

▶ Manual



# Poly Greenhouse - ValkPoly+ Screen System

ValkScreenDrive: Pull wire

## ▶ Disclaimer

You have chosen a ValkPoly+ screen system from Van der Valk horti systems. This manual is a standard manual for specific installation drawings, see project drawings and quotation supplied separately. If you see a QR code in the manual, a movie is available with additional explanation. You can watch this movie by scanning the QR code.

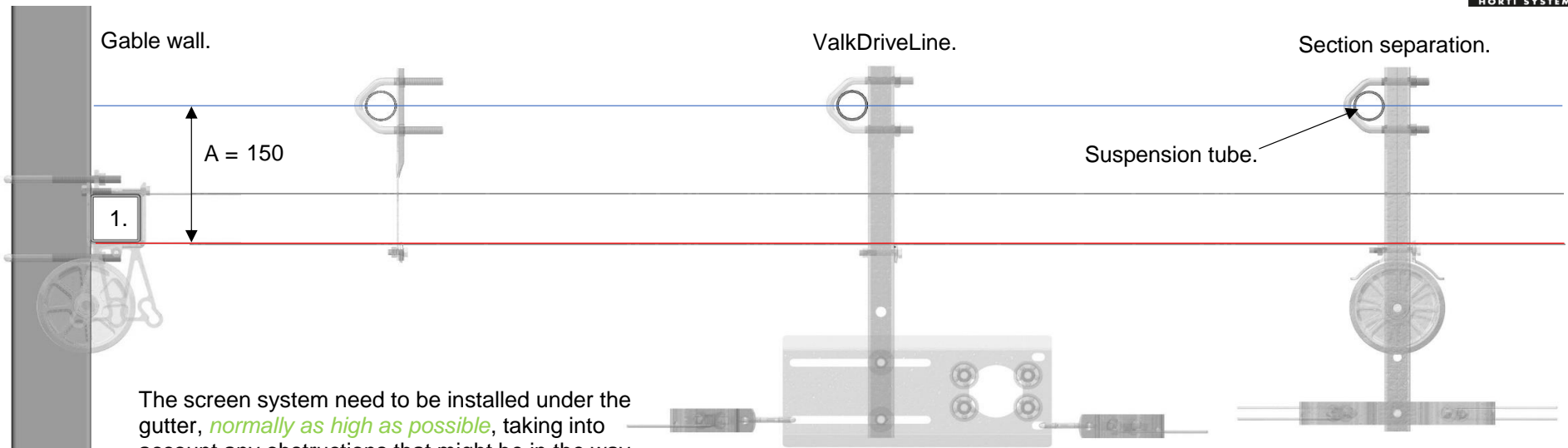
- \* This manual is not project specific.
- \* This manual is not legally binding.
- \* No right may be derived from this installation manual.
- \* Consult the cloth and motor supplier manual for installation of their products.



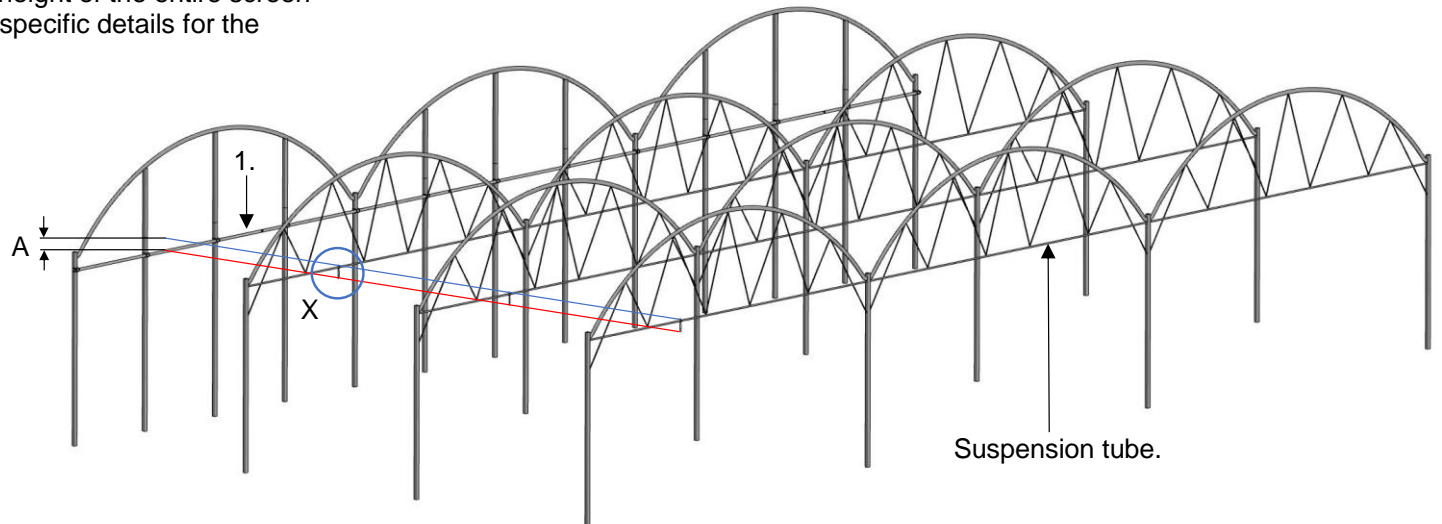
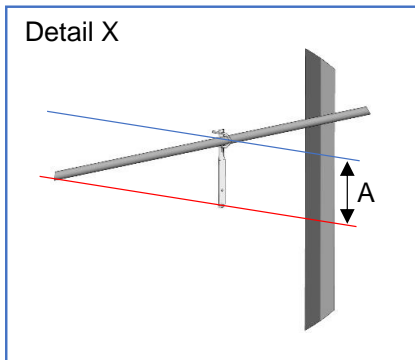
if you scan or click this QR-code you will be linked to the youtube playlist of all installation movies. you will find a specific QR-code at the page.

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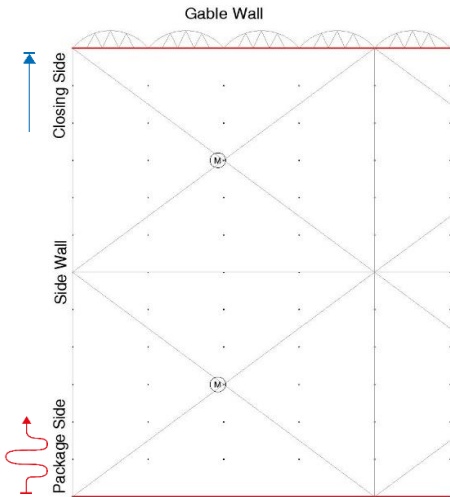
## ▶ Height determination



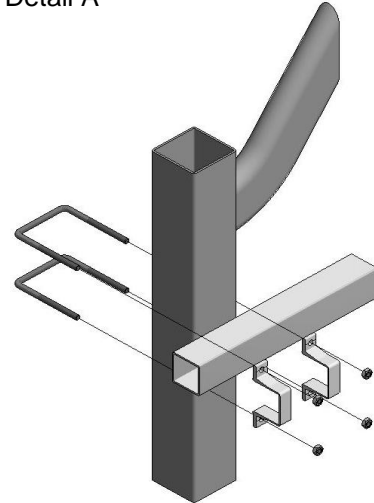
The screen system need to be installed under the gutter, *normally as high as possible*, taking into account any obstructions that might be in the way. The height of the suspension tube(s) determines the height (A) of the square tube (1.) on the gable wall, this automatically sets the height of the entire screen system. Check the project specific details for the height of A.



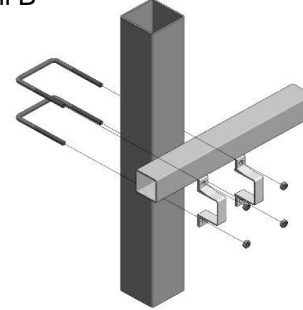
# ▶ Mounting of the Screen Tube - Gable wall



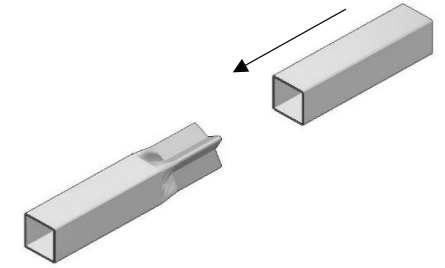
Detail A

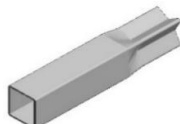

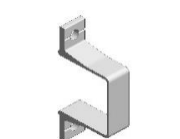




Detail B

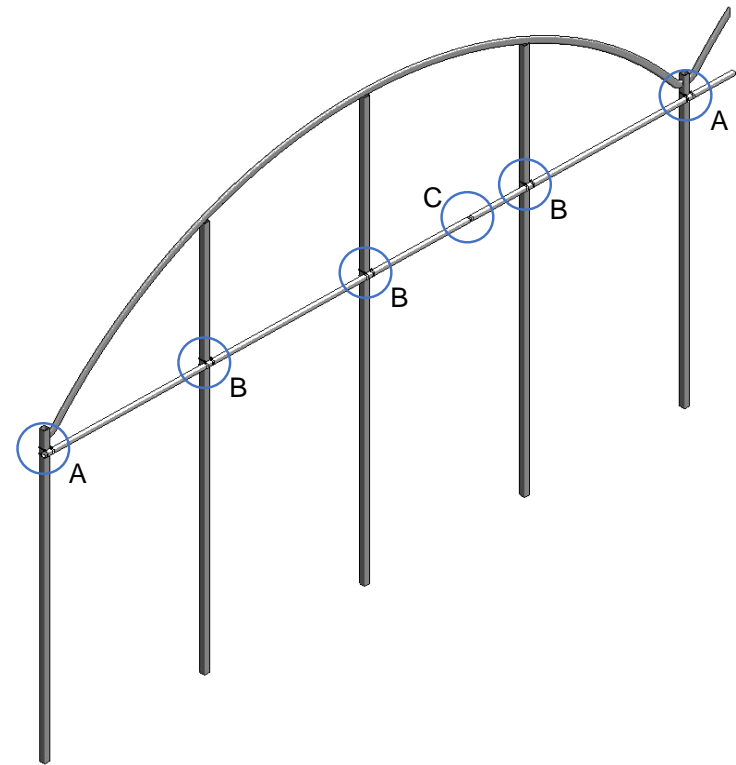
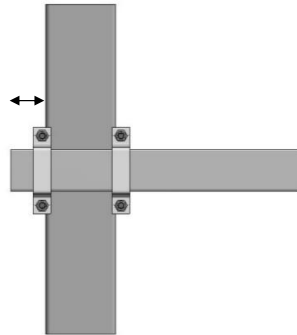


Detail C

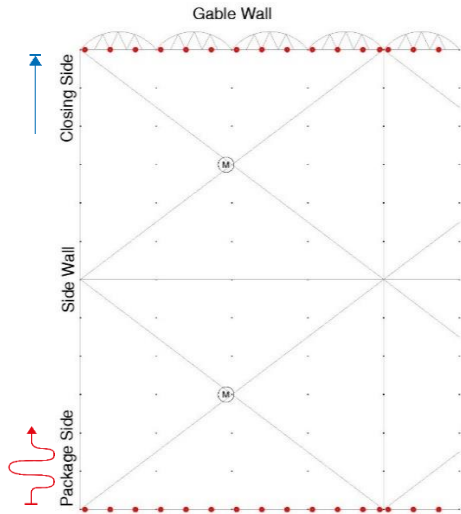


-  50.82.6500
-  44.82.37  
(70-80 mm)
-  44.82.38  
(81-102 mm)
-  44.81.01
-  55.40.00 M8

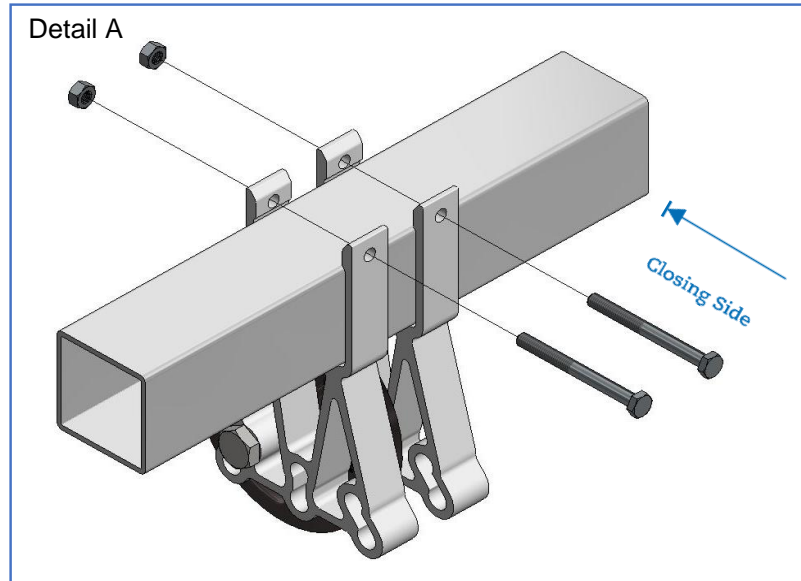
min.  
20  
mm



## ValkReversingWheel - Gable wall



Detail A



44.72.0.050.050



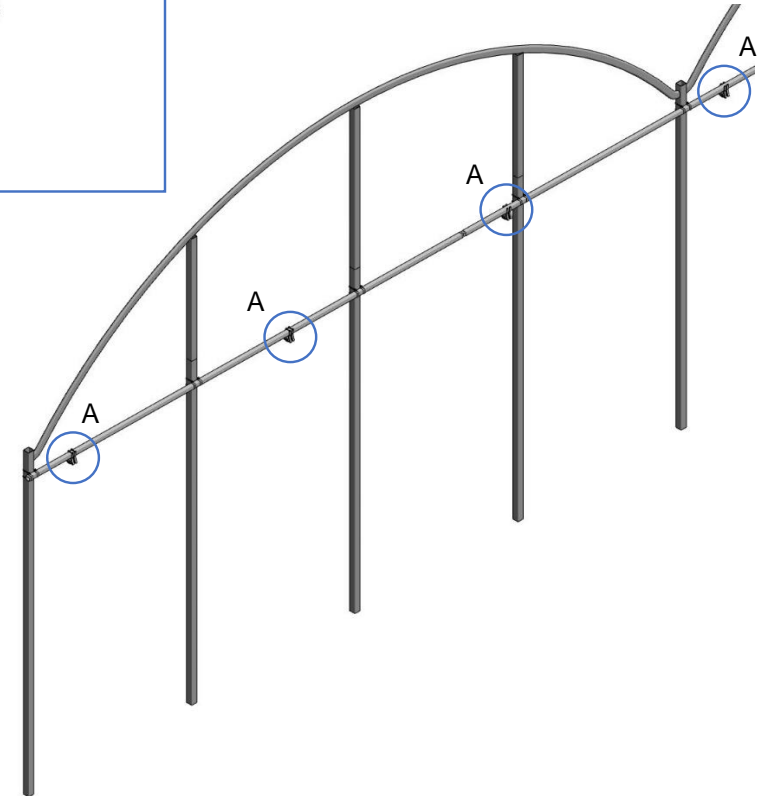
55.30.65 M6



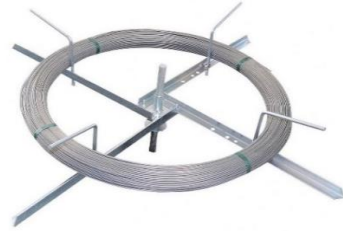
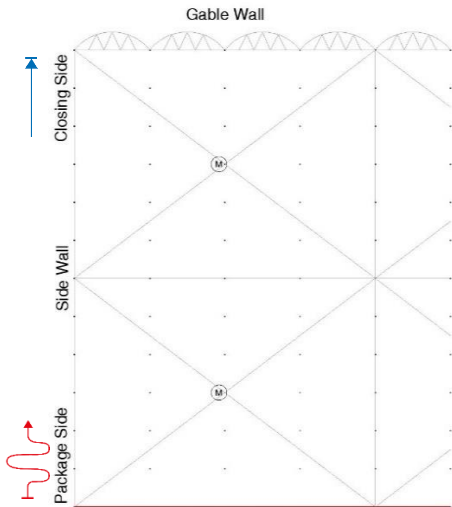
55.30.00 M6

The nuts and wheel are facing the gable wall.

Check the project specific details for the amount of pull wires per bay.  
Mount the first and last pull wire as close as possible to the side wall, this to ensure the best closure of the screen.



## ▶ Mounting of Closing wire - Gable wall



Use a tool to unwind the galvanized wire without twisting.

Check the project specific details for the amount of clamp connections in detail B.

Clamp the wire in the middle of the bay and by the columns.

Note:  
Tension the wire before clamping the wire.

Clamp the wire at the last column.



48.25.20



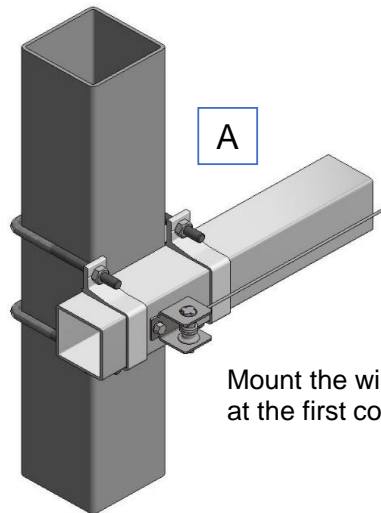
48.80.10



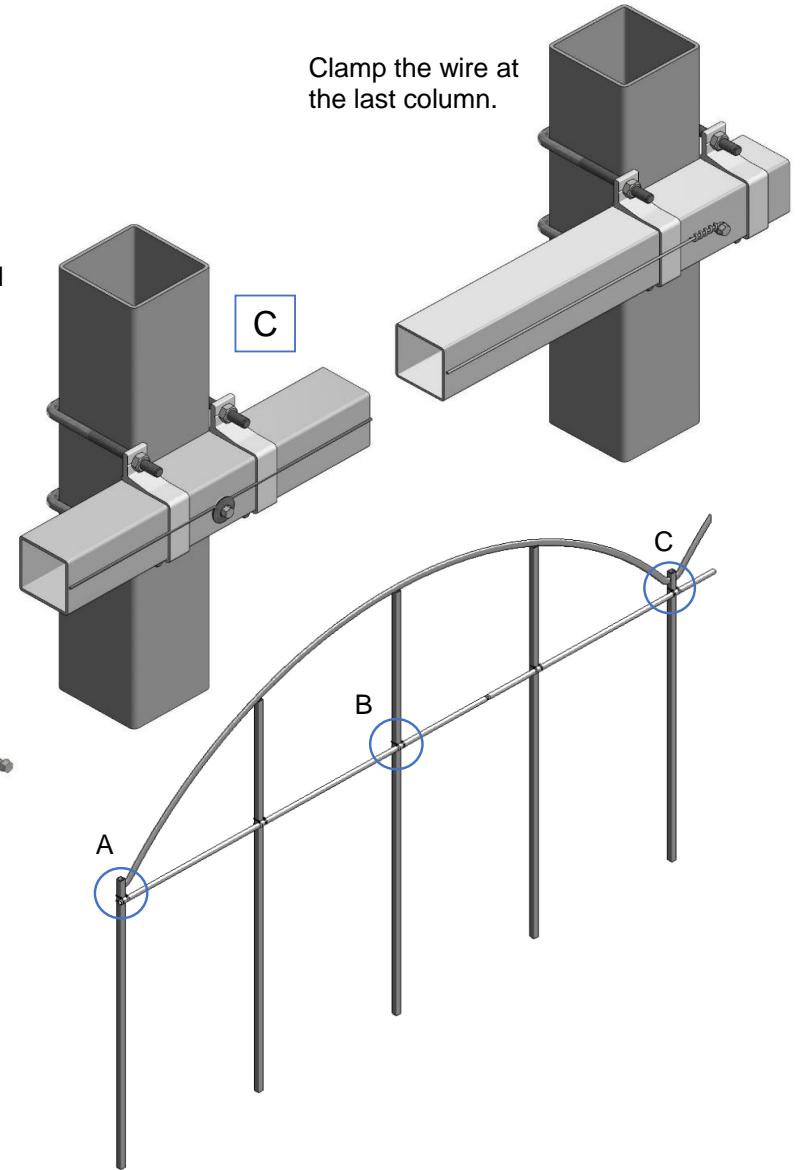
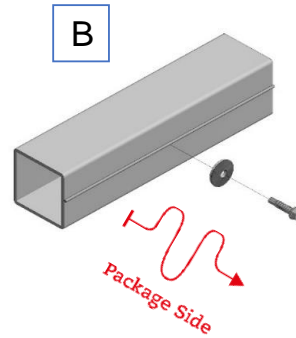
53.57.12



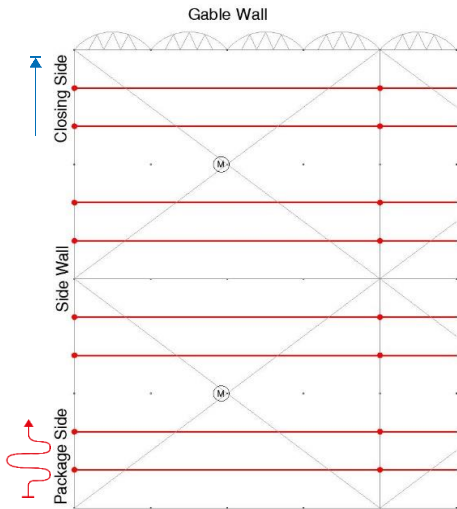
53.54.22



Mount the wire strainer at the first column.



