

ValkHortiPlanner

Project details
Bill of materials
Project map



Van der Valk Horti Systems
Zwartendijk 73
2681 LP Monster
Netherlands
www.valkhortisystems.nl

Customer	:	Greenhouse builder / Installer
Project	:	Greenhouse 1
Last updated on	:	29 April 2022 09:48
Project address	:	Zwartendijk 73 2681 LP Monster Netherlands
Company	:	Van der Valk Horti Systems
User	:	Helpdesk - ValkHortiPlanner
Version ValkHortiPlanner	:	1.01

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Greenhouse details

Greenhouse data

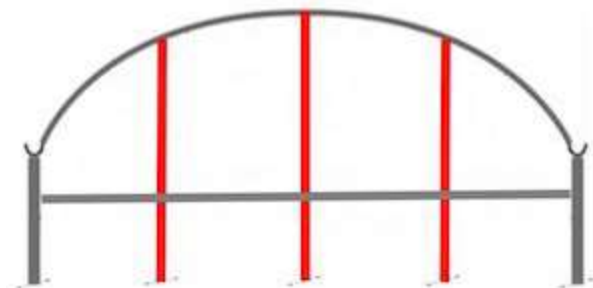
Many parts of the screen system are mounted on or attached to the structure of the greenhouse. To prepare the right quotation for the screen system, it is therefore important to have the correct basic data of the greenhouse structure.

Total greenhouse surface	: 30259 m ²
Total screen surface	: 30259 m ² upper screen / 23040 m ² lower screen
Bay size	: 9600 mm
Section size	: 4000 mm
Diameter of the suspension tube	: Ø 32 mm
Center column size	: 80 x 80 mm
Gable wall column size	: 80 x 80 mm

Intermediate gable wall columns

Due to wind loads the forces on the gable wall of the greenhouse are much higher than the forces in the middle. Therefore at the gable walls extra columns are placed between the columns under the gutters. This extra columns we call the intermediate gable wall columns.

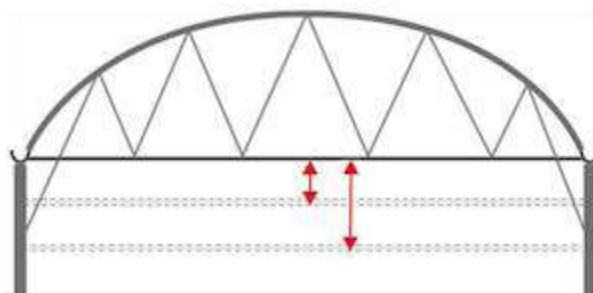
The square tubes 50x50 mm, for tensioning the polyester wires of the screen, are installed (connected) to all of the gable wall columns, so the number of intermediate gable wall columns is important for the right number of screen components.



Number of intermediate gable wall columns : 3 per bay

Screen lowering

The screen lowering is measured from the center of the suspension tube to the bottom of the screen.



Screen lowering upper screen	: 150 mm
Screen lowering lower screen	: 650 mm
Distance between upper and lower screen	: 500 mm

Screen zone information

Zones	Surface upper screen	Surface lower screen	Total number of drive lines per zone per screen
	m ²	m ²	
Zone 1	7680	7680	31
Zone 2	7219	0	31
Zone 3	7680	7680	31
Zone 4	7680	7680	31

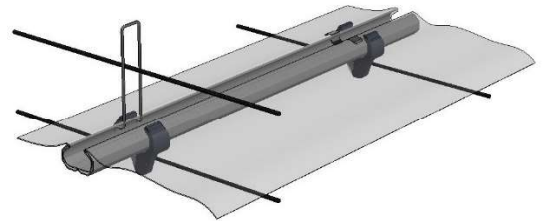
Screen System Details Upper screen

Screen Profile

The unique form makes the ValkPolyProfile stronger than the conventional steel $\varnothing 19$ mm screen profile and makes connecting easy without the need for additional actions or accessories. You simply slide them together. That saves costs! The matching plastic lower wire guide block ensures that the polyester wire and the profile do not touch. This means both will last longer. The stainless steel upper wire guide provides a smaller screen package resulting in more light and a higher production.

