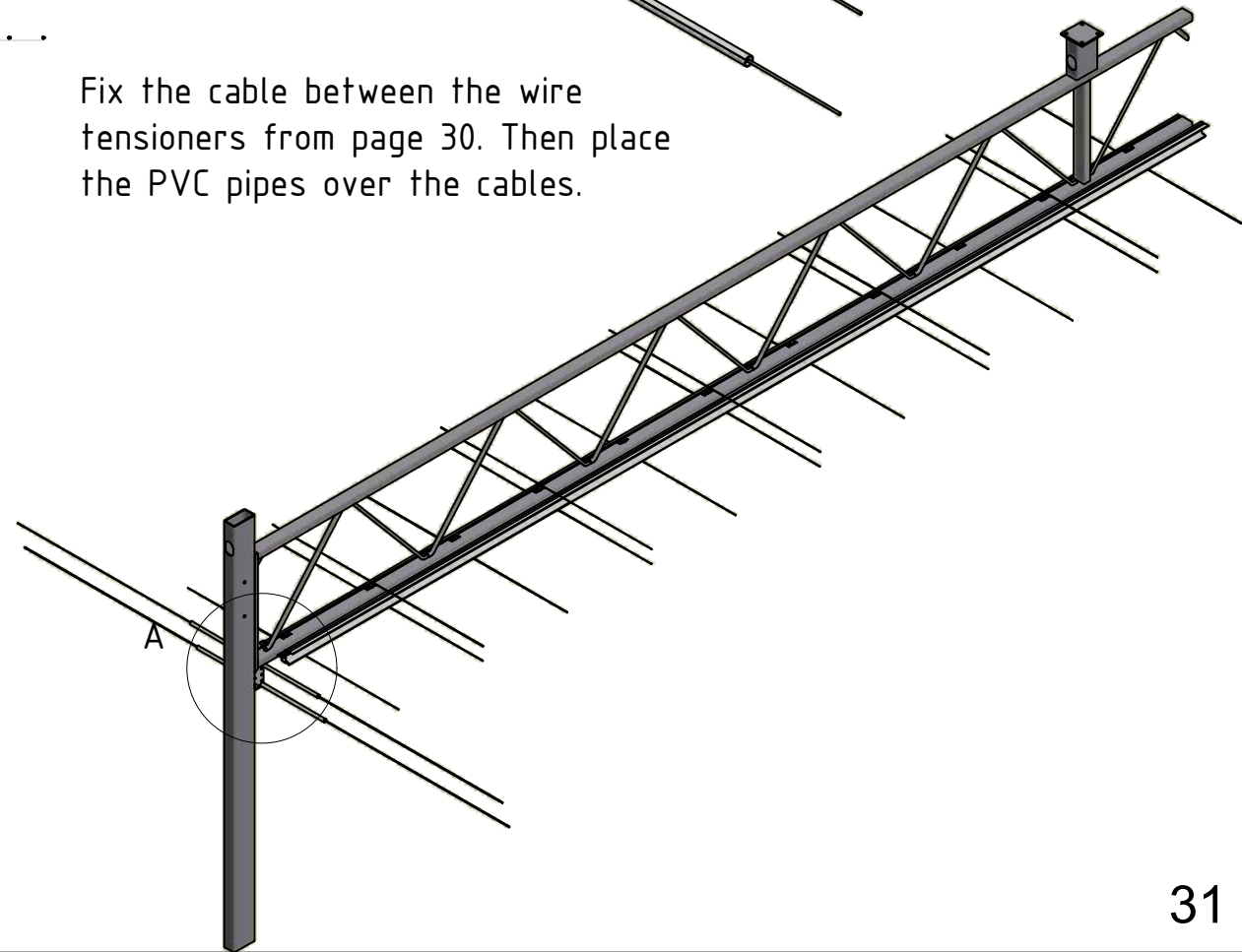
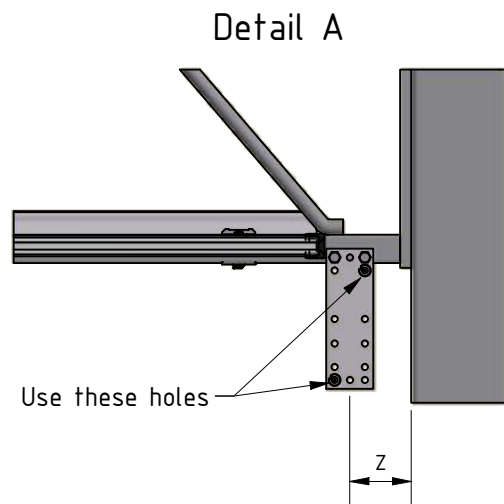
VAN DER VALK