## ▶ Mounting of Closing wire - Middle sections



Check the project specific details for the amount of the ValkPolyStrips in detail B, the strip does not occur in the middle of a bay (section separation) or on the driveshaft lines.

Clamp the wire in the middle of the bay and at the columns.

Note: Tension the wire before clamping the wire.

Tie a knot around the last side wall column.

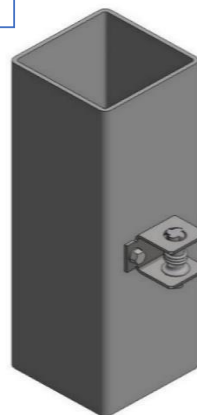
Mount the wire strainer at the first side wall column.

Restart this pattern for every zone.

**A**

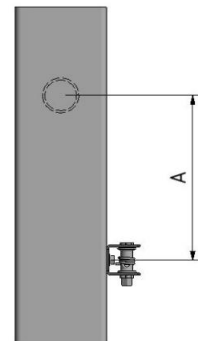
**B**

**C**

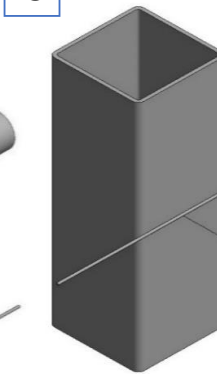


Package Side

Closing Side



Height difference between the closing wire and the suspension tube, see page A1.



**A**

**B**

**C**

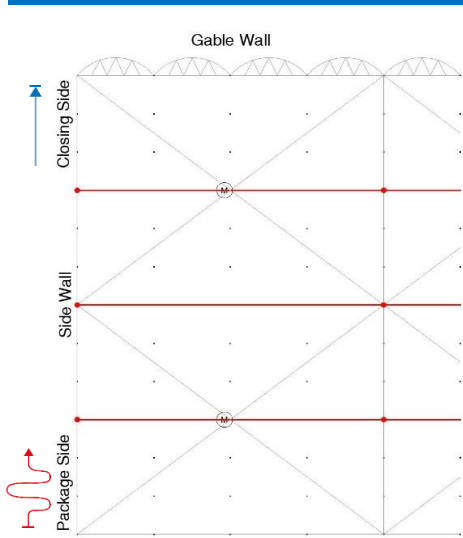


Use a tool to unwind the galvanized wire without twisting.

	44.47.150	A=150
	48.25.20	
	48.80.10	
	44.82.45	M8
	55.40.00	M8
	53.54.22	
	55.30.16	M6
	55.30.00	M6
	53.57.12	



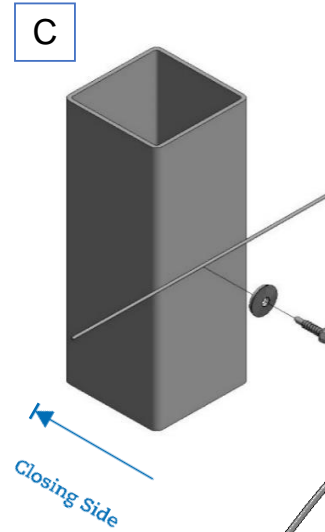
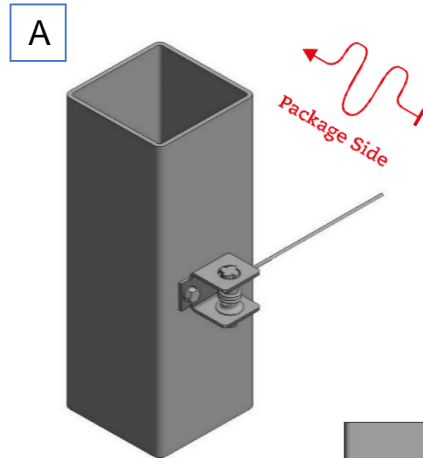
## ▶ Mounting of Closing wire - ValkDriveLine and Section separation



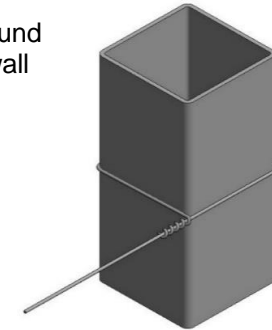
Clamp the wire in the middle of the bay and at the columns.

Note: Tension the wire before clamping the wire.

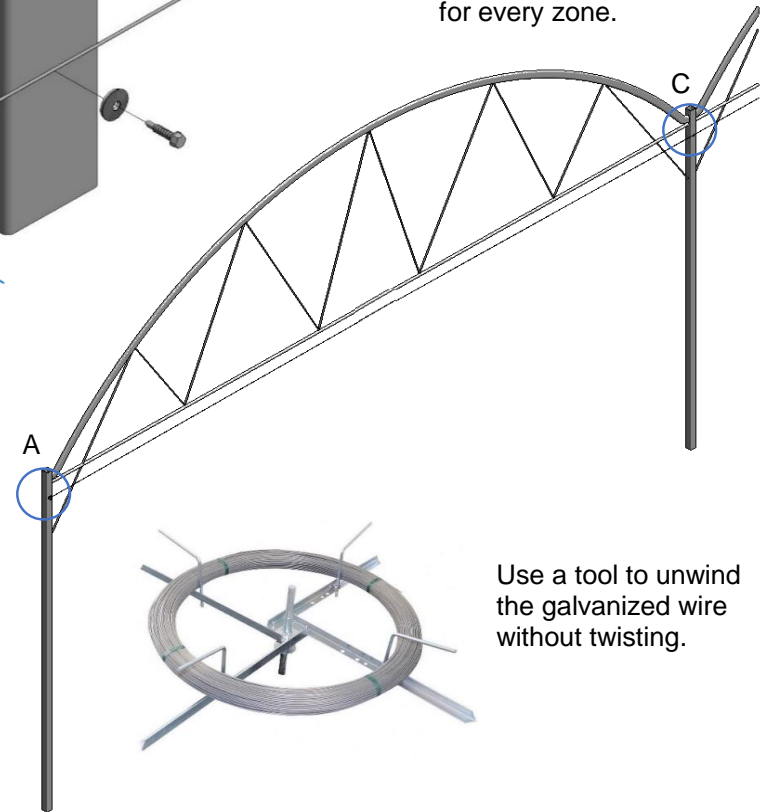
Mount the wire strainer at the first side wall column.



Tie a knot around the last side wall column.

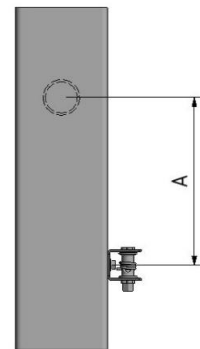






Restart this pattern for every zone.



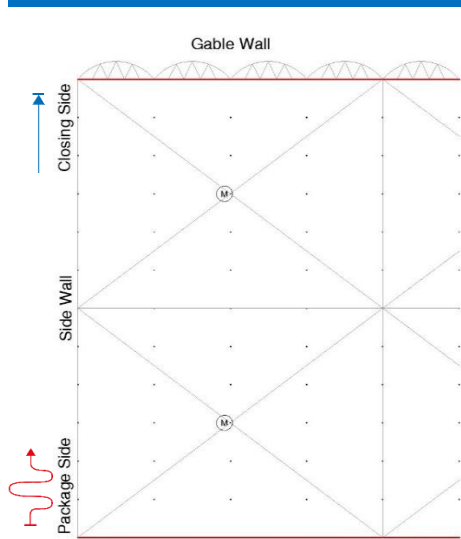
Use a tool to unwind the galvanized wire without twisting.

Height difference between the closing wire and the suspension tube, see page A1.



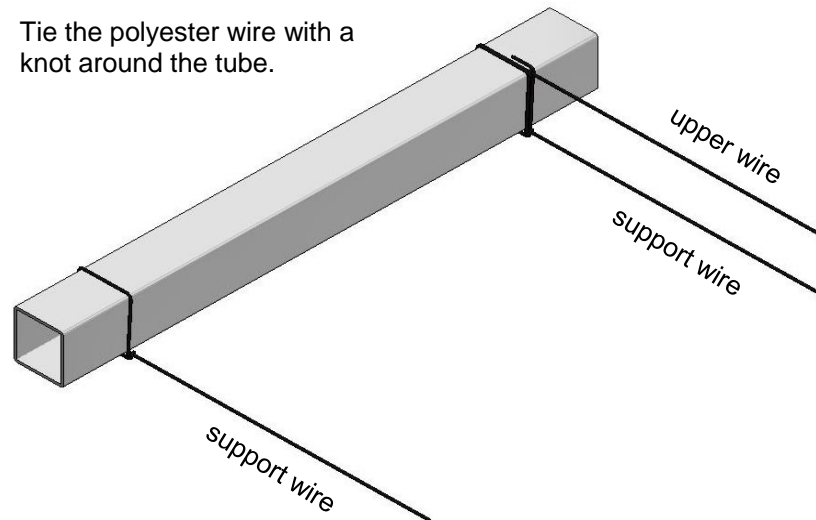
	48.25.20
	48.80.10
	53.57.12
	53.54.22

## ▶ Mounting of Polyester Wires



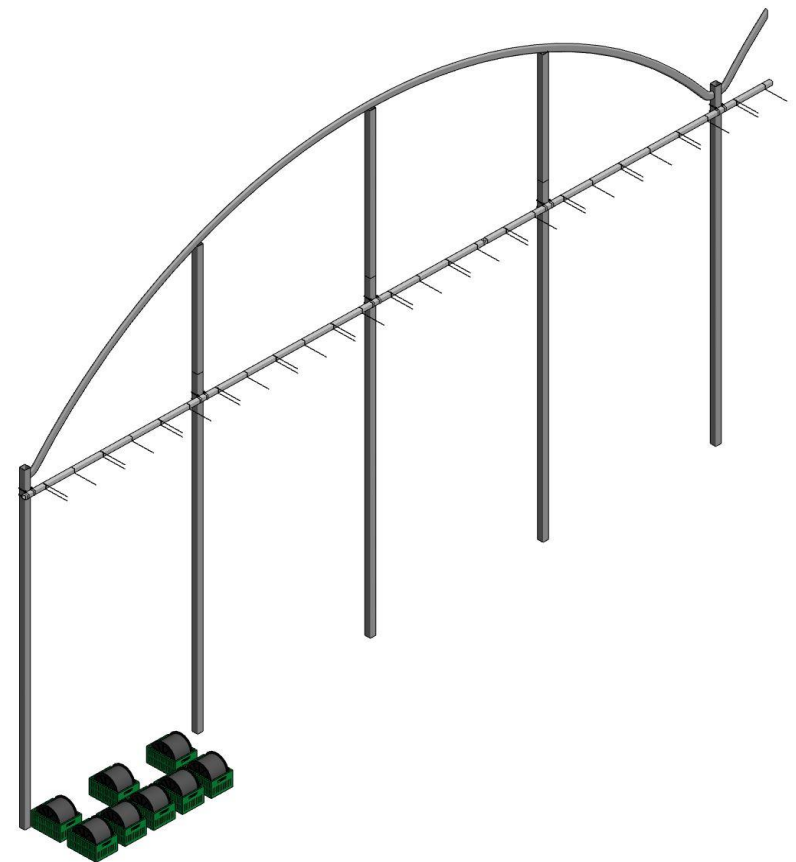
48.50.35

Tie the polyester wire with a knot around the tube.

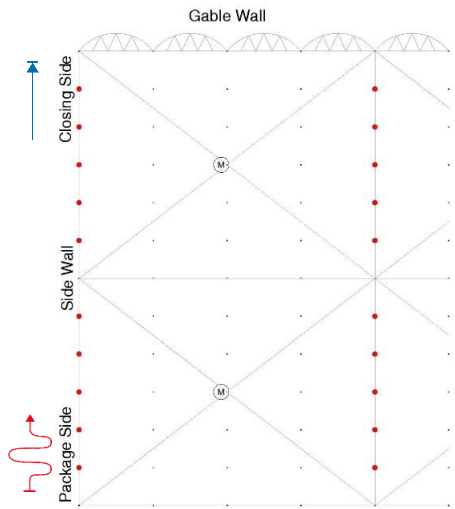


Note:  
The Polyester wires are mounted from gable wall to gable wall, check the project specific details for the exact distance between them.

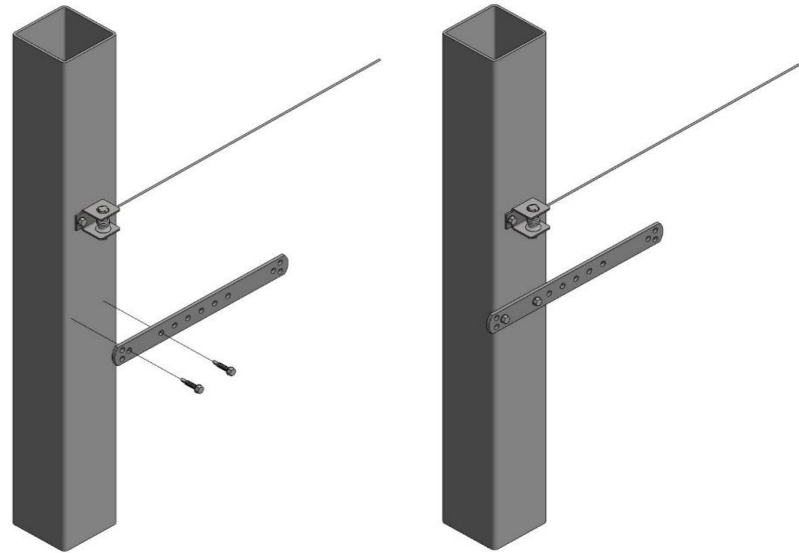
Use a tool like a crate, axle or a wire reel to unwind the polyester wire without twisting.



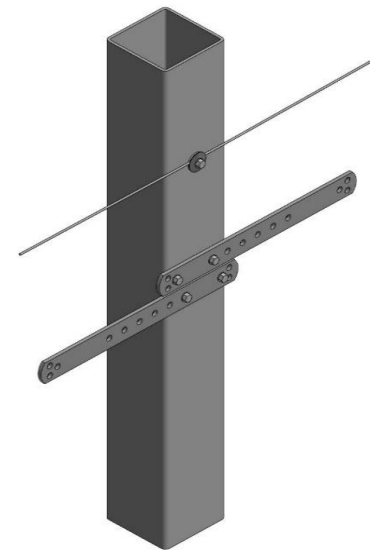
## ▶ Cloth Hangdown Wires (Energy Hangdown)



Side column:



Column at section separation:

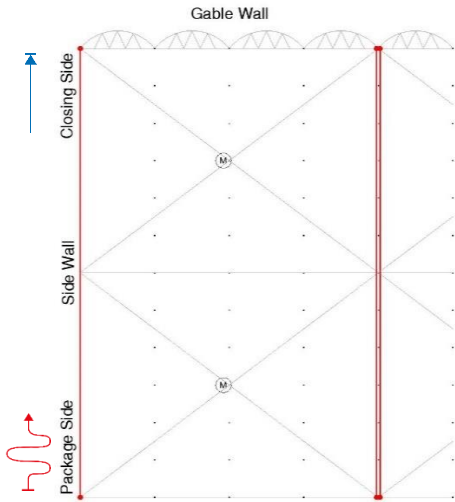


44.27.55

53.57.12

Note:  
Mount the column strips before  
installing the hangdown wires.

## ▶ Cloth Hangdown wires (Energy Hangdown)



48.25.20



44.82.35



44.84.25



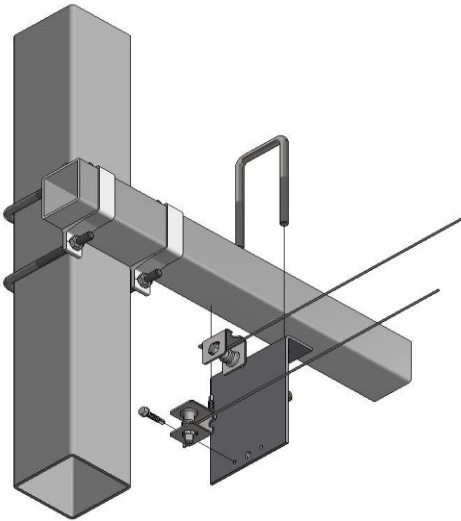
55.40.00



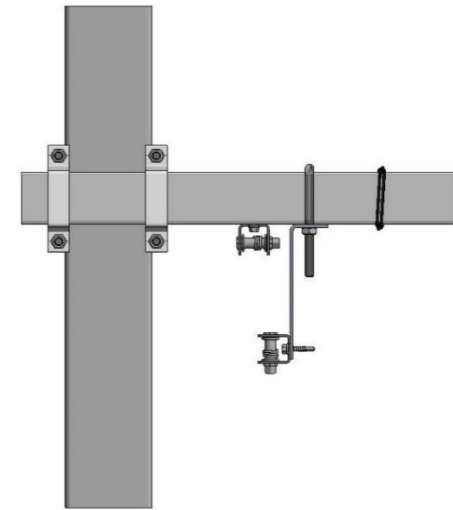
48.80.10



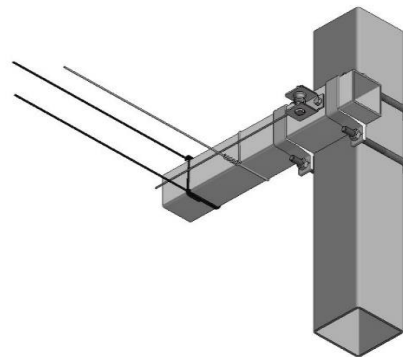
53.57.12



String (thread) the bottom hangdown wire through the column strips before fixating the wires.

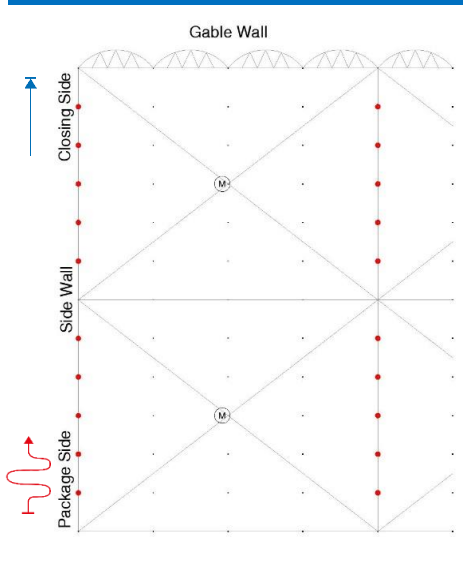


Tension the wires with the wire strainers at the first column.



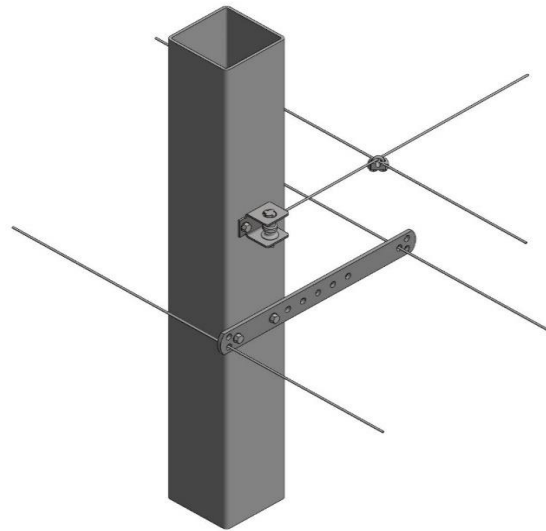
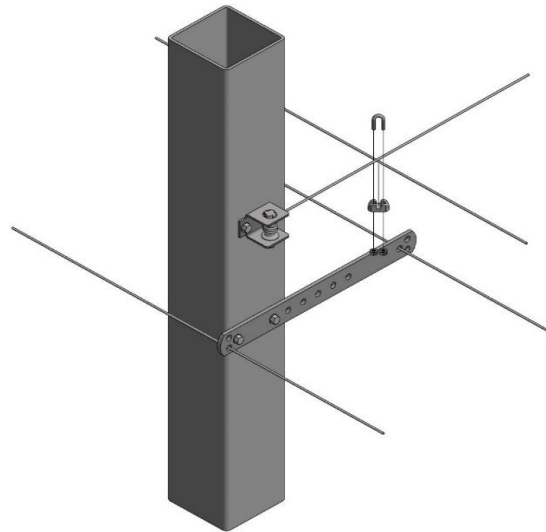
Tie a knot around the tube at the last column.