ValkPolyProfile

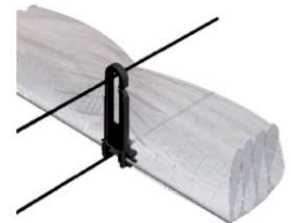
- ✓ Stronger than the conventional steel $\varnothing 19$ mm screen profiles
- ✓ Easy connecting of profiles without accessories
- ✓ Cost saving



Length of the profiles	: 6400 mm
Type of coupling	: By means of rejuvenation
Type of lower wire guides	: ValkPolyClip (spacing 400 mm)
Type of upper wire guides	: SS. upper wire guide VP+ (spacing 800 mm)
Cloth connection	: ValkPolyClothClip (spacing 800 mm)

Screen blocker

The screen blocker is a multifunctional part. With the screen blocker you are able to get a smaller cloth package. The screen blocker blocks your cloth package and so prevents your cloth from hanging over the closing wire. The screen blocker also helps keeping you polyester wire in a straight line and helps attach the cloth to the closing wire.



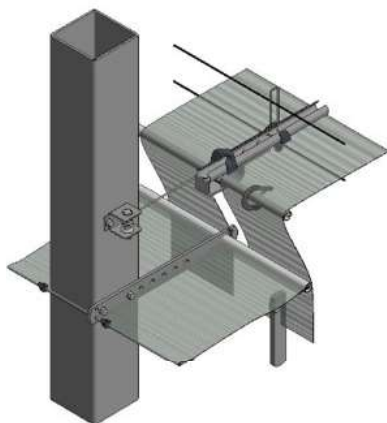
Screen blocker chosen in project	: Yes
Screen blocker spacing	: 800 mm

Polyester wires

Number of polyester lower wires per bay	: 24 (distance 400 mm)
Number of polyester upper wires per bay	: 12 (distance 800 mm)

Sealing type: Energy/light sealing (energy and/or blackout screen)

With the energy/light sealing, the screen system is sealed energy- and light-tight. This option prevents energy and light loss. With this option, the materials are supplied to seal the spaces between the screen and the gables (excluding cloth).



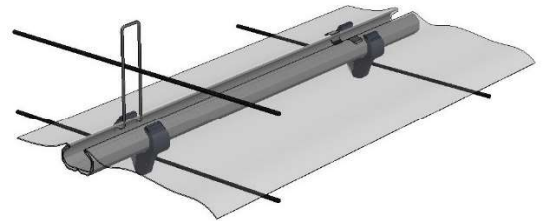
Screen System Details Lower screen

Screen Profile

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ValkPolyProfile

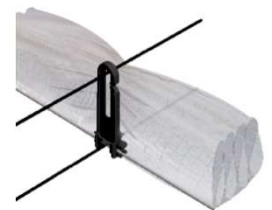
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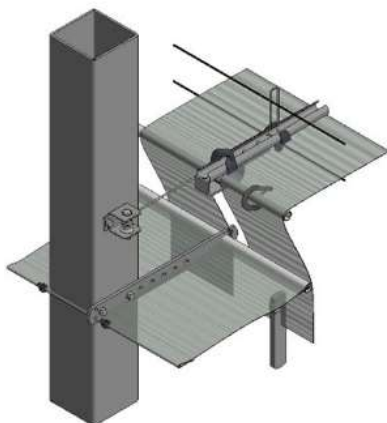
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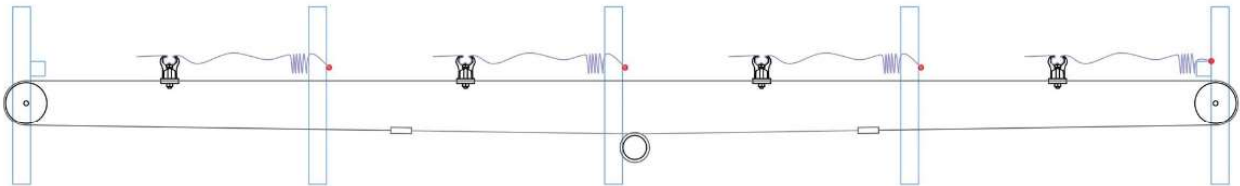