HORTI SYSTEMS









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

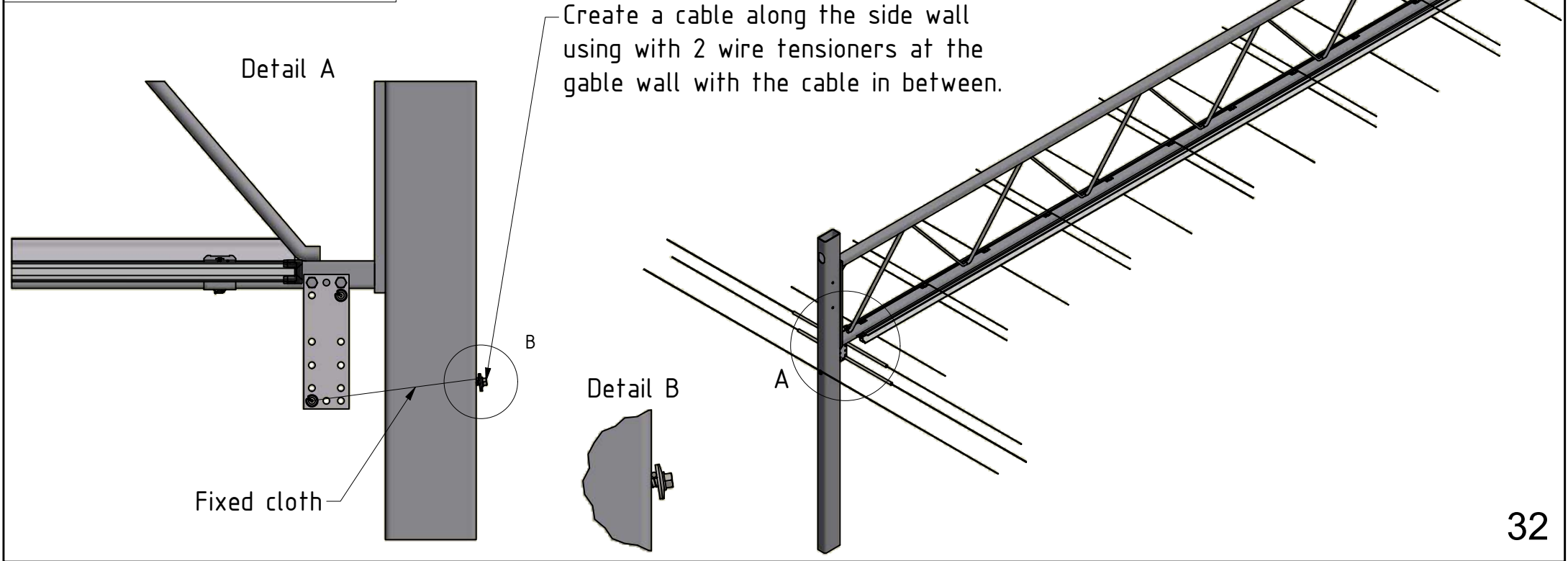
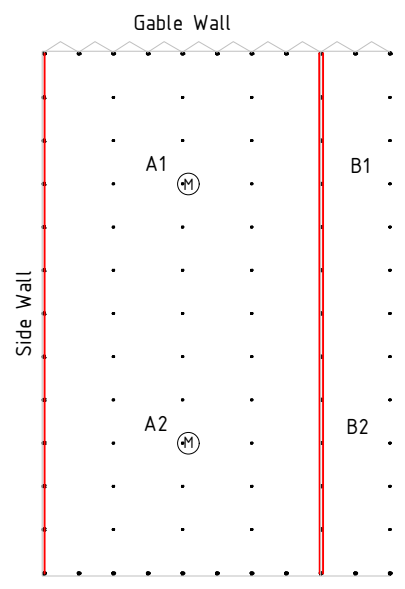


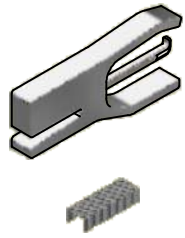


Fixed cloth

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.