## ▶ Cloth Hangdown wires (Energy Hangdown)

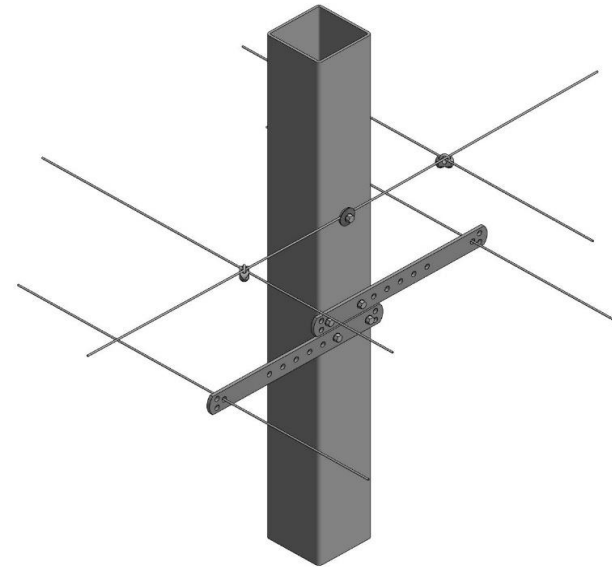


48.80.30

Side column:



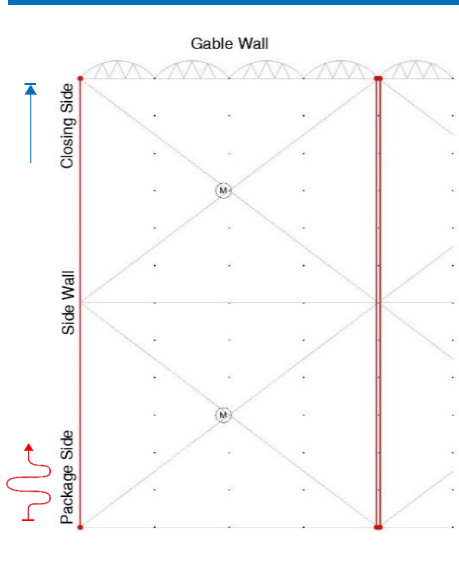
Column at section separation:



Clamp the hangdown wire to the closing wire at the side column.

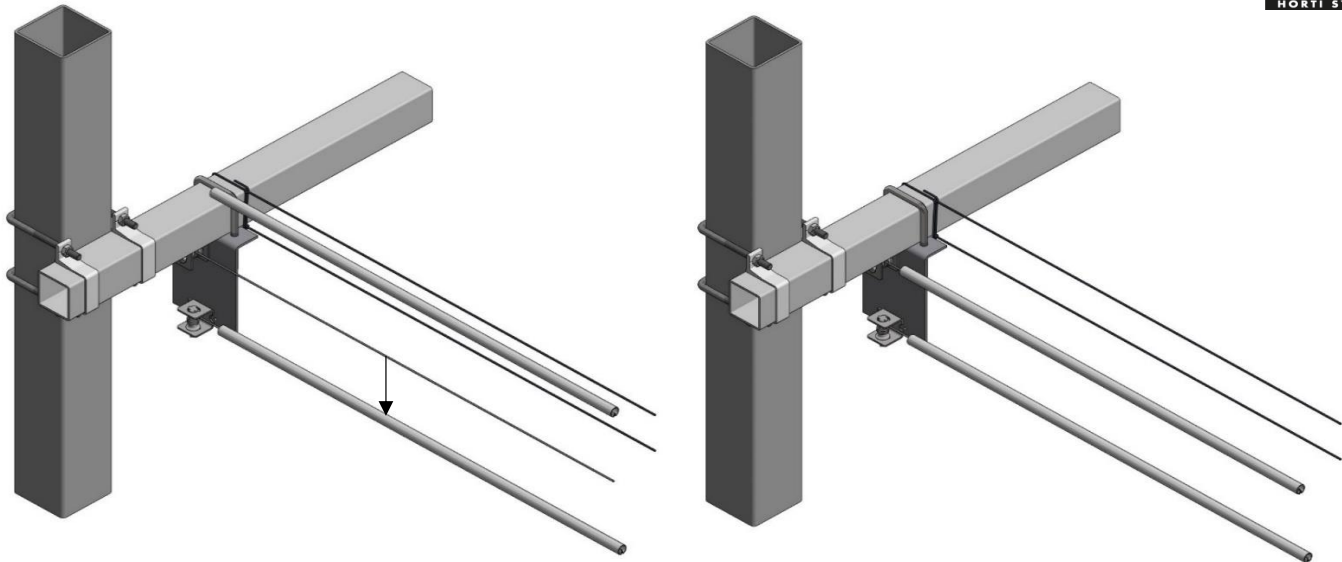
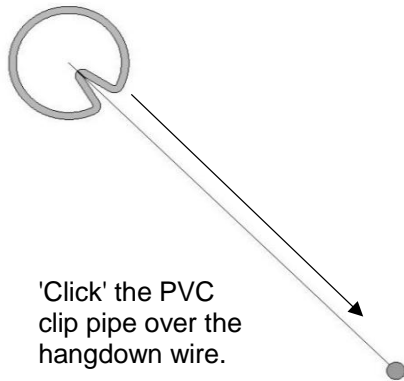
Note:  
Tension the hangdown wire before clamping it to the closing wire, see previous page.

## ▶ Cloth Hangdown (Energy Hangdown)

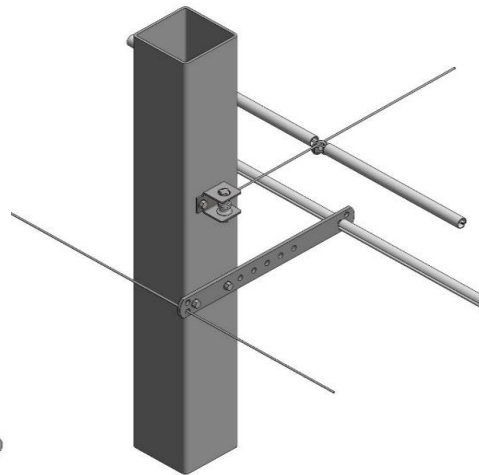


48.60.-----

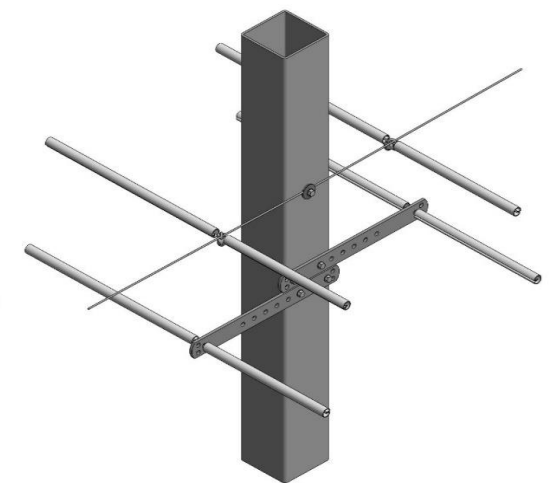
Attention:  
The energy screen cloth must be  
installed before the PVC clip  
pipe. See page P2.



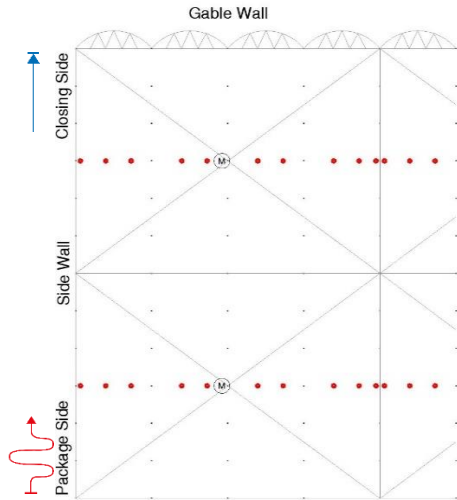
Side column:



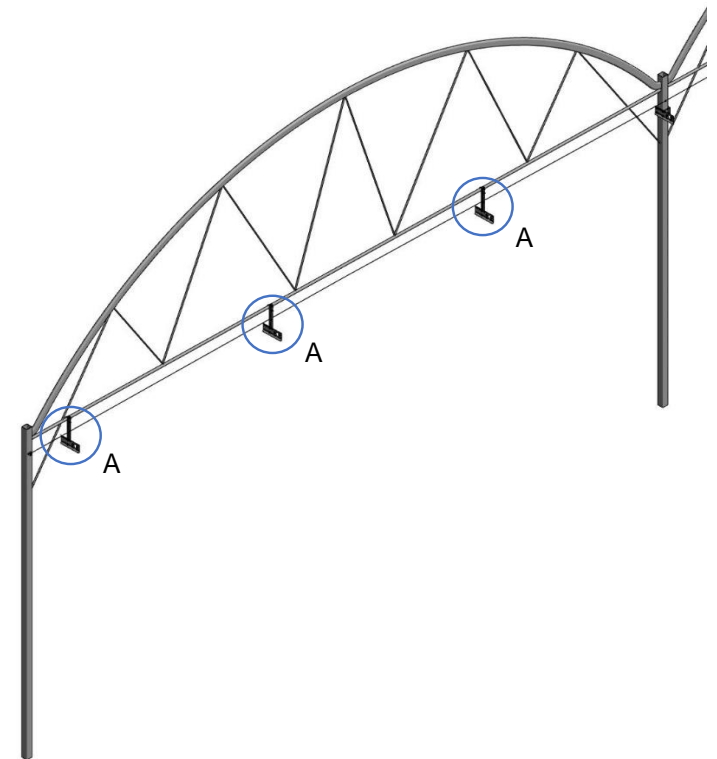
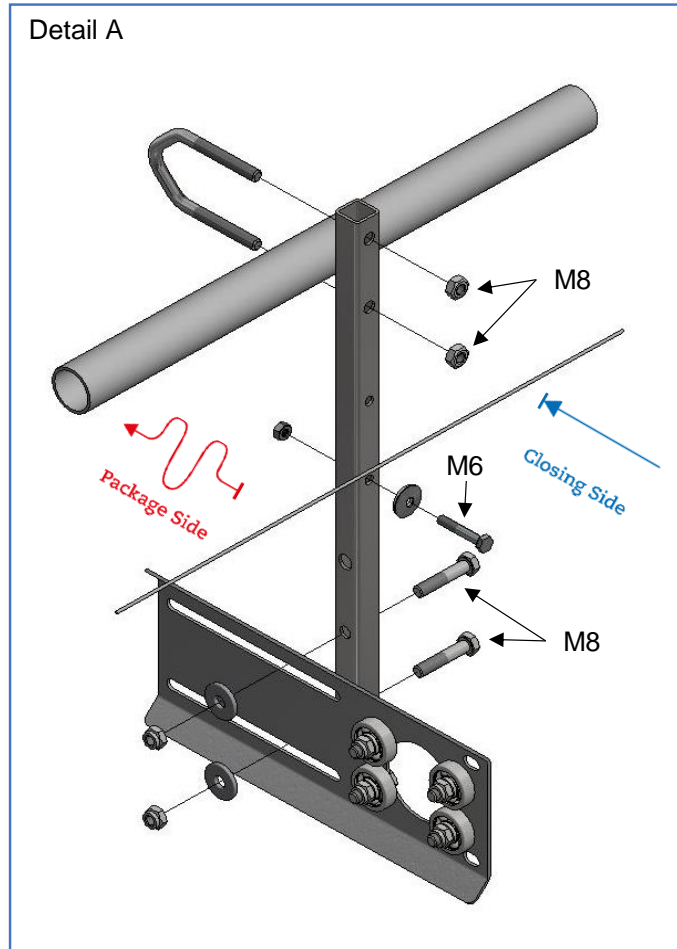
Column at section separation:



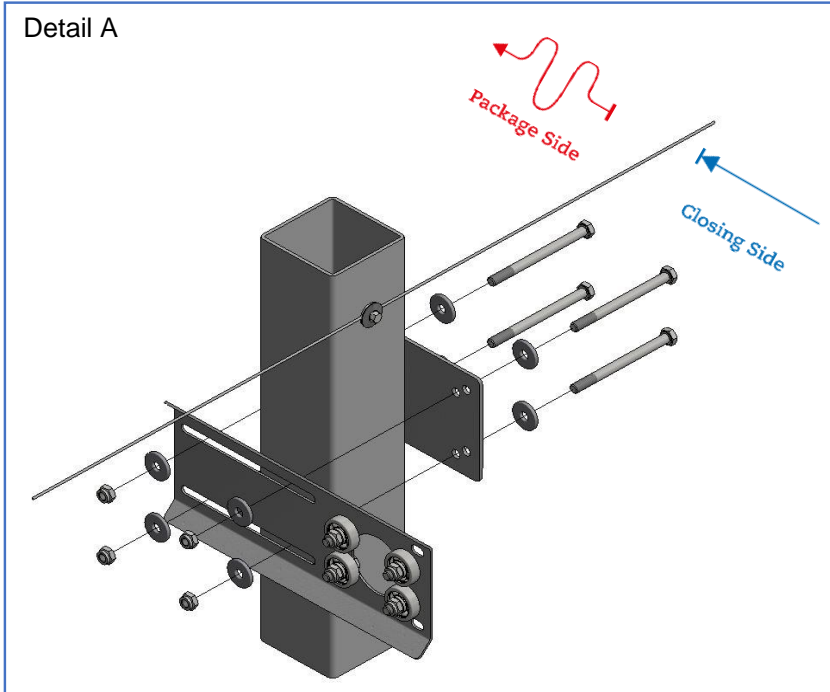
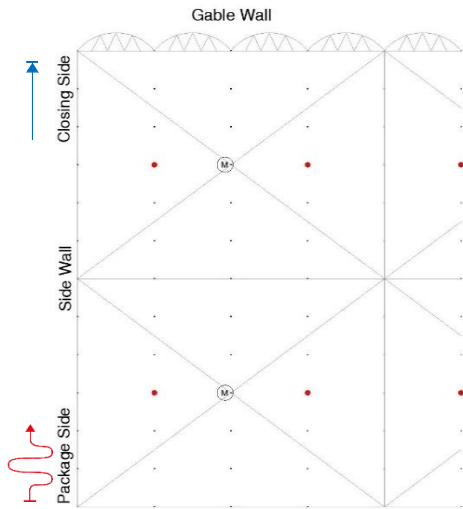
# ValkDriveLine - ValkBearingBracket in Bay








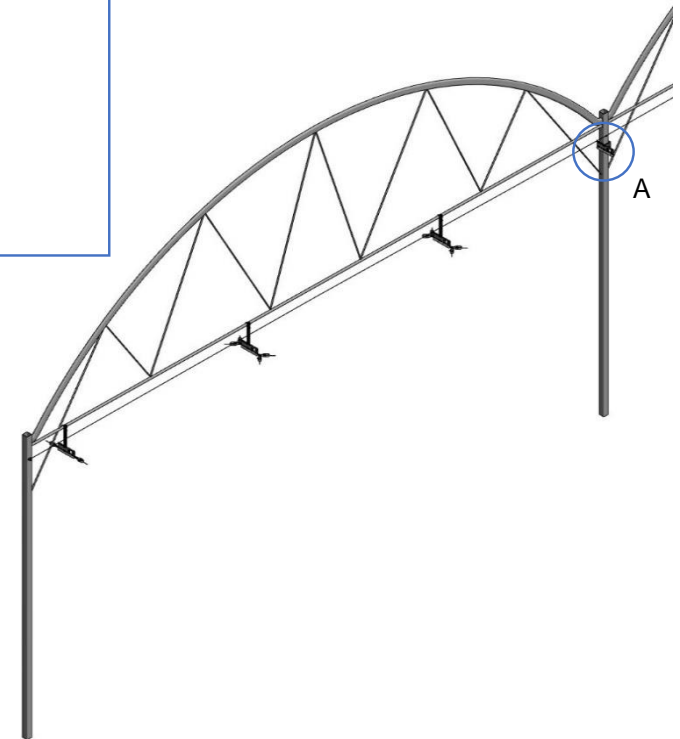
	44.48.150	A=150
	44.82.26	
	45.55.08	M8
	55.40.00	M8
	55.40.40	M8
	55.40.05	M8
	53.55.37	M8
	55.30.35	M6
	55.30.00	M6
	53.54.22	



# ValkDriveLine - ValkBearingBracket at the Column

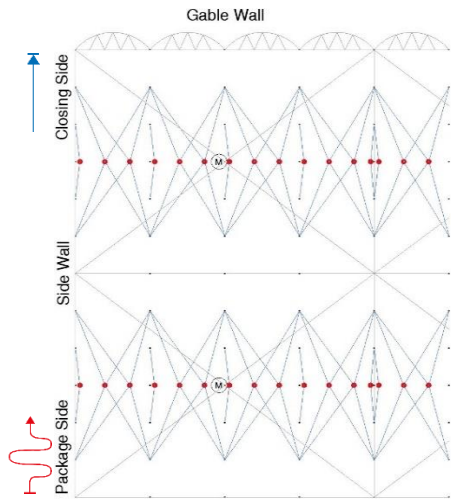


-  44.82.26
-  44.82.27
-  55.41.-- M8  
↑  
(Column width + 20 mm)
-  53.55.37 M8
-  55.40.05 M8