Drive Line Details Upper Screen

Type of Driveline: Pull Wire system - Fixed

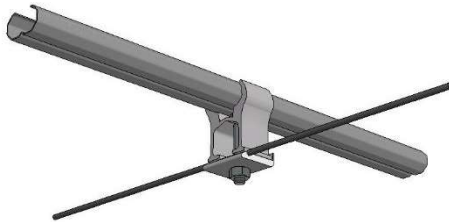
In this project all sections have the same size.

The pull-wire system functions using a steel pull-wire in combination with the ValkPolyCord. This special cord can be wound around a smaller drive shaft. With a smaller drive shaft, you need less engine power and less engine power means fewer motors. This saves energy and costs.



Type of Driveline connection

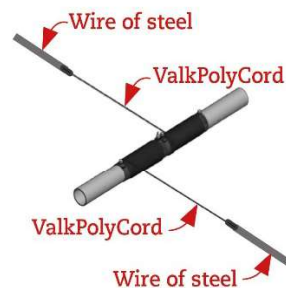
The pull wire clamp makes a fixed connection between the ValkPoly+ screen profiles and the drive cables. In this projects all sections have the same size so all connections can be made with pull wire clamps.



Pull Wire system

The pull-wire system uses a steel pull-wire and ValkPolyCord. This cord can be wound around a smaller drive shaft. With a smaller drive shaft, you need less engine power and less engine power means fewer motors. This saves energy and costs.

- Energy and cost saving
- Controls larger screen sections with less engine power



Number of drivelines per bay : 3
Distance between drivelines : 3200 mm

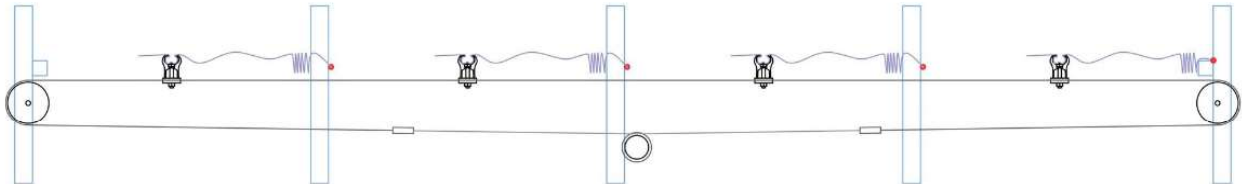
- ① This drive system causes additional forces on the gable walls. The greenhouse has to be able to withstand the forces exerted by this system (see zone information for the forces) See overview of the external materials for the drive to learn which external drive line materials are included