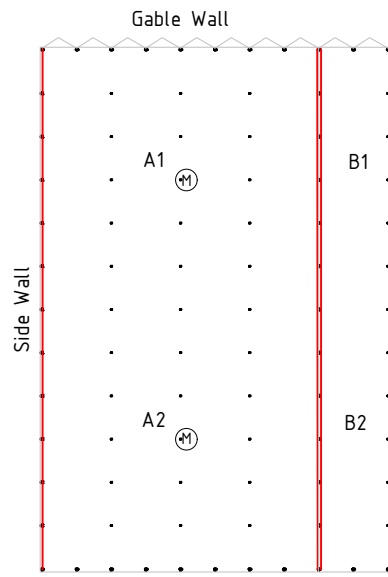
-  48.80.10
-  53.57.12
-  53.55.18
-  48.20.15
-  61.10.05
-  61.10.06





61.10.05

61.10.06

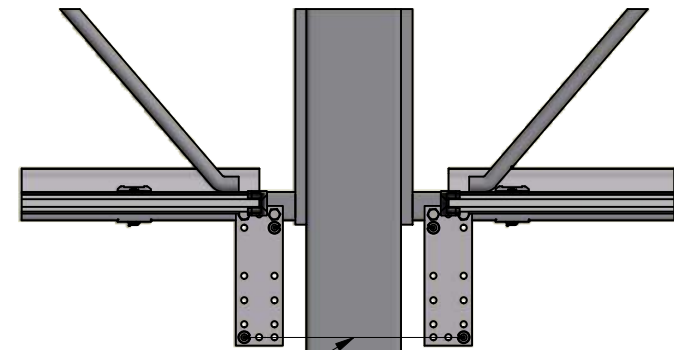


Fixed cloth

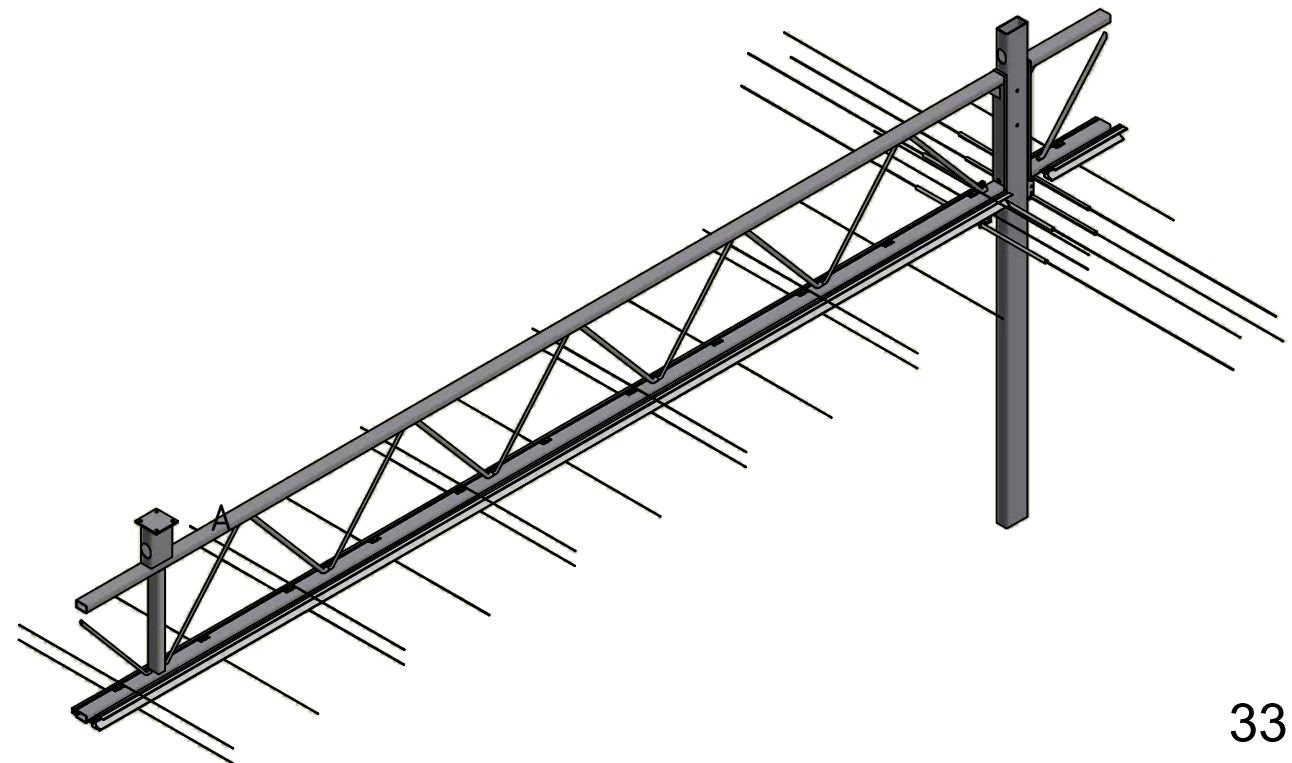
VAN DER VALK



Detail A

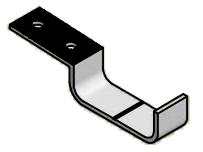