## ValkDriveLine - Bracing of ValkBearingBracket



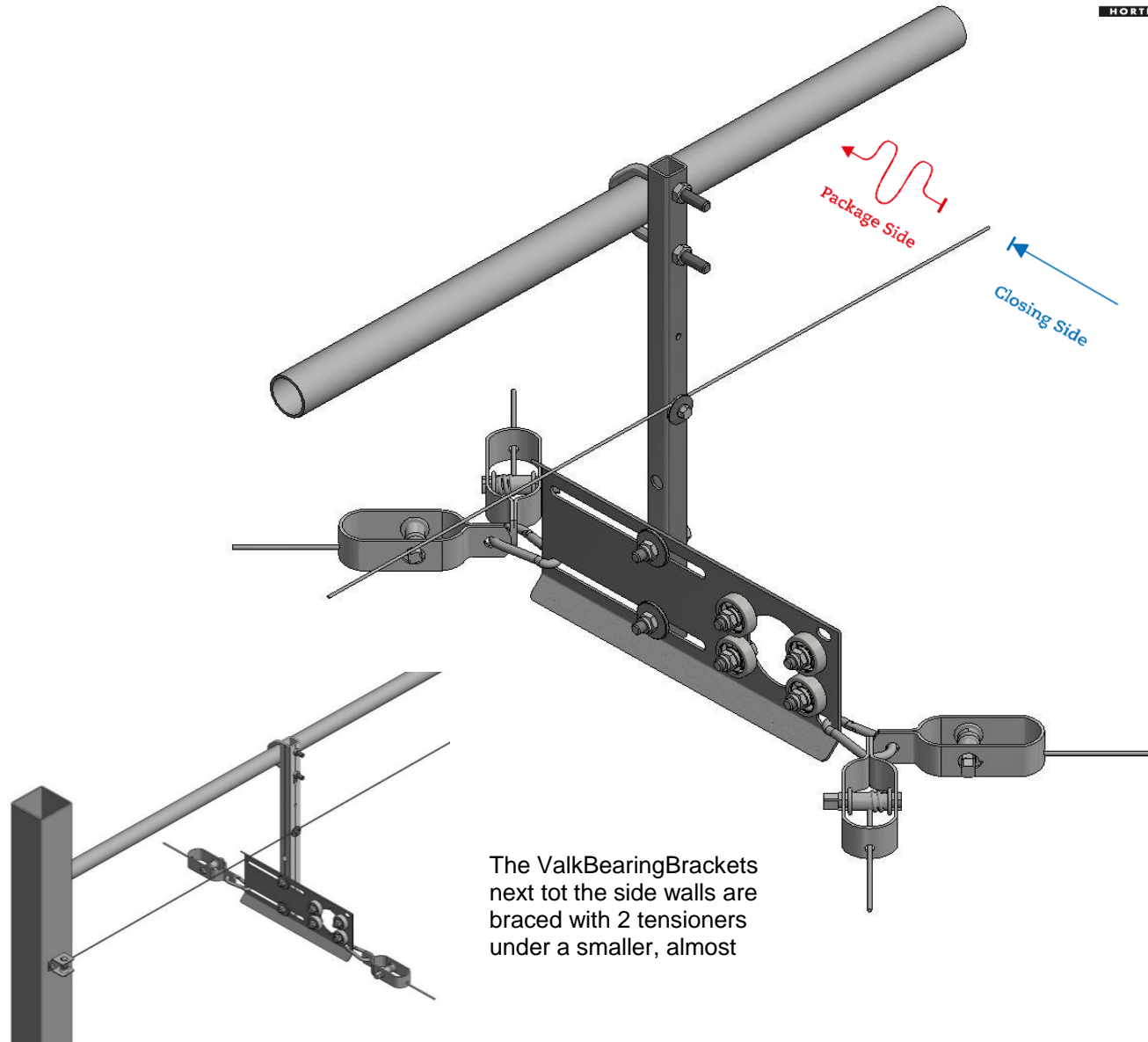
48.25.20



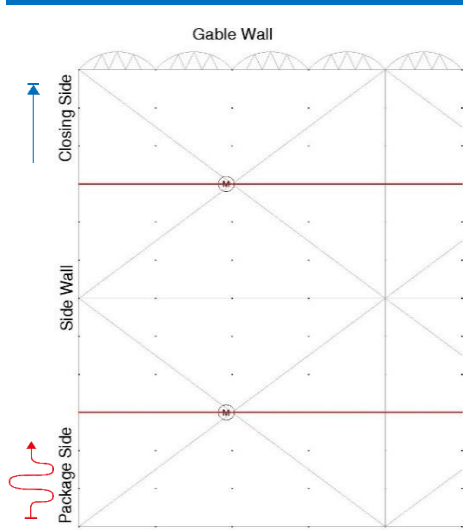
48.80.40



48.80.12



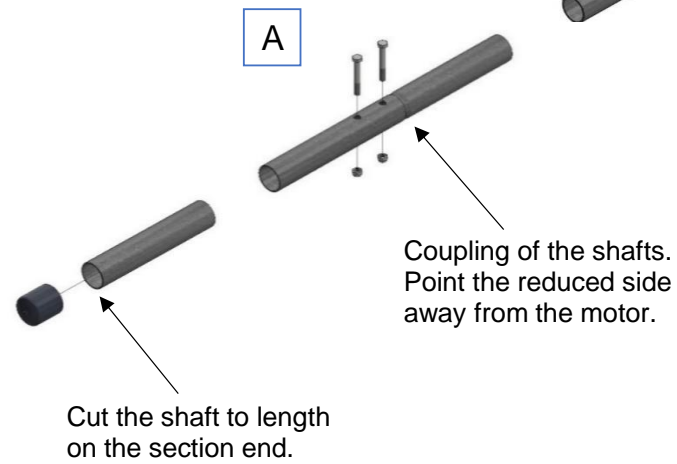
The ValkBearingBrackets next to the side walls are braced with 2 tensioners under a smaller, almost



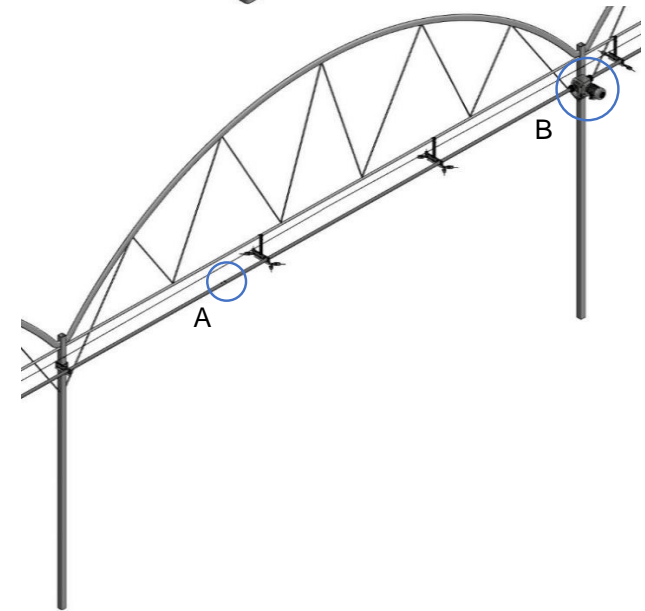
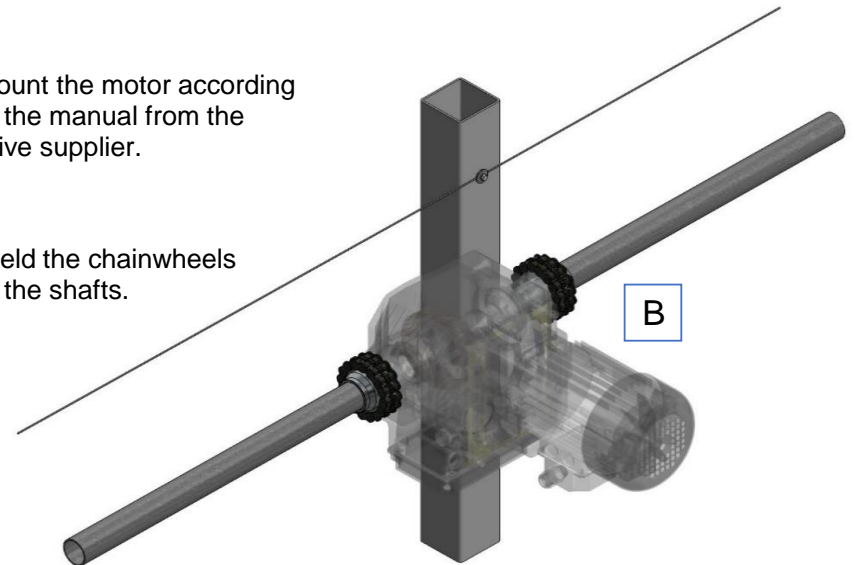
The motor and chain wheels are not standard supplied by Van der Valk Horti Systems. The chain wheels must be compatible for a 42,4 mm shaft.

Mount the motor according to the manual from the drive supplier.

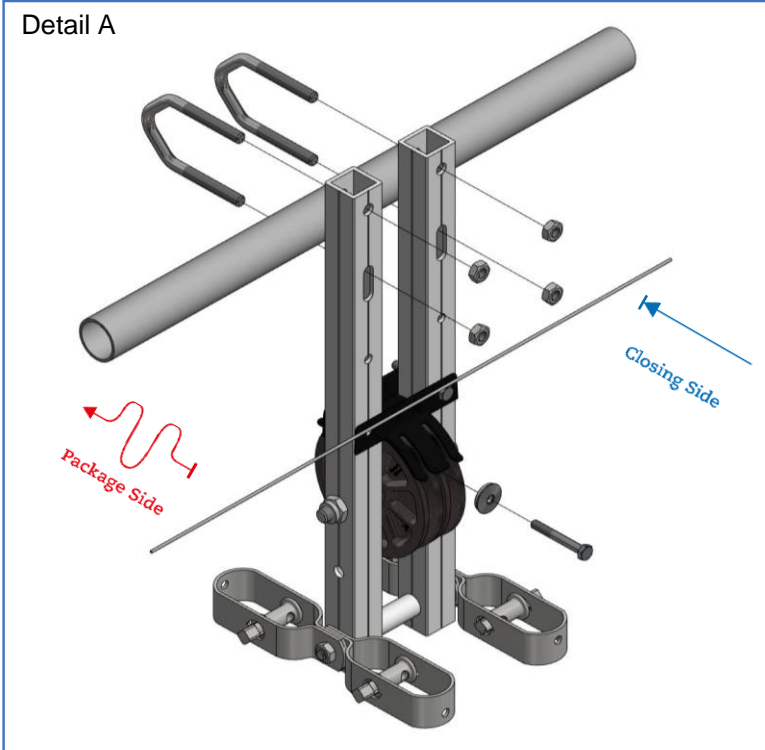
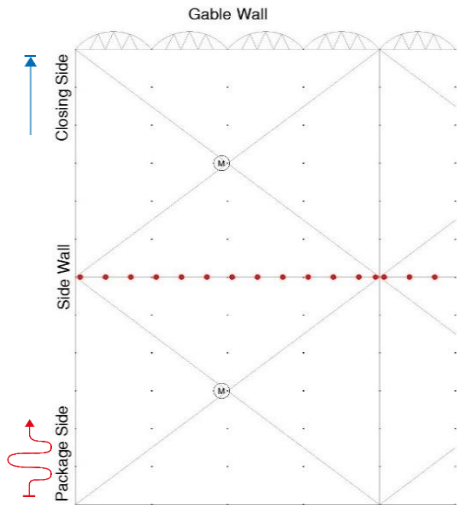
Weld the chainwheels to the shafts.



Cut the shaft to length on the section end.



## ▶ ValkReversingWheel Double



44.81.150 A=150

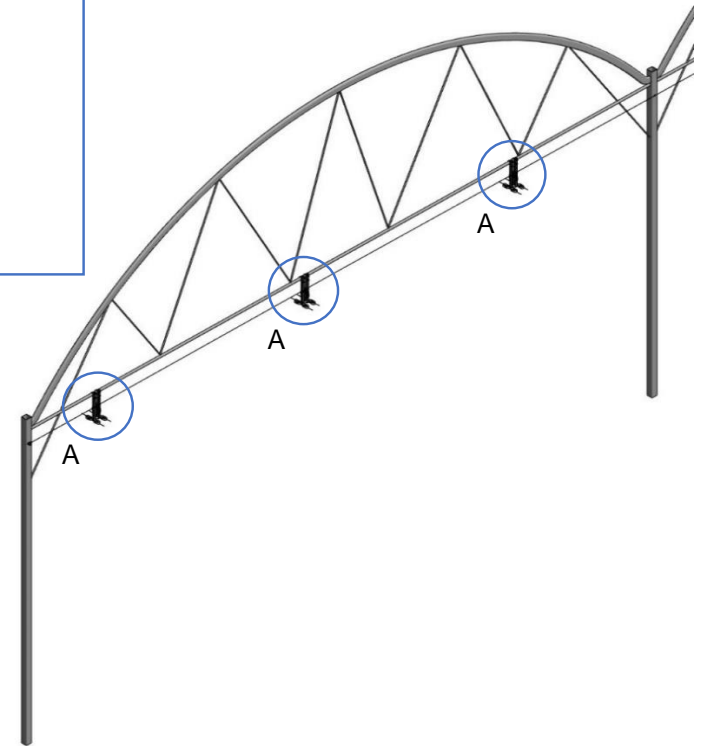


44.82.45 M8

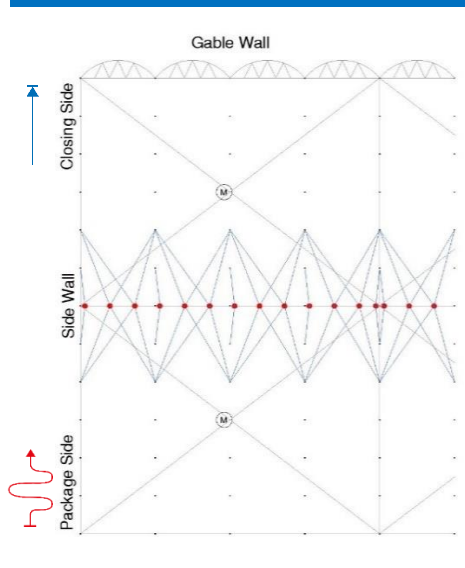


55.40.00 M8

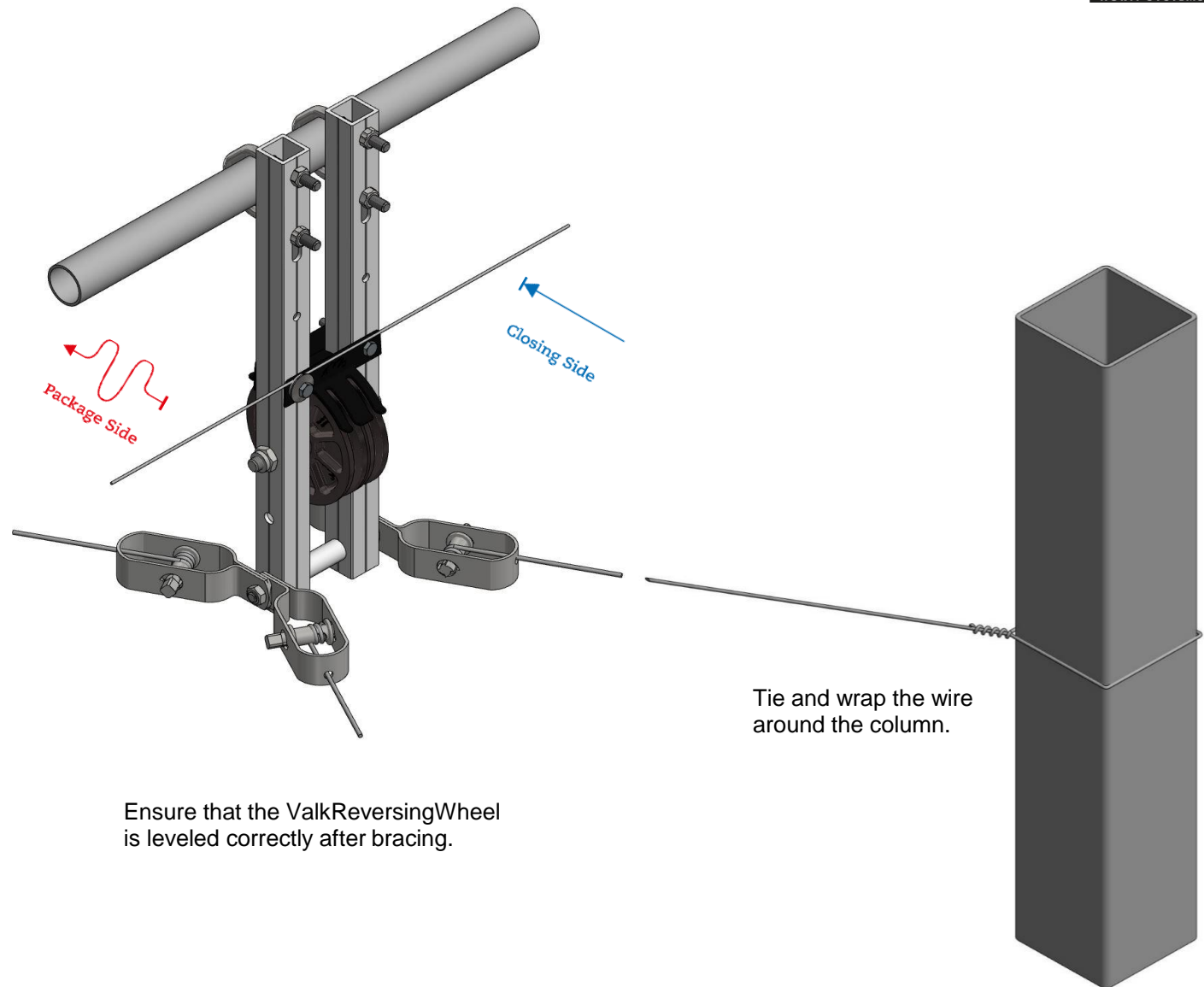
The ValkReversingWheel Double is only necessary at the section separation and must be in line with the reversing wheels on the gable end wall.



## ▶ Bracing of ValkReversingWheel Double

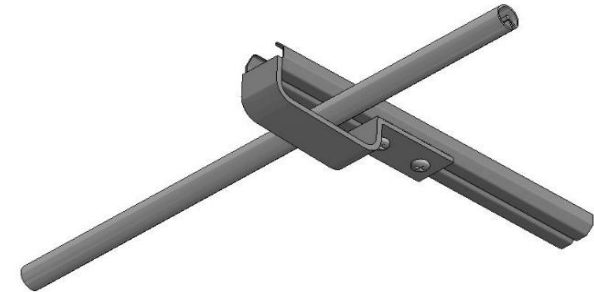
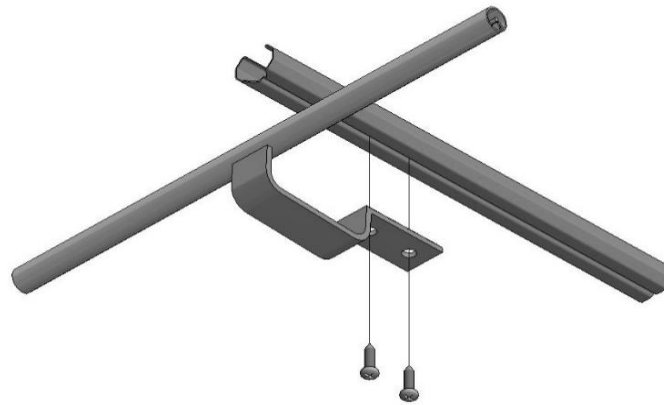
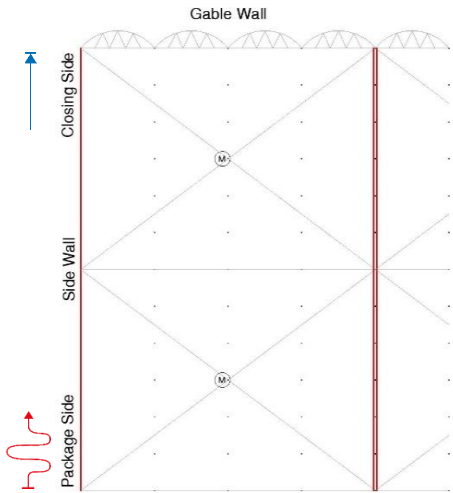


48.25.20



Ensure that the ValkReversingWheel is leveled correctly after bracing.