Drive Line Details Lower Screen

Type of Driveline: Pull Wire system - Fixed

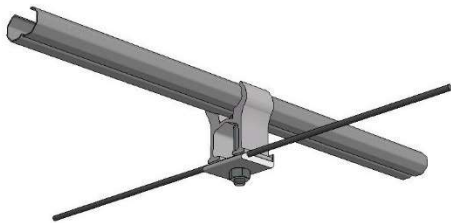
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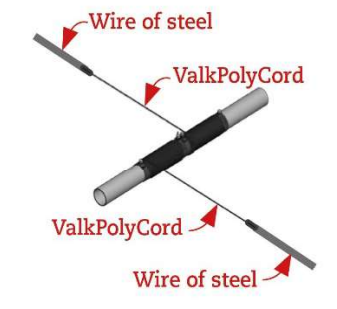
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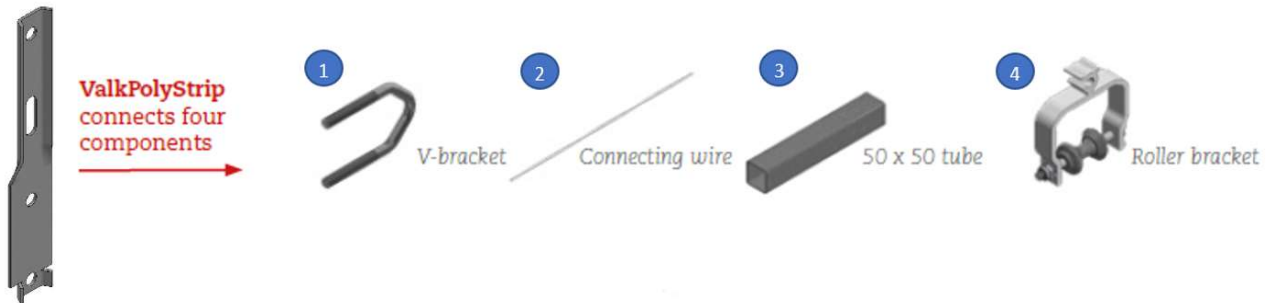


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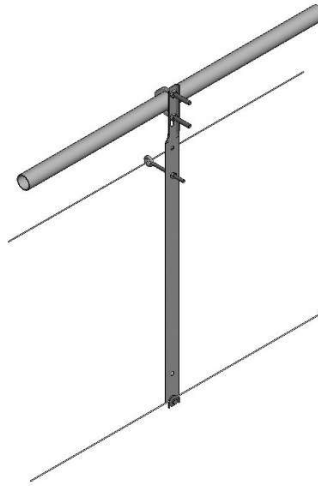
ValkPolyStrip

The core of the drive systems is the **ValkPolyStrip**. With its smart design, it acts as a connecting element between four different components. This means you need fewer loose articles for mounting, which greatly simplifies your stock management. And thanks to the ValkPolyStrip the screen system will be aligned at the same height.



In this project the ValkPolyStrip is used for:

- Supporting the support wires



Safety instructions | Delivery conditions | Guarantee

Standard values

This project report is based on the set values and results of the online calculation programme ValkHortiPlanner. The outcomes of the calculation are prepared with the greatest possible care. It is possible, however, that certain information is not entirely correct, given the fact that standard values are assumed in some cases. Therefore, check to ensure that all values are correctly entered and displayed.

It is possible to design exotic screen sections in the ValkHortiPlanner that are impossible to realise in practice. The responsibility for this lies with the user of the tool. If you have any doubts, we advise you to talk to an expert at Van der Valk Horti Systems or your installer.

Safety instructions

- The ValkHortiPlanner project report supplements the installation manuals, which describe the correct method of mounting the systems of Van der Valk Horti Systems.
- All applicable construction and safety regulations must be observed.
- Screen installations produce additional loads on the greenhouse framework. A design calculation must be done to determine if the greenhouse can cope with the additional pressure. If necessary, modifications will have to be made. The calculated loads published in this report are of vital importance to ensure that the screen installation can be safely installed and used.

Guarantee

The guarantee provided is subject to the guarantee provisions stated in the general terms and conditions of Van der Horti Systems BV. Our general terms and conditions can be found on our website: www.valkhortisystems.nl.

Disclaimer

Van der Valk Horti Systems BV accepts no liability for direct or indirect consequences of any action (or omission) resulting from the incorrect use of the ValkHortiPlanner by the customer.

For the complete text of the disclaimer, please go to our website: www.valkhortisystems.nl.

Not included

The following drive line materials are not included in this quotation. Please make sure you get a separate offer for this materials.