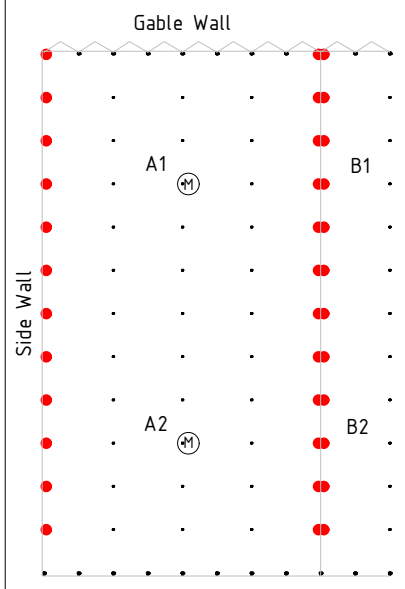


attach the fixed cloth around the cables with staples.

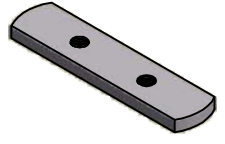




Screen guide



44.27.05



44.05.05

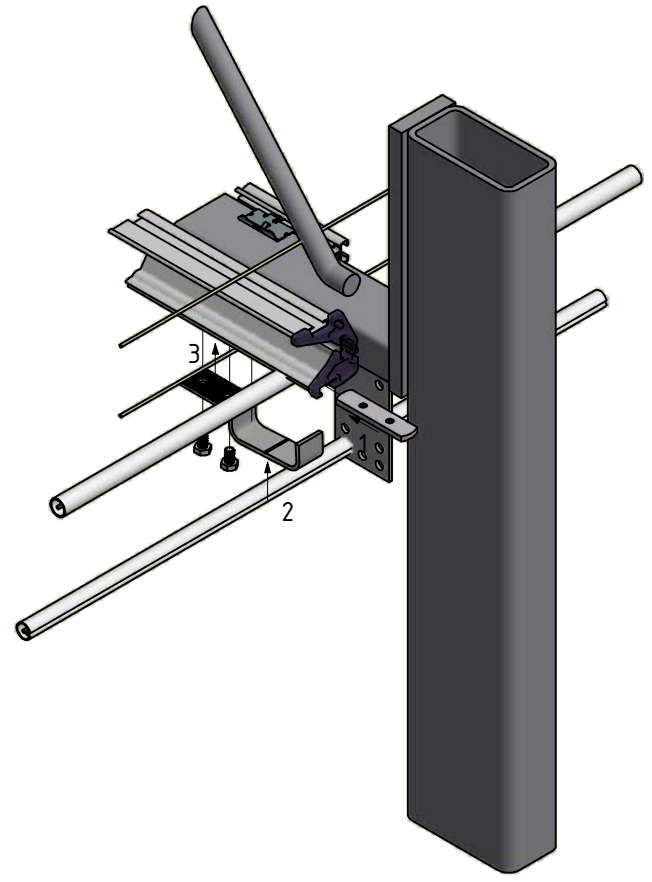
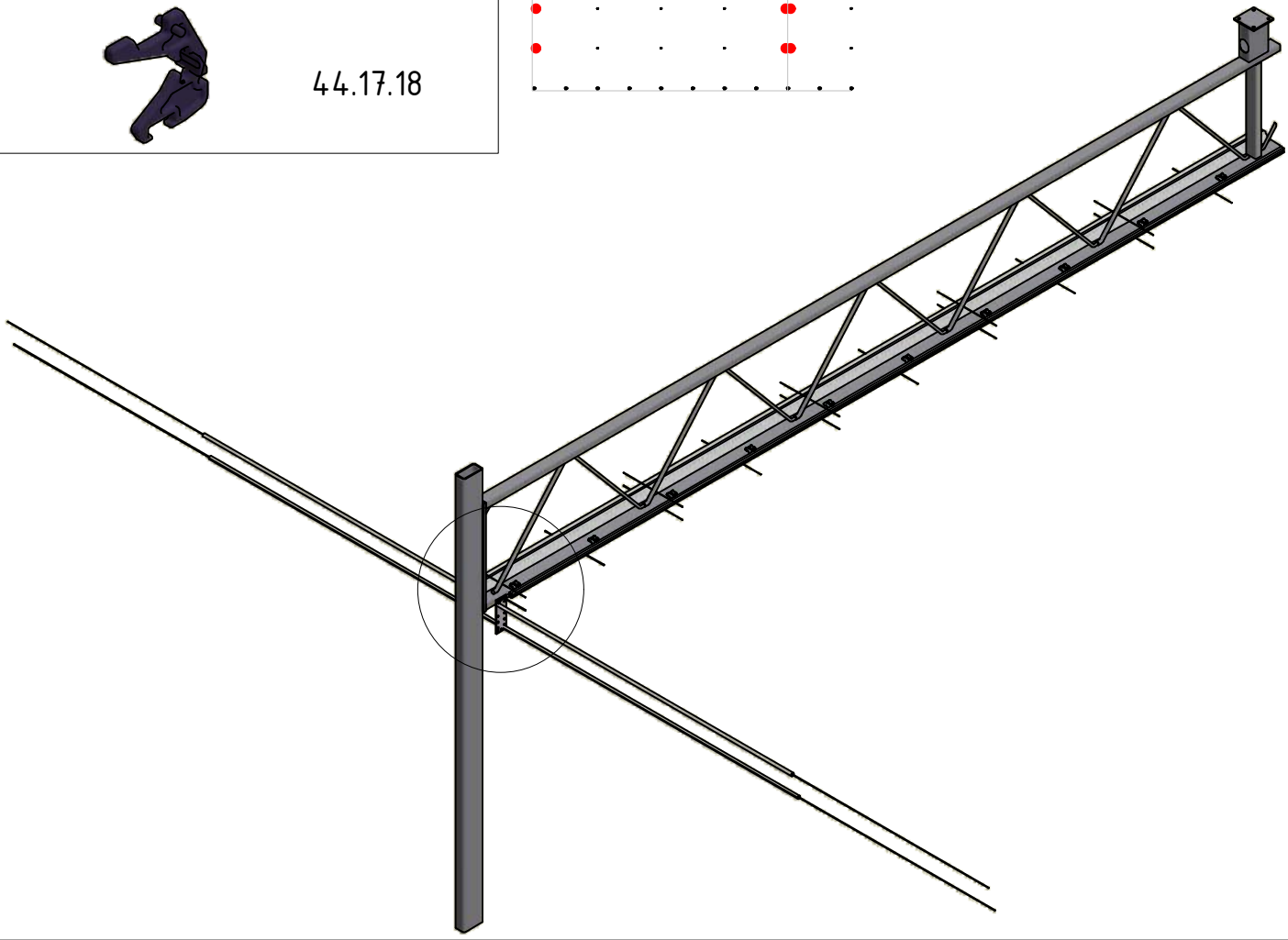
M6x10