# ValkScreenProfile VP+ - ValkOverhangFixed



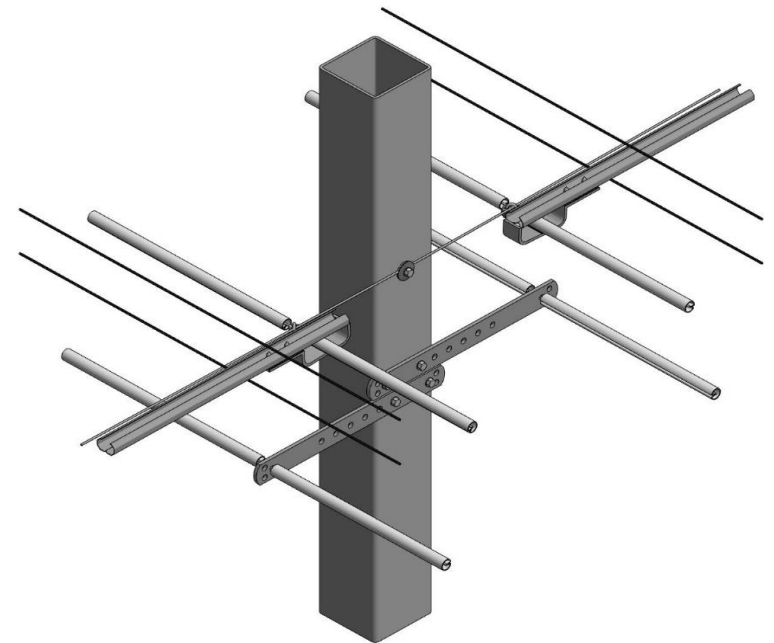
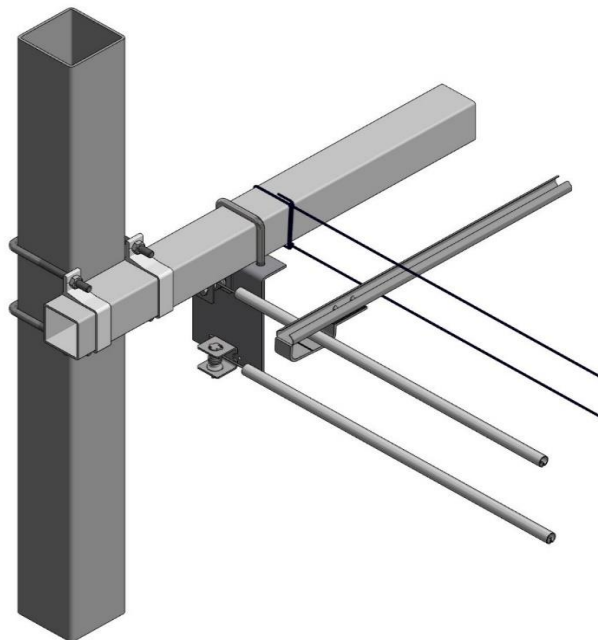
50.05.06470

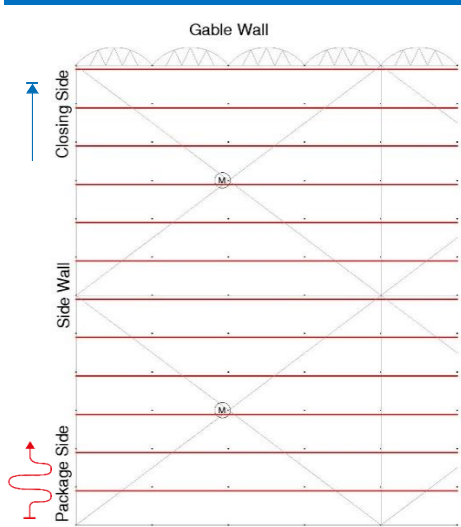


44.27.05

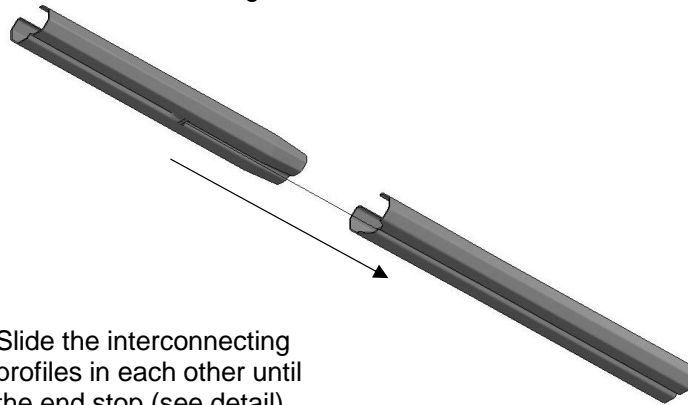


53.56.16





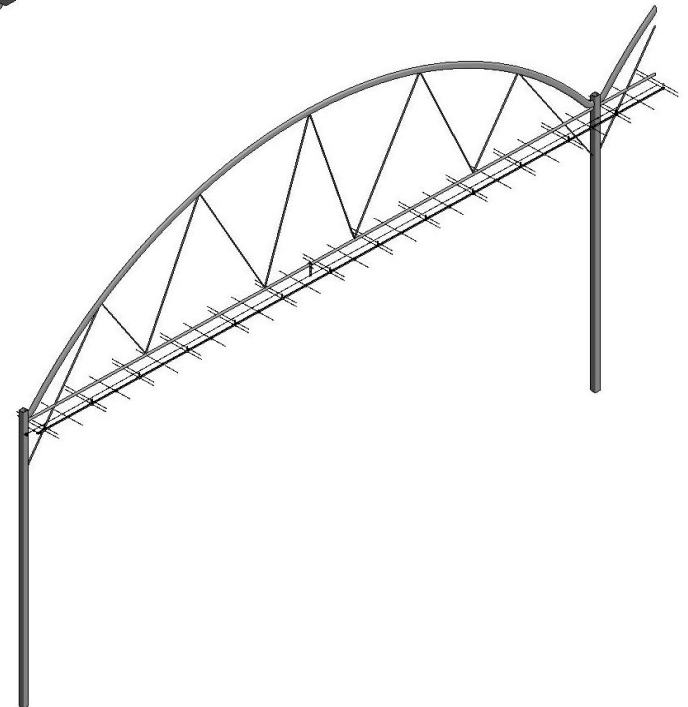
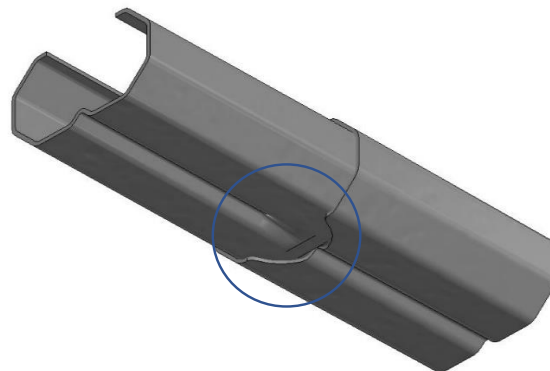
Connecting the VP+ ValkScreenProfile:



Slide the interconnecting profiles in each other until the end stop (see detail). Cut the last profile in the section to the correct length.

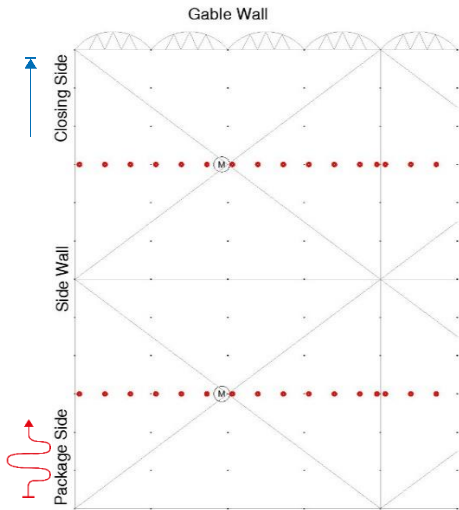
During installation of the ValkScreenProfile also pull in the cloth rope (48.55.03). This rope will later be used to pull in the cloth, see page N2.

Detail of the end stop:





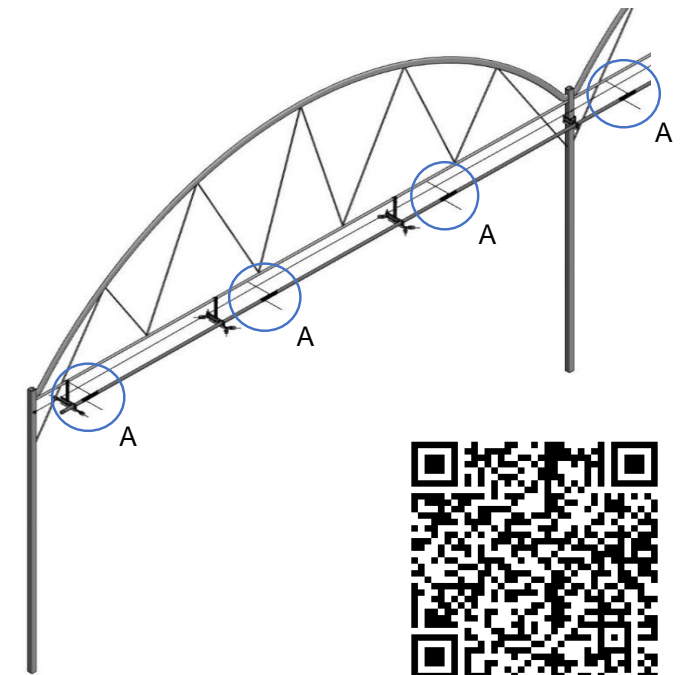
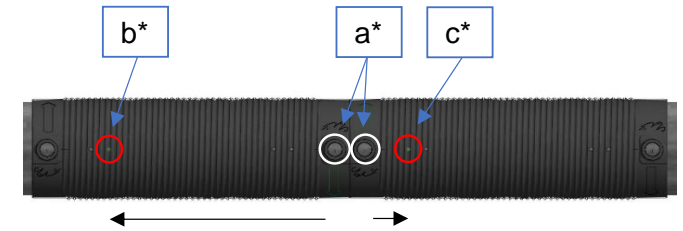
# ValkWireSleeve & ValkPolyCord



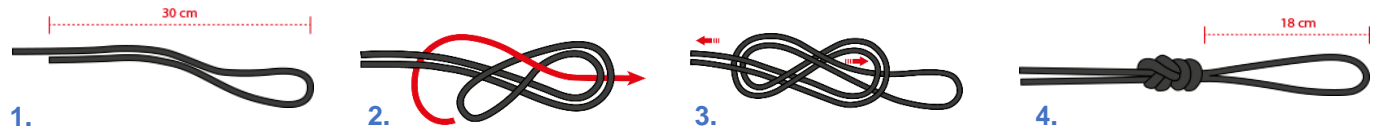
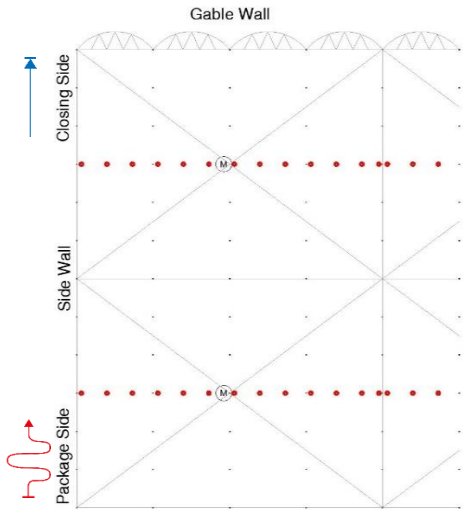
**Detail A**

1. Mount the ValkDriveSleeve in line with the ValkReversingWheels.
2. The sleeves also need to be in line with each other.
3.

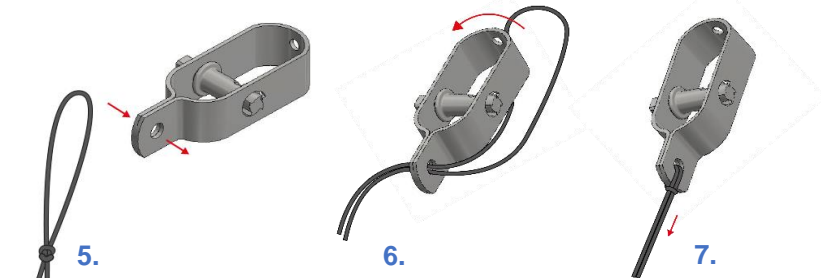
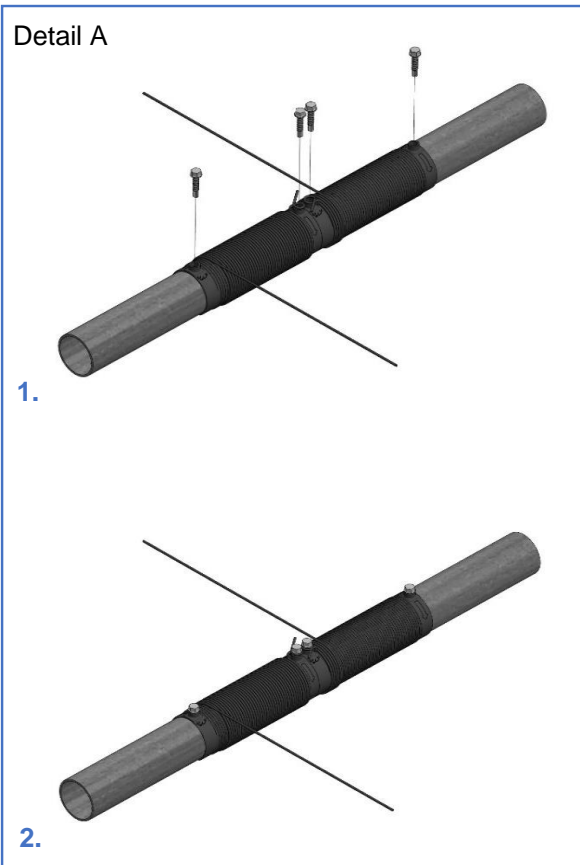
Tie a knot around the hole (a\*) for the self drilling screw (supertex), use the hole (a\*) closest to the other sleeve.  
 Wind the cord around the first sleeve in the direction of the arrow on the sleeve until the third small hole (b\*) and on the second sleeve until the first small hole (c\*).



# ValkWireSleeve & ValkPolyCord



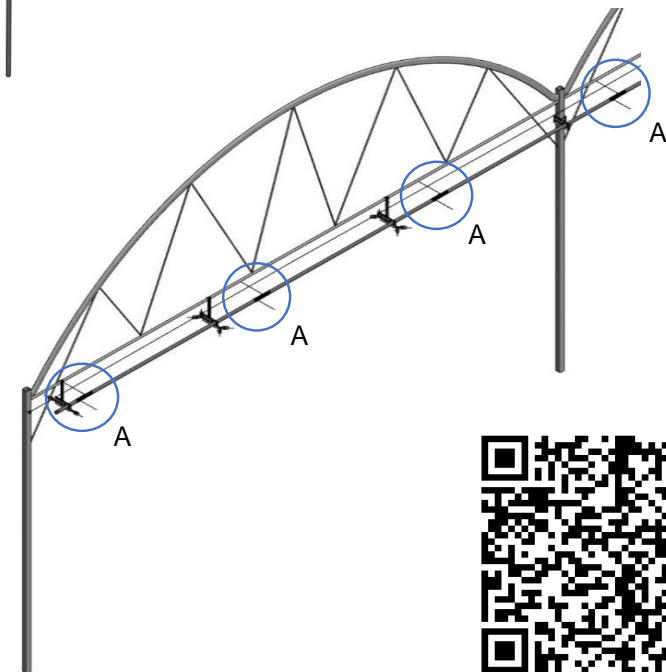
Note: This knot is tested and the only correct way to make the nut.



48.80.12

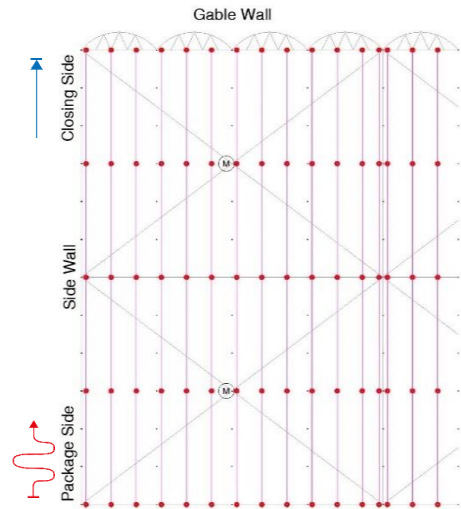


53.57.12

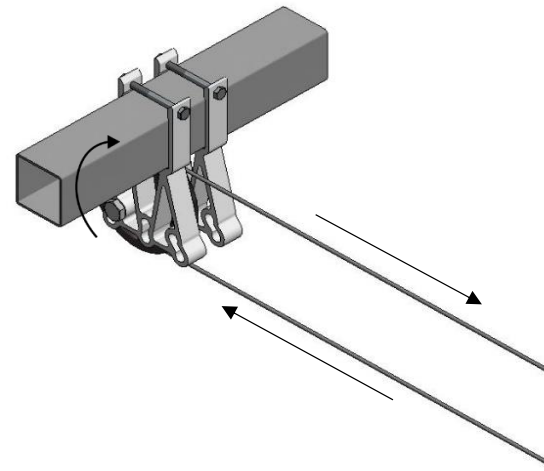




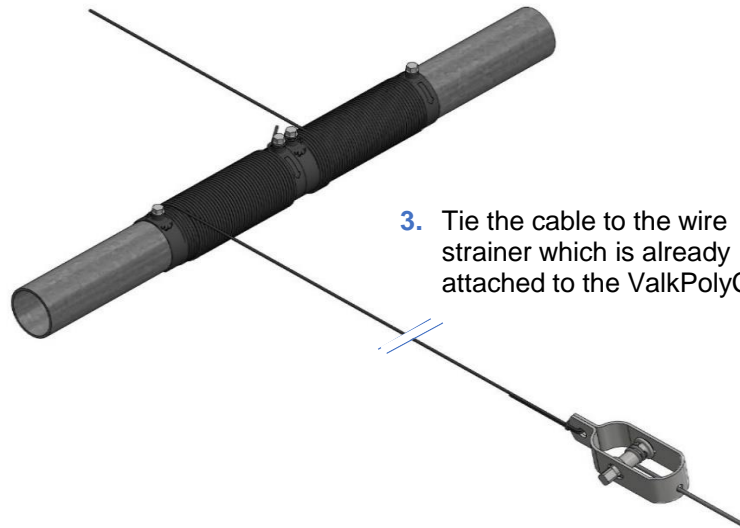
## ▶ Threading the Pull Wire



48.10.18

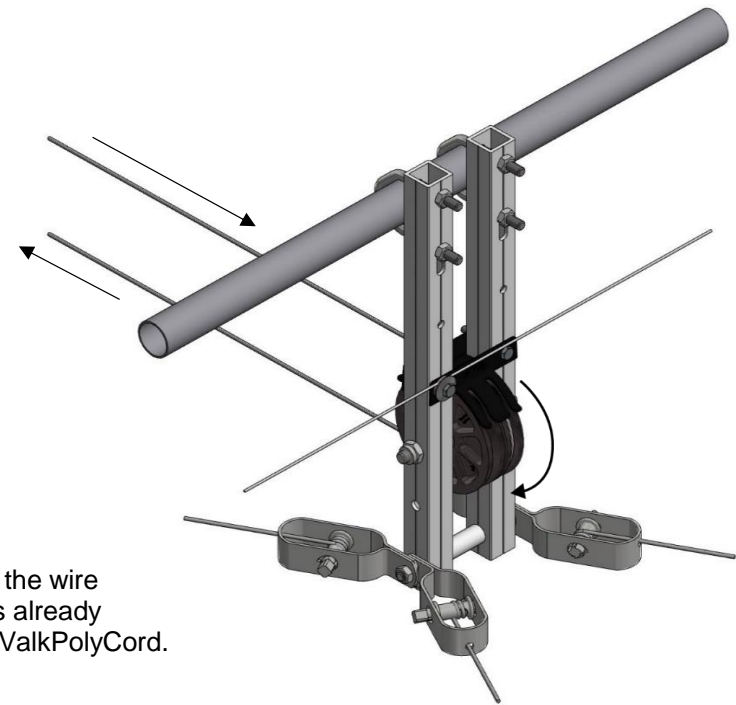


2. Put the stainless steel cable trough the ValkReversingWheel from the bottom to the top of the wheel.

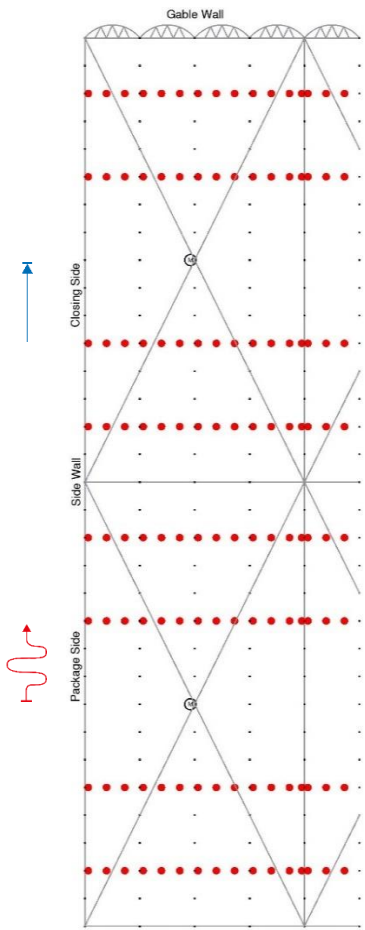


3. Tie the cable to the wire strainer which is already attached to the ValkPolyCord.

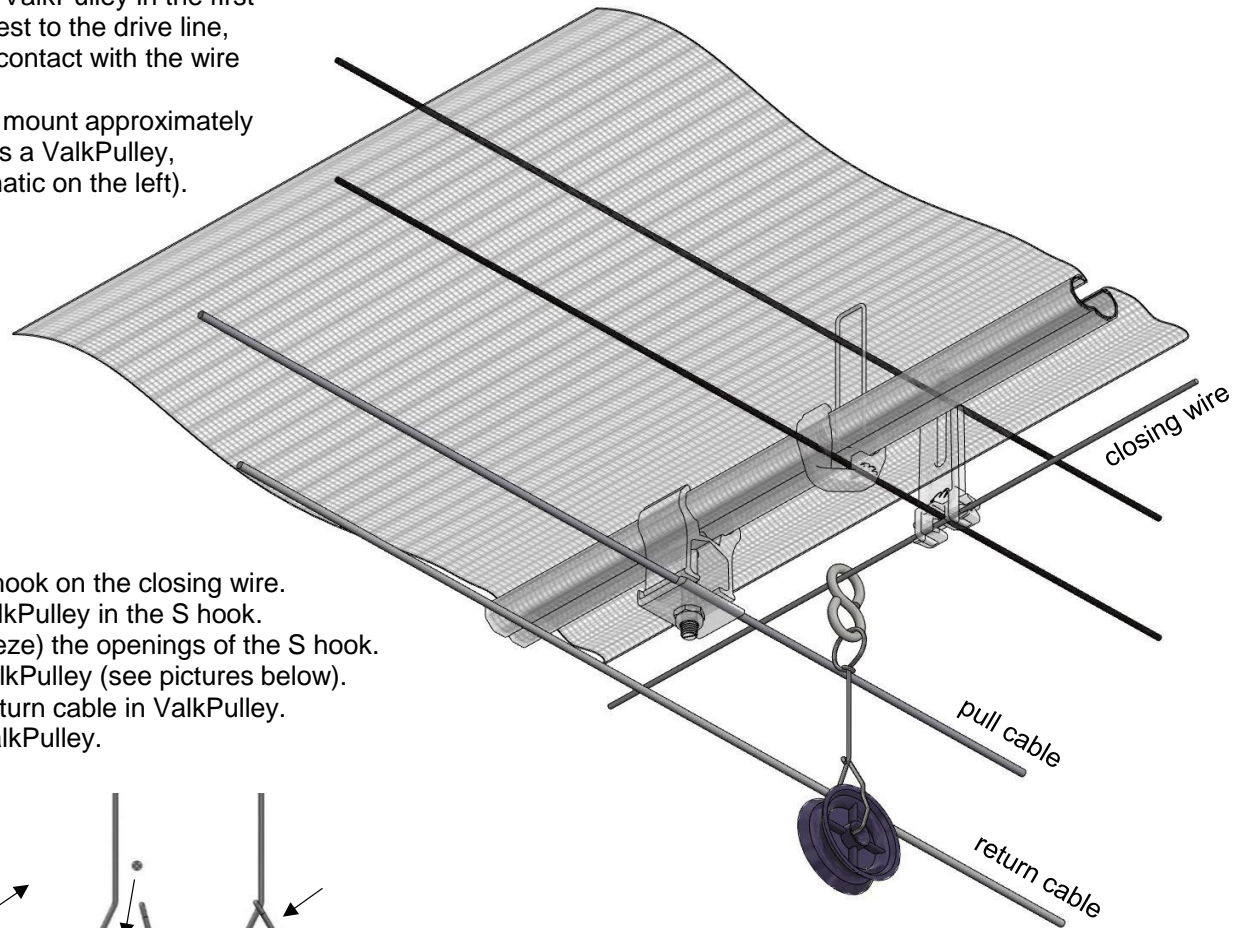
1. Start unwinding the stainless steel cable at the drive line. Use a tool like a crate, axle or a wire reel to unwind the stainless steel cable without twisting.