55.30.10

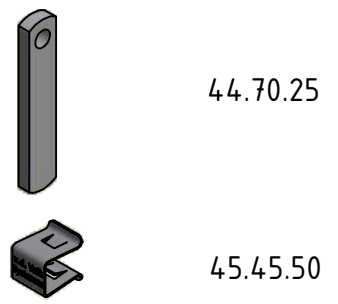


44.17.18



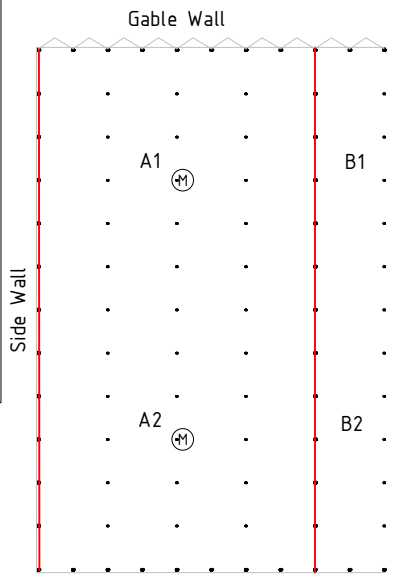


Cloth weight

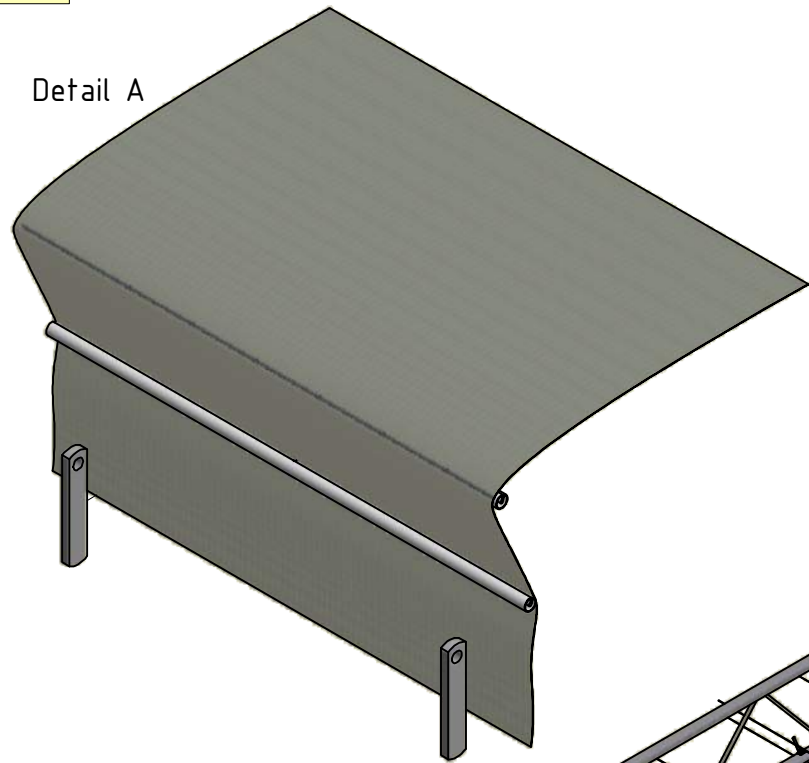


44.70.25

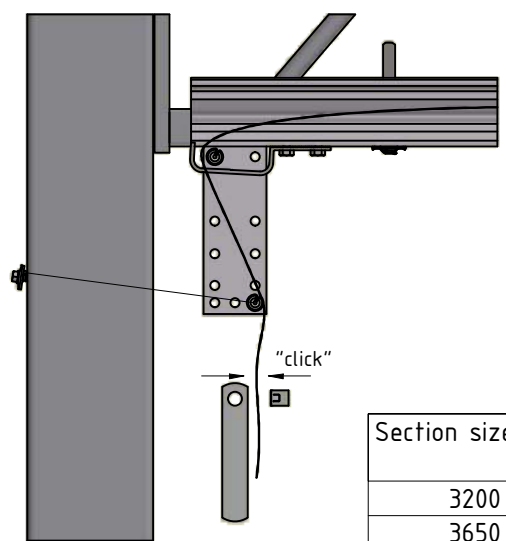