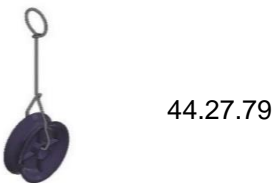
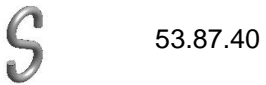
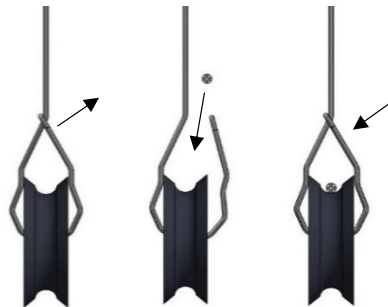
Note:  
Ensure that the ValkReversingWheel Double is braced correctly before pulling trough the steel cable. See page I2.



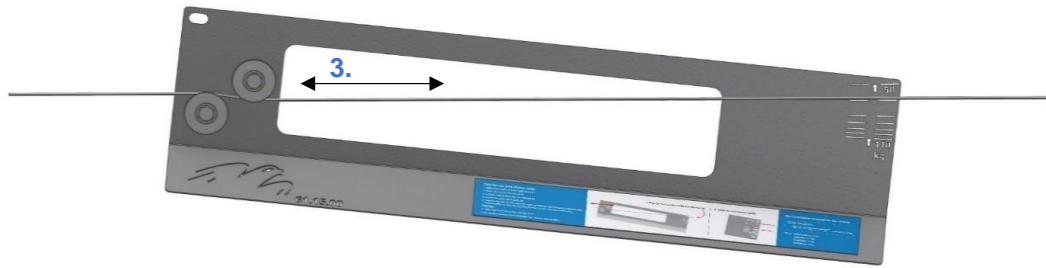
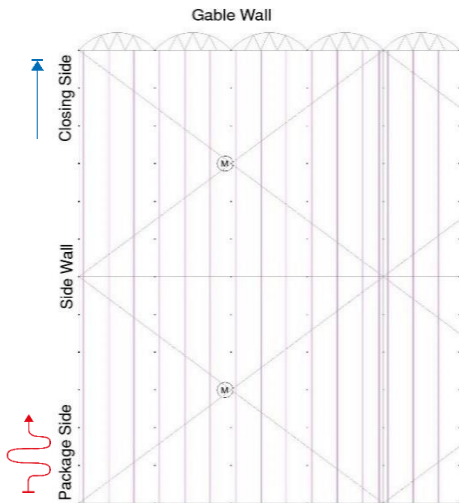
**Note:**  
 Never mount a ValkPulley in the first 3 sections closest to the drive line, this to prevent contact with the wire strainer.  
 From there on, mount approximately every 20 meters a ValkPulley, (see the schematic on the left).



1. Hang the S hook on the closing wire.
2. Hang the ValkPulley in the S hook.
3. Close (squeeze) the openings of the S hook.
4. Open the ValkPulley (see pictures below).
5. Mount the return cable in ValkPulley.
6. Close the ValkPulley.



## ▶ Cable Tension Meter



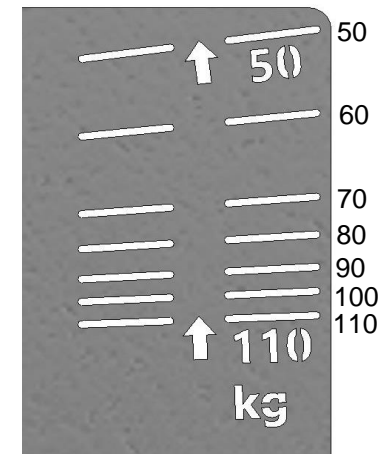
**Attention:**  
Set the cable to the required tension before installing the ValkPolyClamps and ValkKliMax's according the steps below:

1. Determine your required cable tension\*.
2. Place the tension meter (61.15.00) on the ø3 mm steel cable.
3. Roll the meter on the cable for calibration.
4. Check the cable tension (in kg).
5. Tension the wire to the correct tension on the wire strainer.
6. Repeat step 3-5 until all the cables are on the required cable tension.
7. Turn on the motor and let the entire installation run back and forward for the full length, this to remove the slack of the cable on the ValkWireSleeve.
8. Repeat (if necessary) step 3-6 until all cables are on the required cable tension.

\*Cable tension:

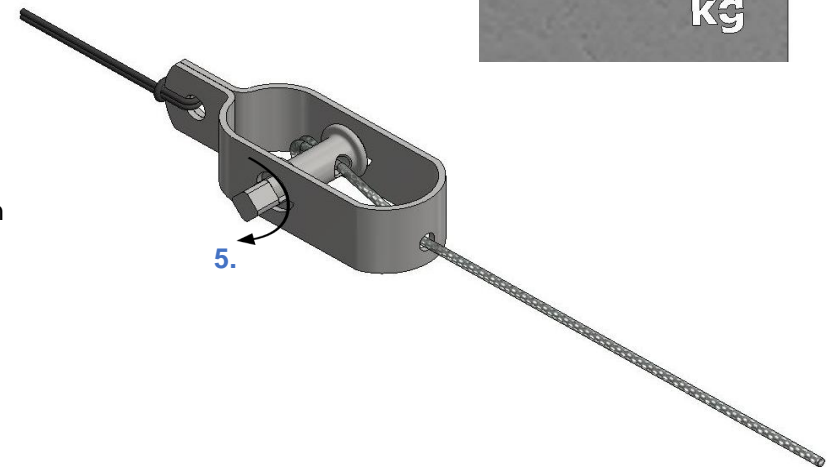
$$\frac{\text{Amount of sections (connections) x Force** (kg)}}{2} + \text{preload of 20 kg}$$

**Attention:**  
Before tightening the cable make sure the double ValkReversingWheels and the ValkBearingplates are braced correctly.



61.15.00

You can order the cable tension meter separately at Van der Valk Horti Systems.



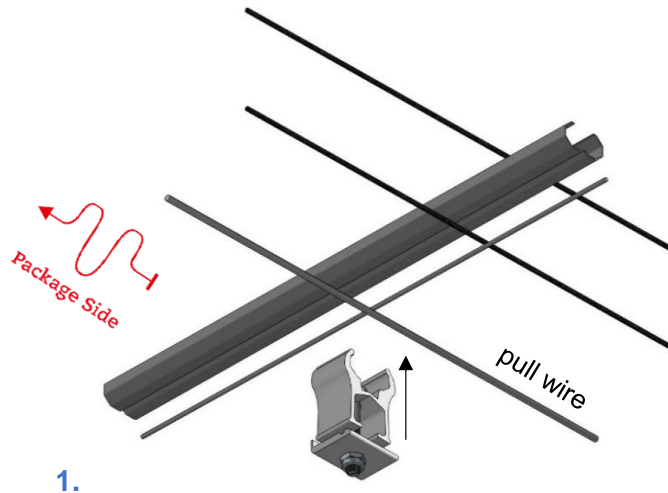
\*\*Force:  
ValkPolyClamp = 5 kg  
ValkKliMax (blanc) = 6 kg

**Attention:**  
Set the pull cable to the required tension before installing the ValkPolyClamps. See page L3.

Check the project specific drawing for the exact location of the ValkPolyClamps.

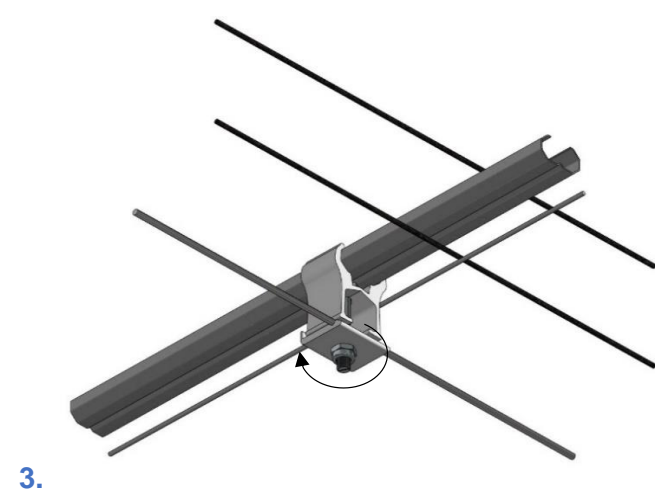
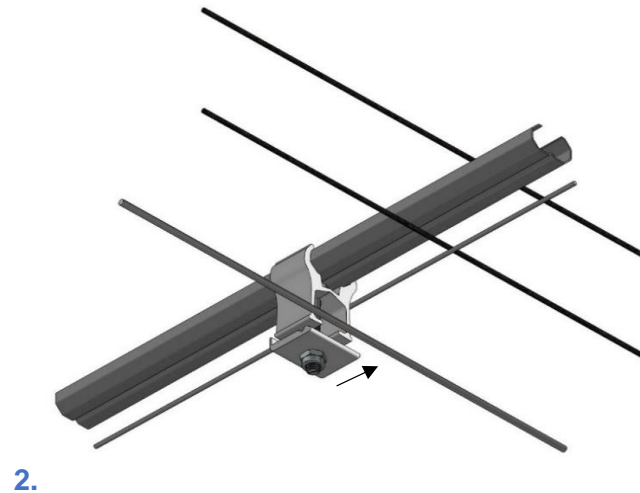


44.31.25



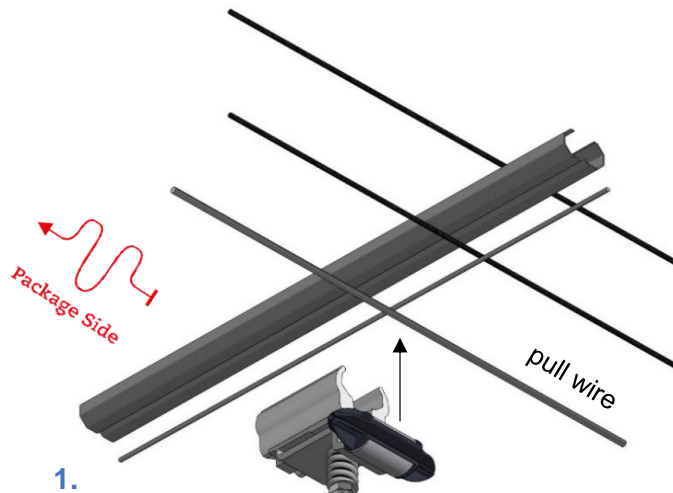
**Note:**  
Make sure the profile is in the closed position.  
Make sure the windings on the ValkDriveSleeve are correct for a closed screen position.

1. Clamp the ValkPolyClamp around the profile.
2. Clamp the ValkPolyClamp over the pull wire.
3. Tighten the bolt.



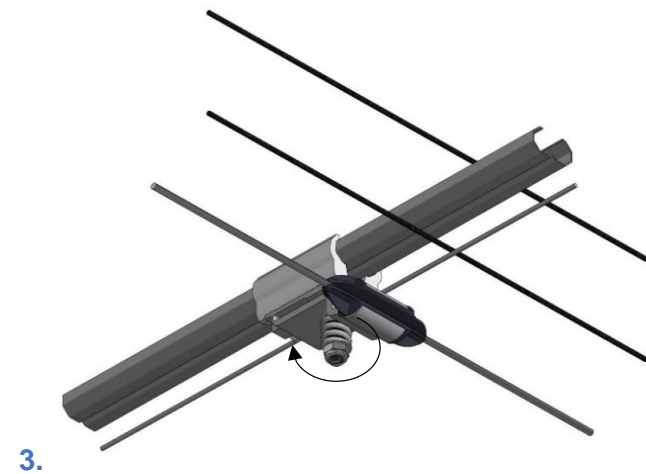
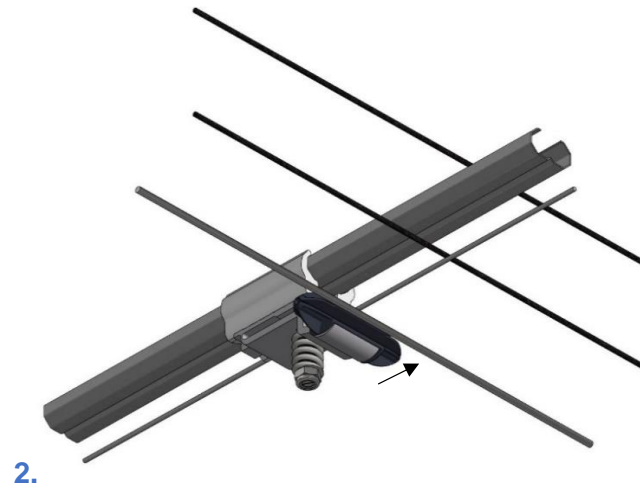
**Attention:**  
Set the pull cable to the required tension before installing the ValkKliMax's. See page L3.

Check the project specific drawing for the exact location of the ValkKliMax's.



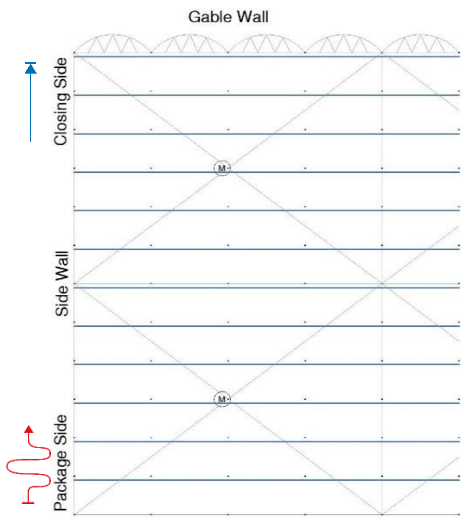
**Note:**  
Make sure the profile is in the closed position. Make sure the windings on the ValkDriveSleeve are correct for a closed screen position. The ValkKliMax is used in a smaller section or in a section with an obstacle, check the project specific details.

1. Clamp the ValkPolyClamp around the profile.
2. Clamp the ValkKliMax over the pull wire.
3. Tighten the bolt with a maximum torque of 6 N/m, do NOT use an impact wrench.

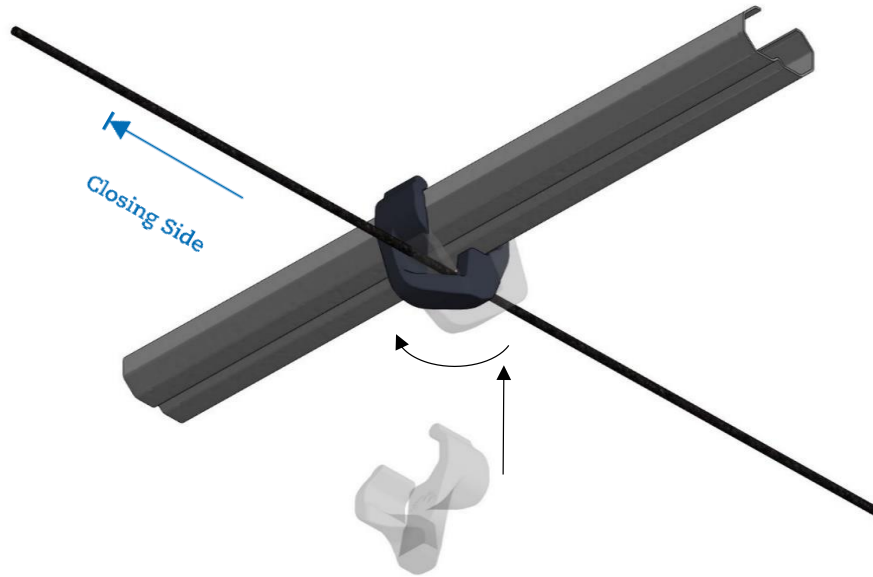


44.40.41

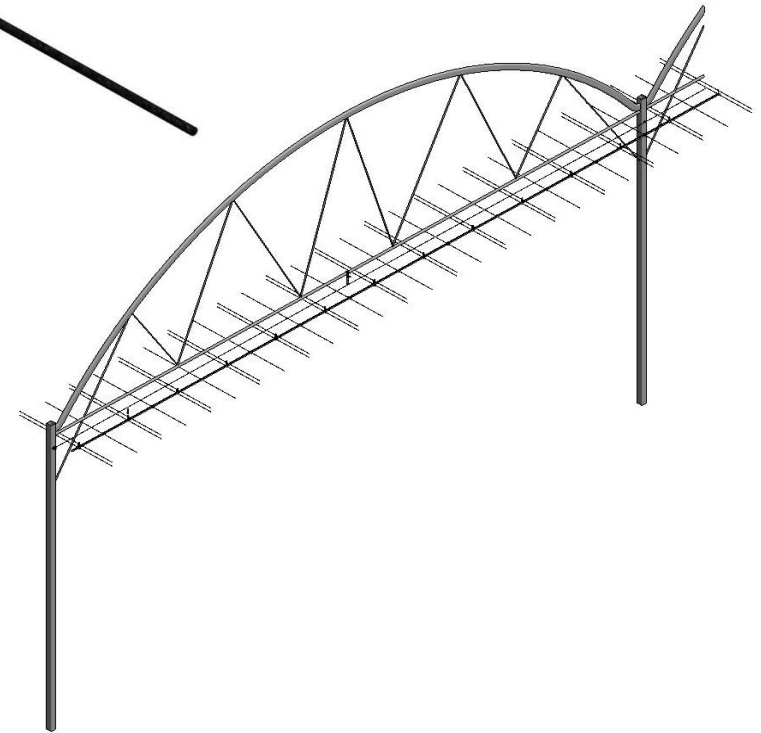




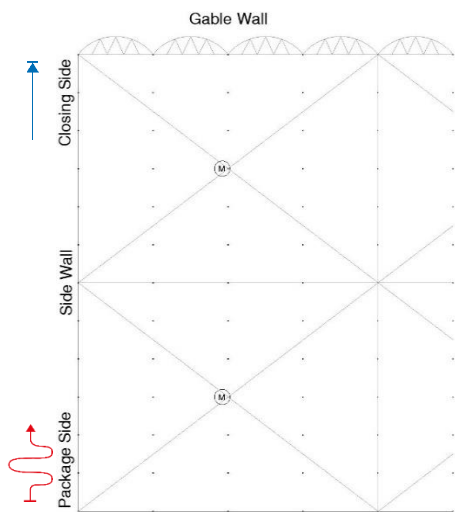
44.15.29



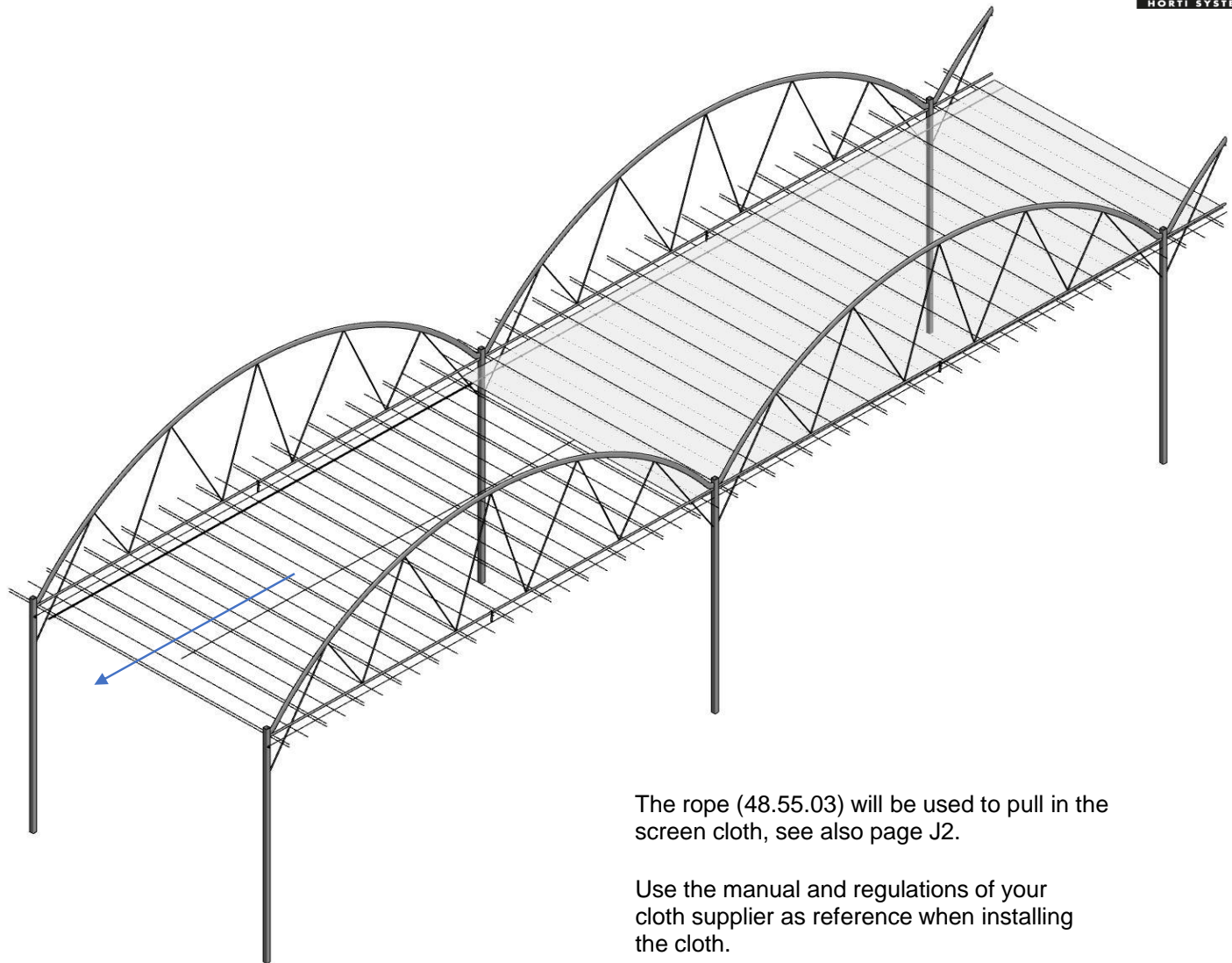
1. Put the ValkWireGuide over the support wire.
2. Turn the ValkWireGuide.
3. 'Click' the ValkWireGuide on the profile.



## ▶ Pulling in the Cloth



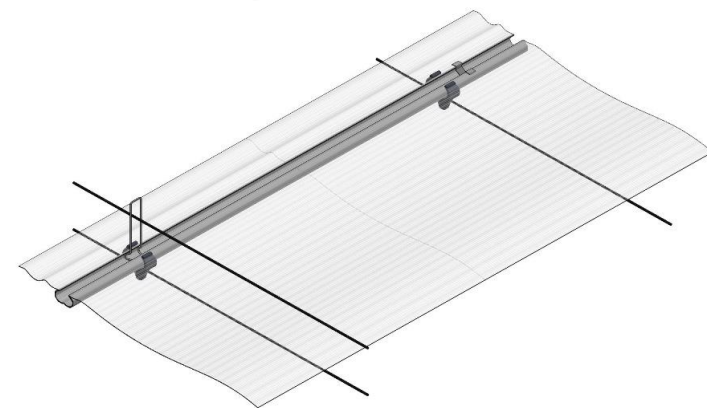
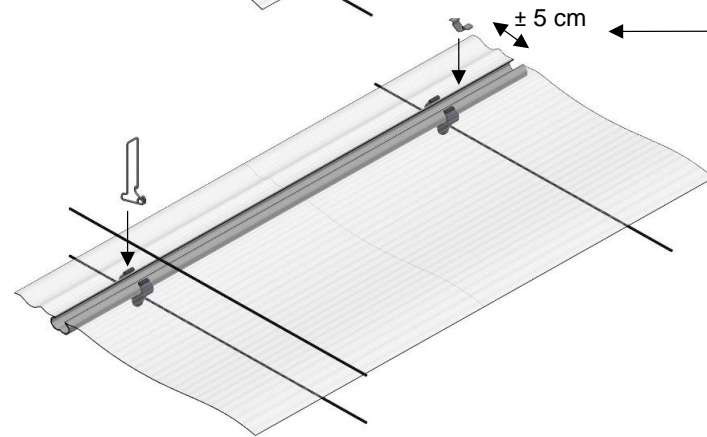
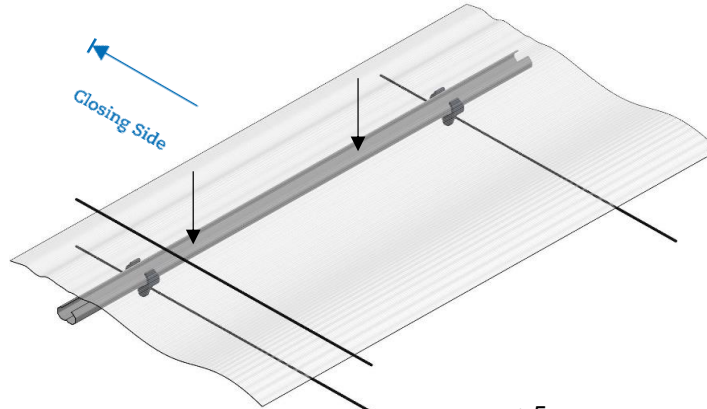
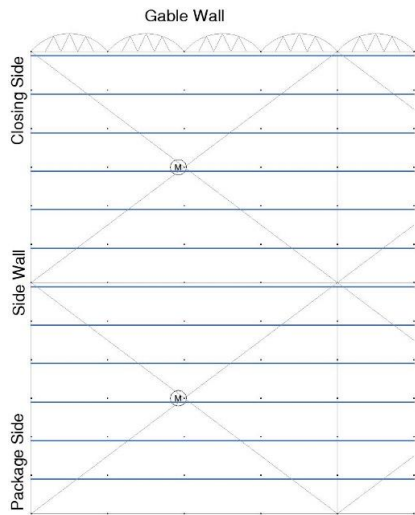
48.55.03



The rope (48.55.03) will be used to pull in the screen cloth, see also page J2.

Use the manual and regulations of your cloth supplier as reference when installing the cloth.

## ▶ ValkScreenClip & Upper ValkWireGuide



1. Pull in the cloth. (See previous page)
2. Mount the ValkWireGuide (45.55.08) over the upper wire and click it together with the cloth in the profile.
3. Click the ValkScreenClip (45.55.11) together with the cloth in to the profile.

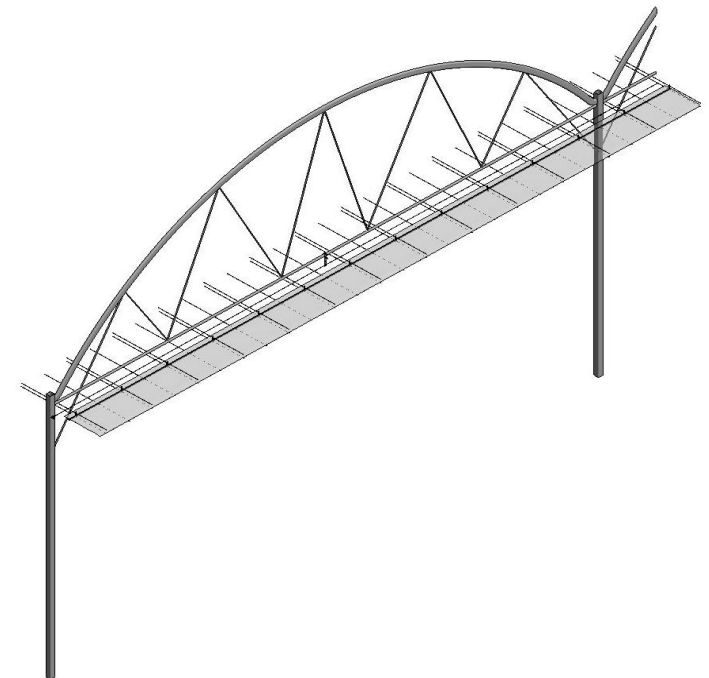
Note:  
The flap on the closing side is approximately 5 cm.



45.55.08

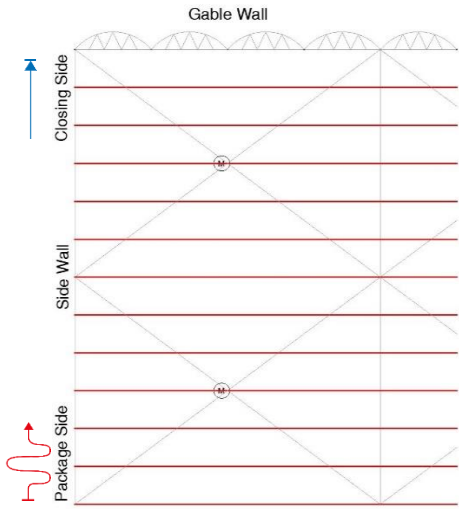


45.55.11

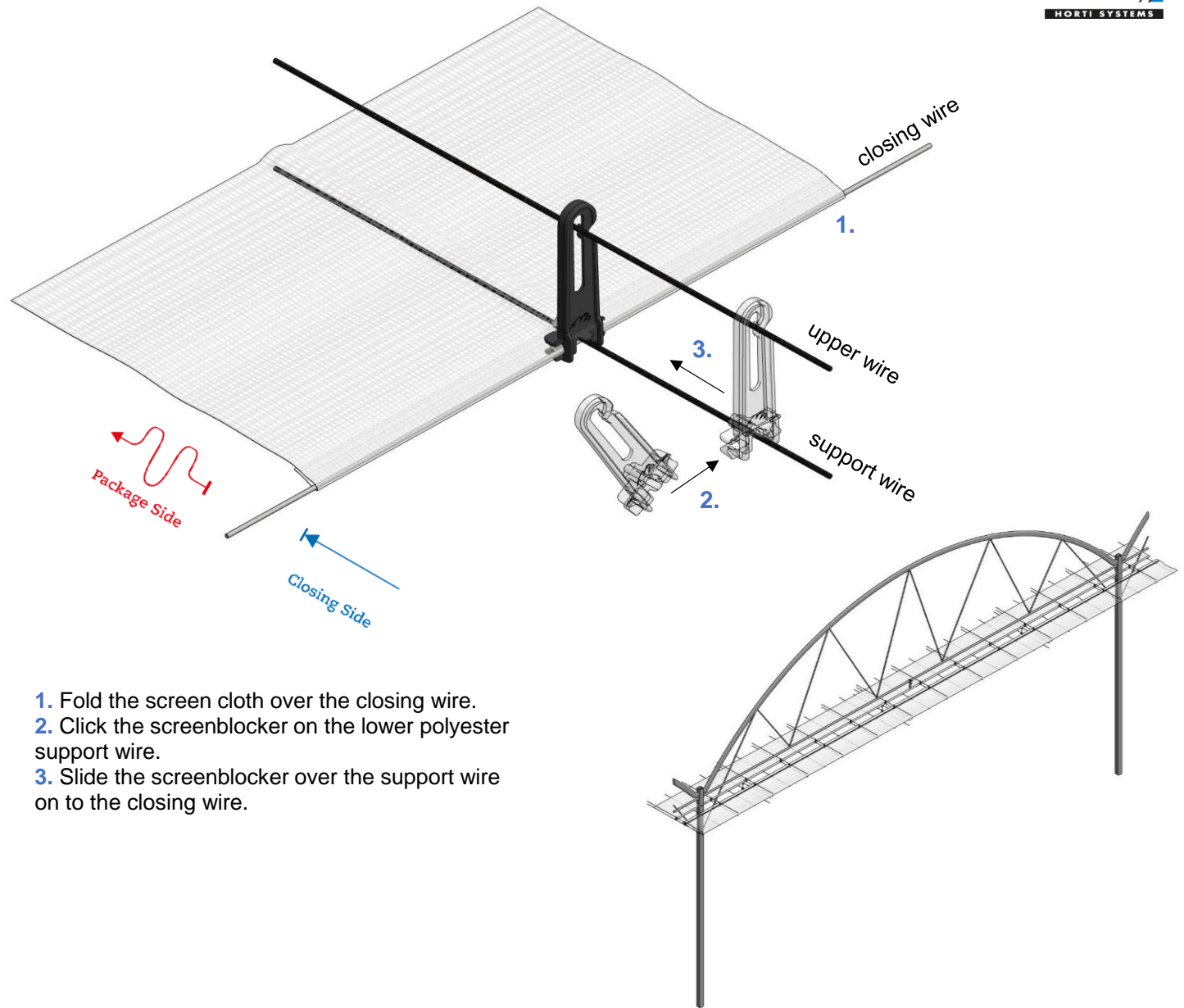




## ▶ Screen Cloth - Closing side

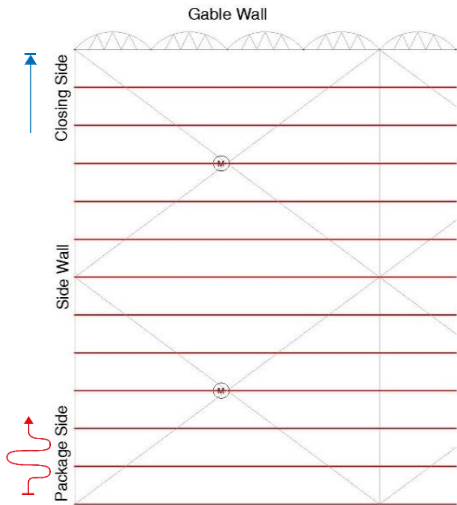


44.15.34

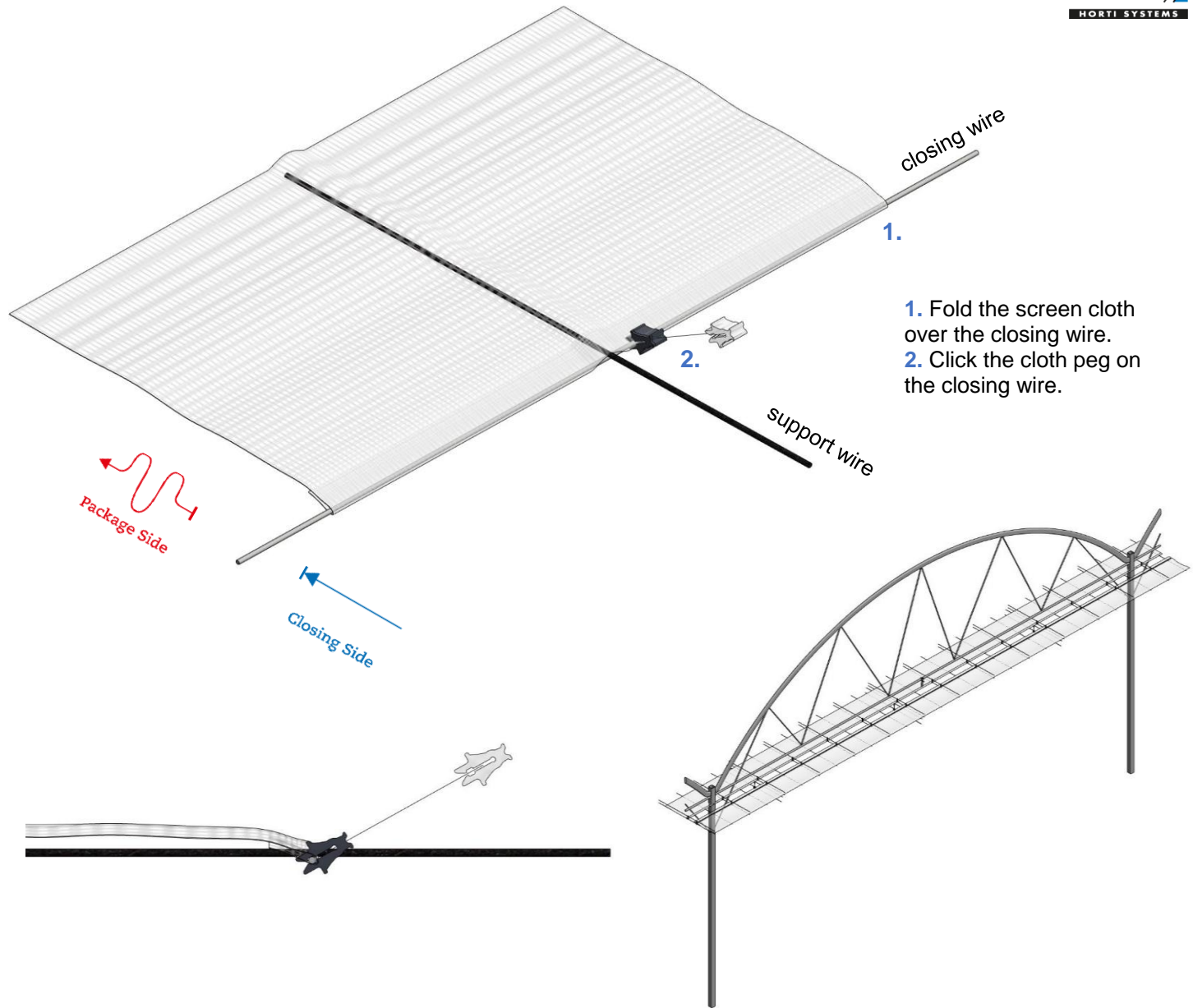


1. Fold the screen cloth over the closing wire.
2. Click the screen blocker on the lower polyester support wire.
3. Slide the screen blocker over the support wire on to the closing wire.