45.45.50



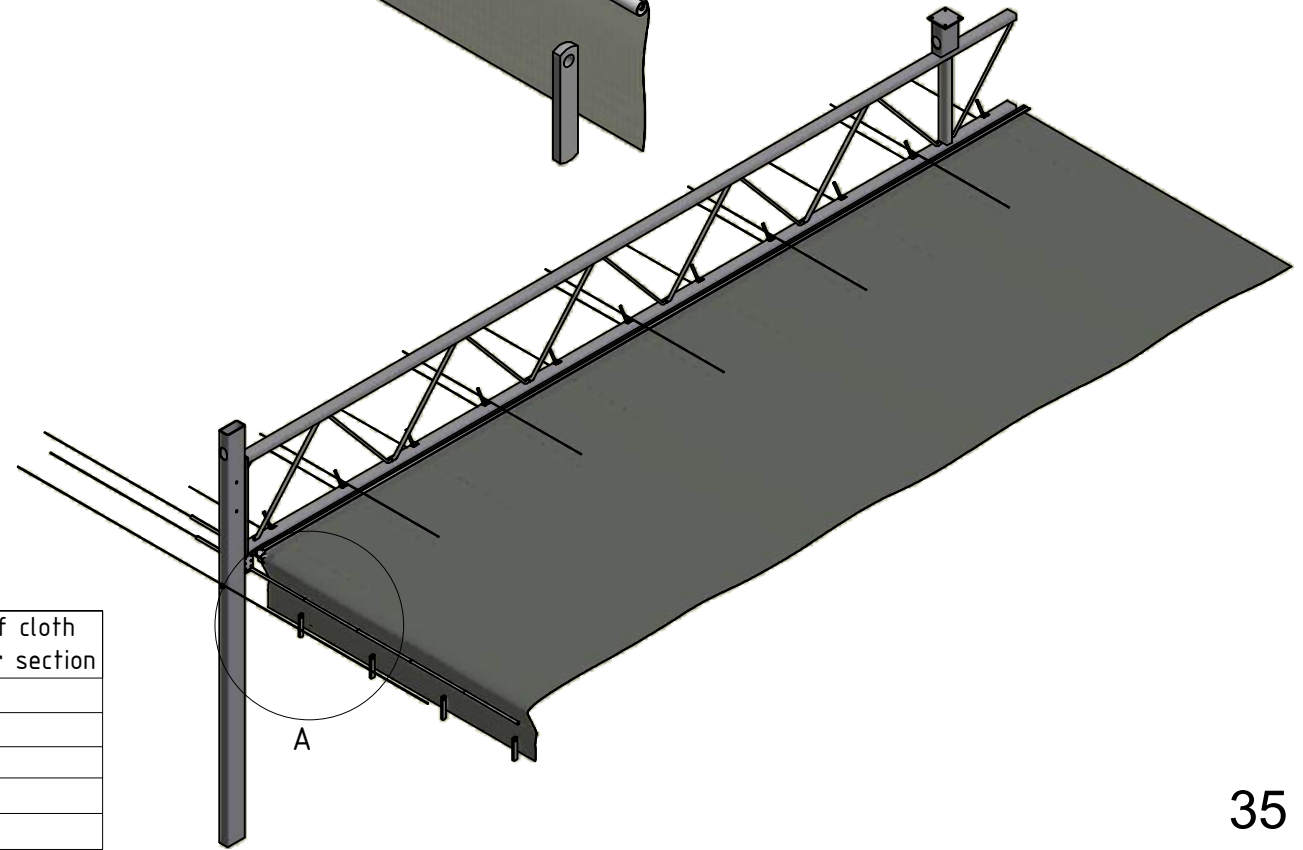
Detail A



Detail A

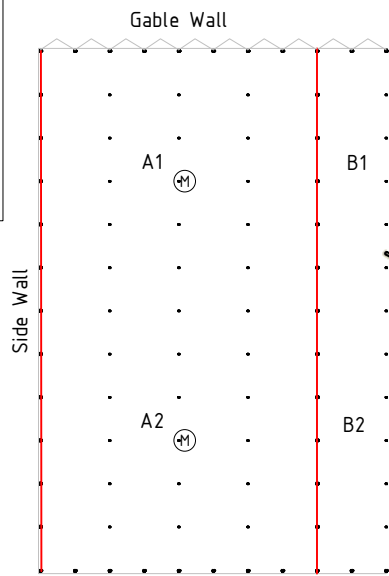


Section size [mm]	Number of cloth weights per section
3200	5
3650	5
4000	6
4500	7
5000	8