## ▶ Screen Cloth - Closing side

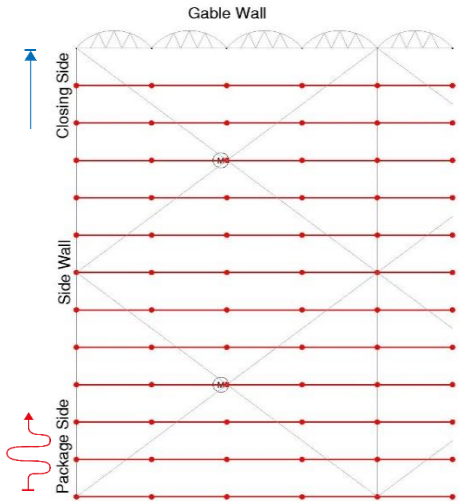


44.15.33

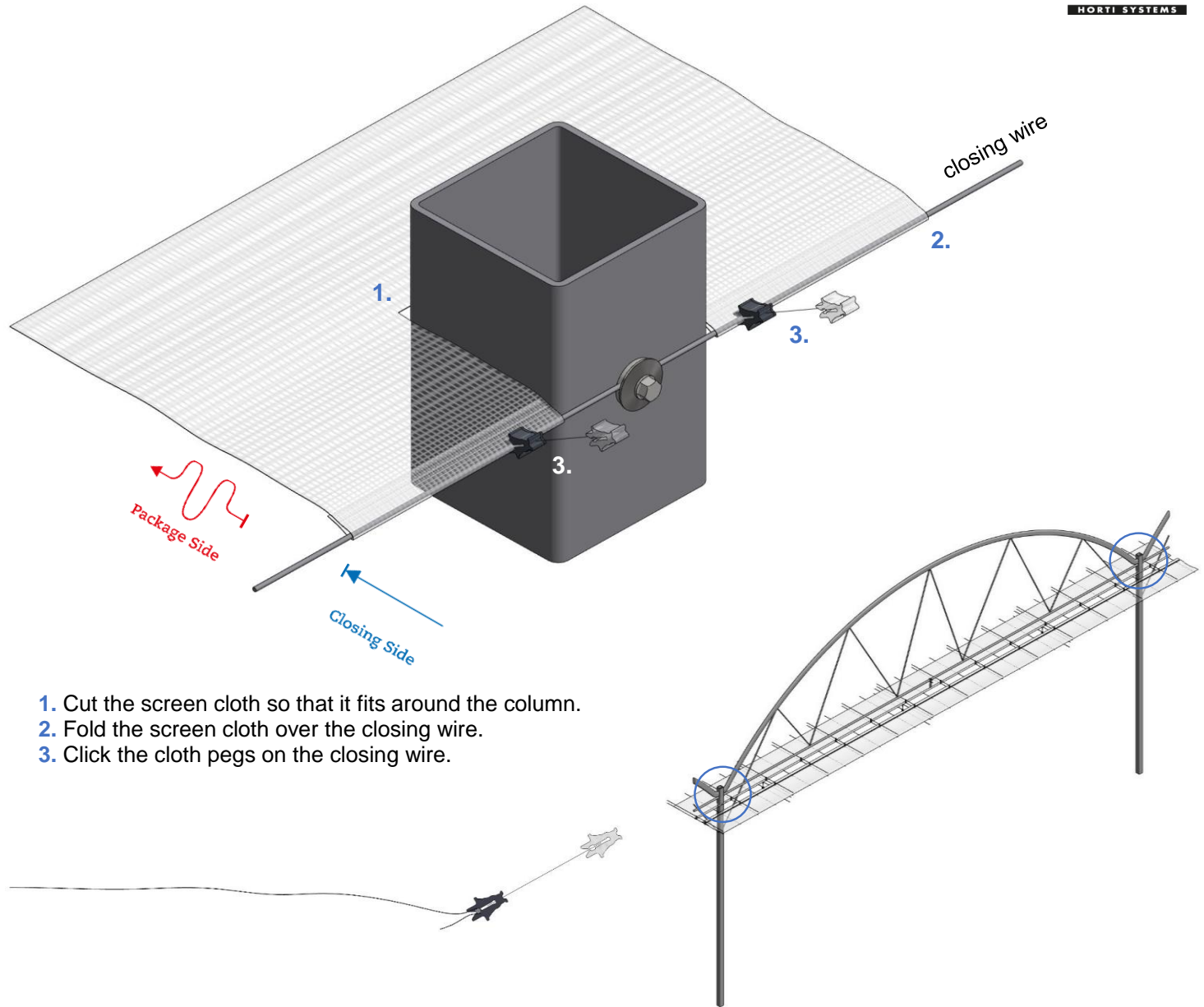


1. Fold the screen cloth over the closing wire.
2. Click the cloth peg on the closing wire.

## ▶ Screen Cloth - Closing side

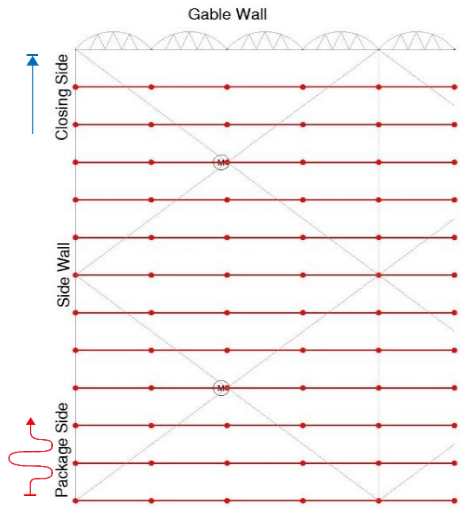


44.15.33

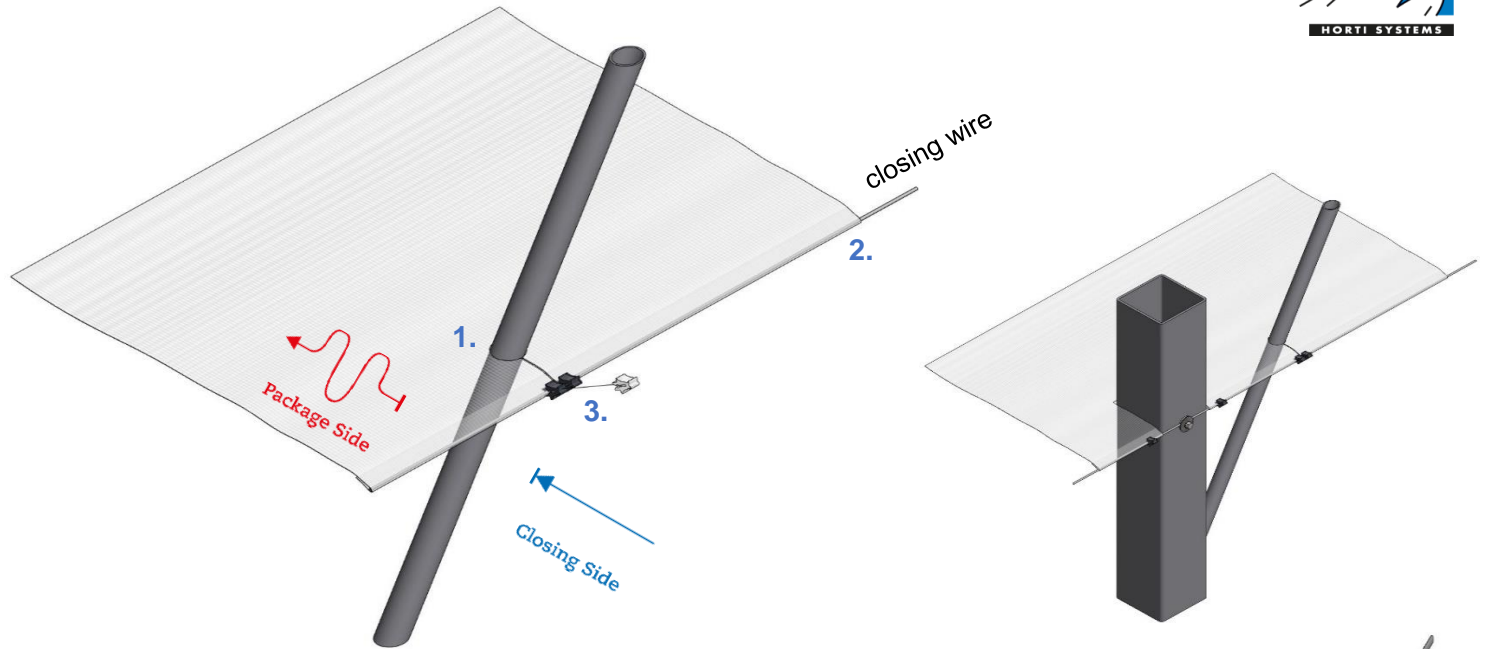


1. Cut the screen cloth so that it fits around the column.
2. Fold the screen cloth over the closing wire.
3. Click the cloth pegs on the closing wire.

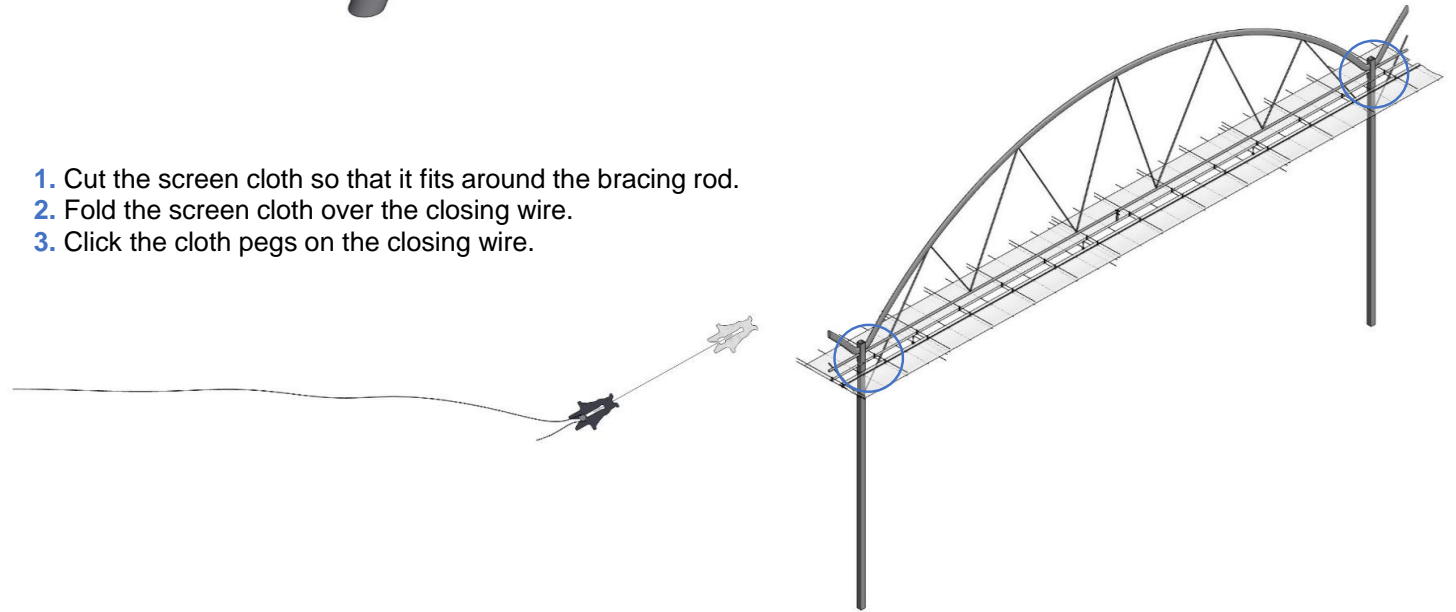
## ▶ Screen Cloth - Closing side



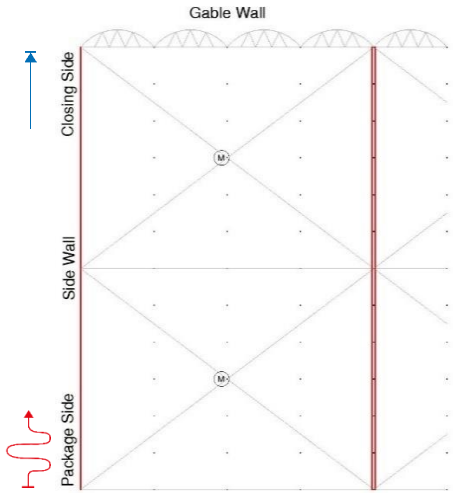
44.15.33



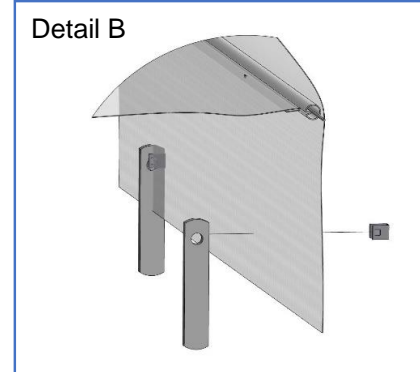
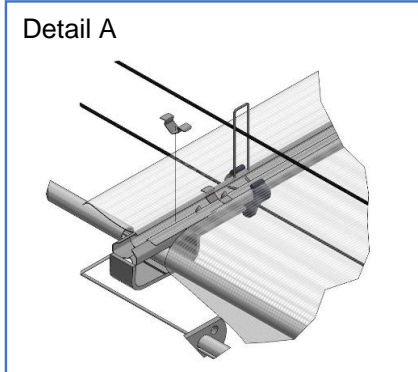
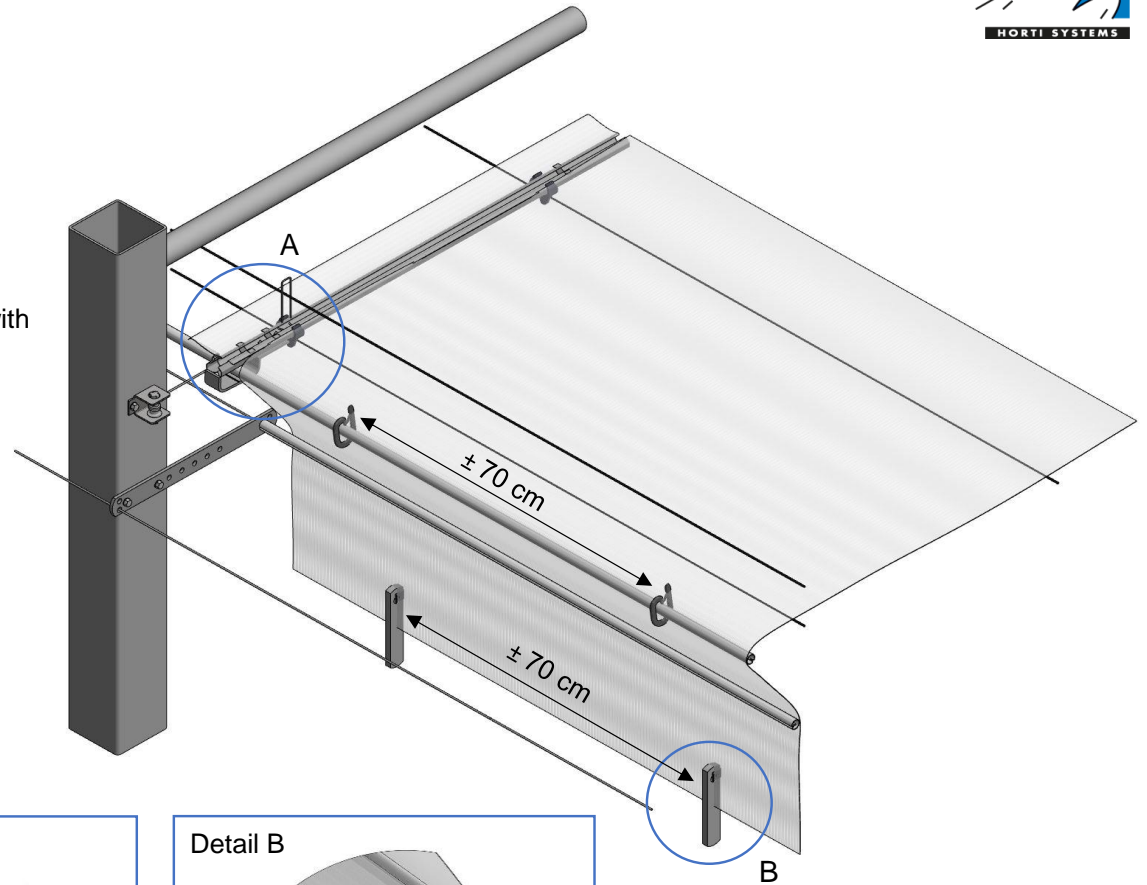
1. Cut the screen cloth so that it fits around the bracing rod.
2. Fold the screen cloth over the closing wire.
3. Click the cloth pegs on the closing wire.







## ▶ Cloth (Closed Energy) Hangdown



Secure the screen cloth with 2 extra ValkScreenClips (45.55.11), see detail A.

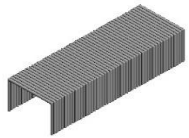
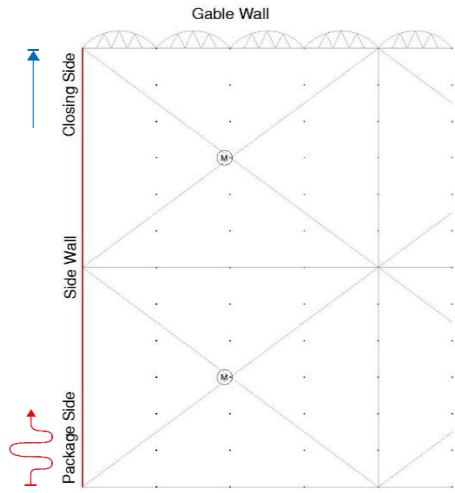


Mount the cloth weights and the plastic screen hooks approximately every 70 cm.

-  44.70.25
-  45.45.50
-  44.15.20
-  45.55.11



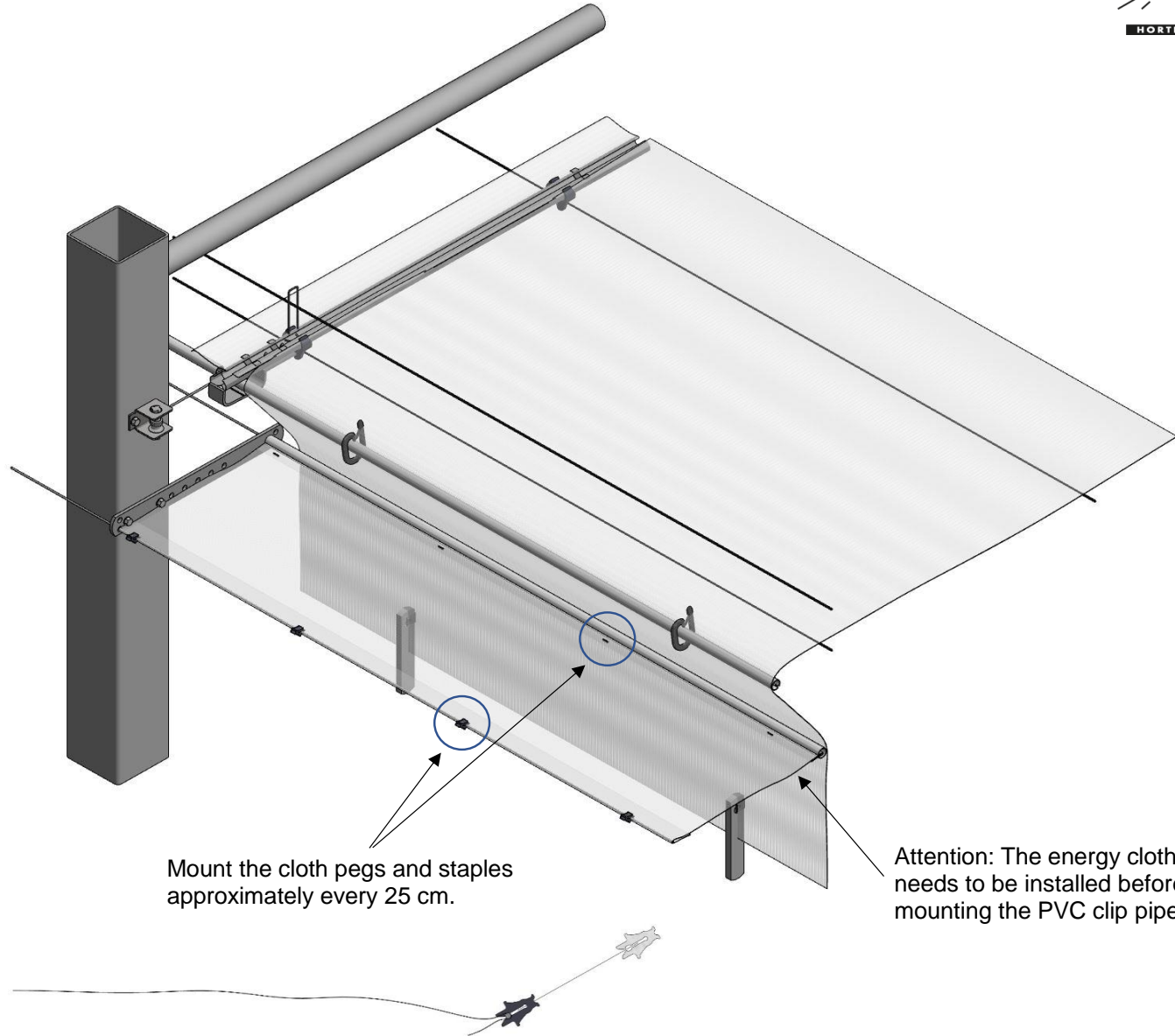
## ▶ Cloth (Closed Energy) Hangdown



61.10.06



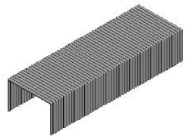
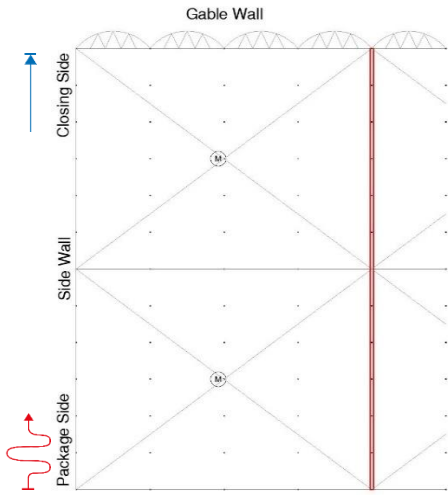
44.15.33



Mount the cloth pegs and staples approximately every 25 cm.

Attention: The energy cloth needs to be installed before mounting the PVC clip pipe.

## ▶ Cloth (Closed Energy) Hangdown



61.10.06