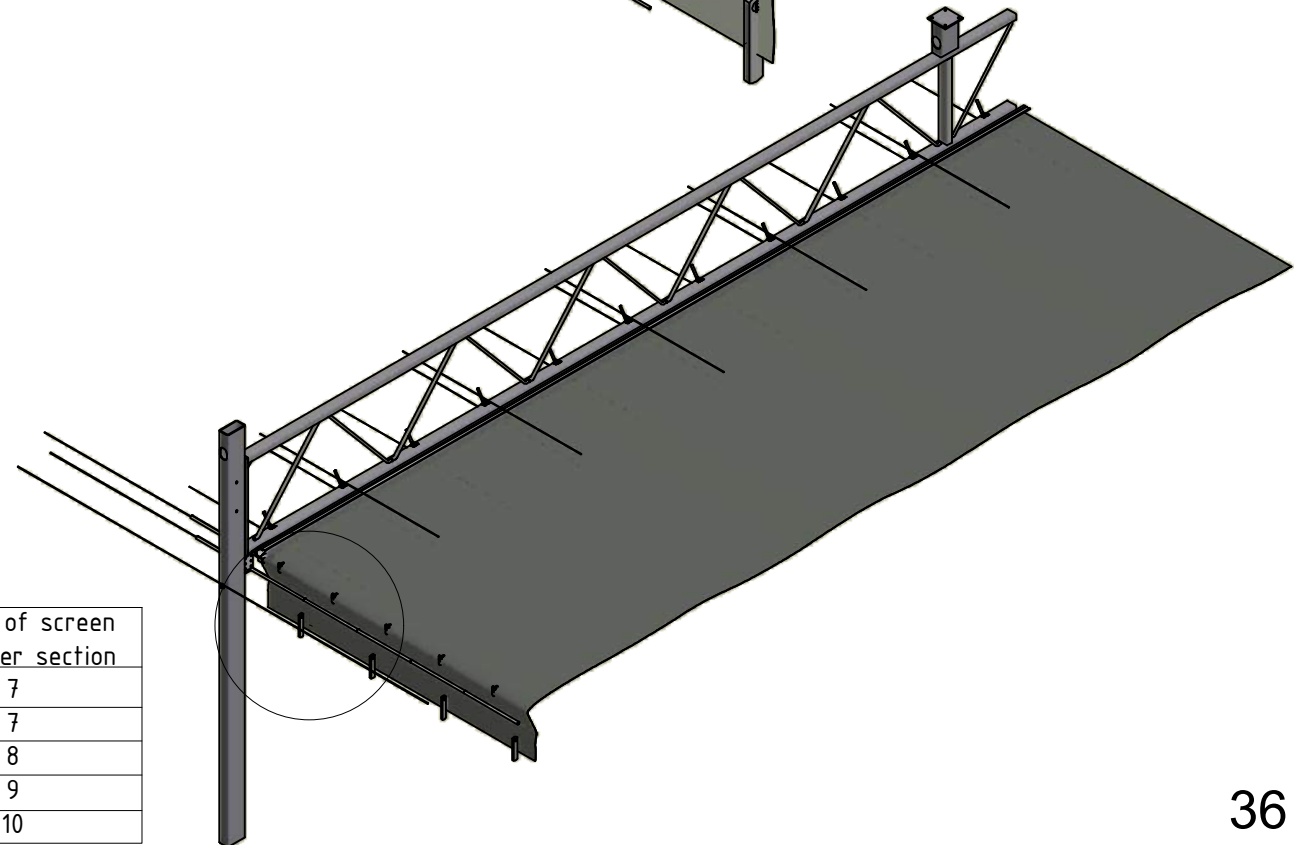
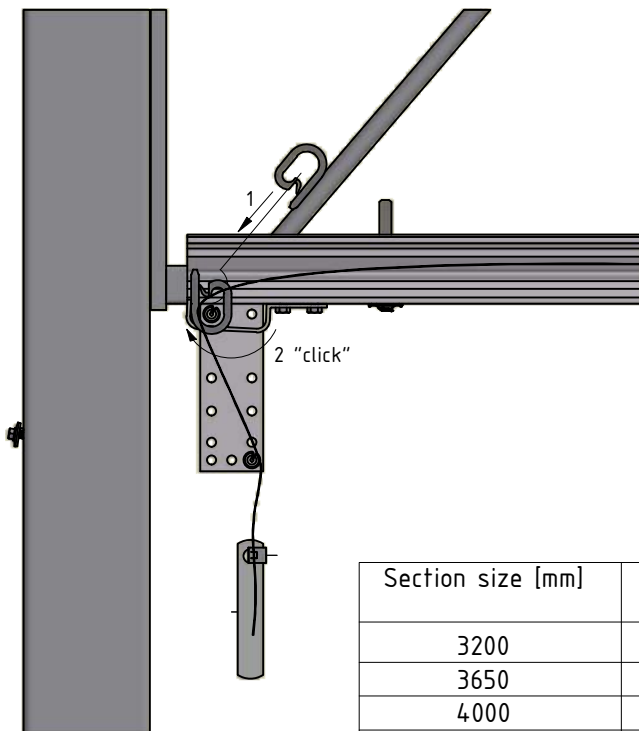
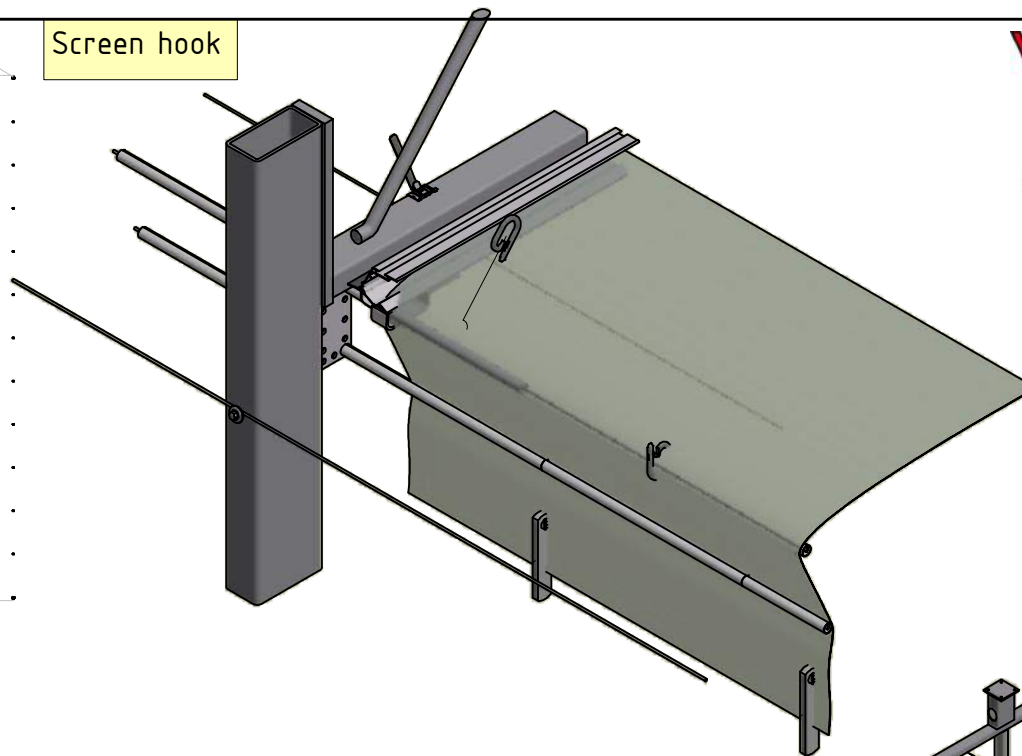


44.15.20



Screen hook

VAN DER VALK



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.