- | | |
|---|--------------|
| ➤ Motor(s), motor plate(s) and fasteners | not included |
| ➤ Chain coupling and chain wheels to go on the drive shaft(s) and on the motor(s) | not included |
| ➤ Rack drives (incl. sleeve couplings and shaft guarding clips) | not included |
| ➤ Sheet steel racks (incl. coupling pieces) | not included |
| ➤ Screen cloth | not included |

Transport information

The total weight of the quoted materials is : 12.541 kg

Contact

If you have any questions about the use of the ValkHortiPlanner, calculated results or this project report: please contact the team at Van der Valk Horti Systems.

Bill of materials

29 April 2022



Total screen surface **30260 m2**
 Bay size **9600 mm**
 Section size **4000 mm**
 Drive system **Pullwire**
 Pull wires per bay **3**
 Spacing polyester wires **800 mm / 400 mm**

Customer **Greenhouse builder / Installer**
 Project **Greenhouse 1**
 User **Helpdesk - ValkHortiPlanner**
 Total net price € (€ /m²)
 Total weight **12.541 Kg**

Project address
 Zwartendijk 73
 2681 LP Monster
 NETHERLANDS

Screen system details (Upper)

Screen profile type **ValkPoly +**
 Sealing type **Energy/light sealing**

Screen system details (Lower)

Screen profile type **ValkPoly +**
 Sealing type **Energy/light sealing**

Model	Description	Total quantity	Net unit price	Total net price
441520	Plastic screen hook 43x31 mm	2000	€ 	€
441529	ValkPolyClip	34000	€ 	€
441531	Plastic sleeve for cable Ø2 mm VP+	439	€ 	€
441533	Plastic Valk cloth peg	35000	€ 	€
441534	Plastic screenblocker VP+	16600	€ 	€
441642	Plastic end-cap for tube 42mm	15	€ 	€
442705	Alu. screen guide	290	€ 	€
442758	Alu. column strip 25x4 mm L=315 mm	290	€ 	€
442779	ValkPulley	420	€ 	€
443123	Alu. pull wire clamp VP+ 26 mm	4350	€ 	€
444700150	Galv. trellis strip VP+ 150 mm	165	€ 	€
4447150500	Galv. trellis strip VP+ 150 mm - 650 mm	555	€ 	€
444800150	Galv. trellis tube VP+ 150 mm	25	€ 	€
4448150500	Galv. truss tube VP+ 150 mm - 650 mm	70	€ 	€
447025	Galv. cloth weight 130 gr. (20x8x110 mm)	1980	€ 	€
44720050050	Rev. wheel sgl. VP+ Ø100 - 3 mm next #50x50	251	€ 	€
448101	Alu. mounting bracket tube 50 mm	580	€ 	€

4481150	Reversing wheel double VP+ 150 mm Ø100 - 3 mm	17	€		€	
4481150500	Reversing wheel double VP+ 150 - 650 mm Ø100 - 3 mm	32	€		€	
448226	Galv. bearing plate VP+	220	€		€	
448227	Galv. counter bearing plate VP+	57	€		€	
448235	Galv. U-bracket M8 tube 50x50 mm	20	€		€	
448237	Galv. U-bracket M8 tube 70-80 mm	580	€		€	
448245	Galv. V-bracket VP+ M8 tube Ø27- 42,4 mm	860	€		€	
448425	Galv. corner plate 130x35x100x3 mm	19	€		€	
454550	SS. cloth weight clip	1980	€		€	
455508	SS. upper wire guide VP+	17000	€		€	
455511	SS. cloth clip VP+	17600	€		€	
535080	Galv. eye bolt M6x80 mm	590	€		€	
535422	Galv. washer VP+ M6x22 mm	3200	€		€	
535537	Galv. washer M8 25x3 mm	800	€		€	
535616	Galv. tapping screw VP+ 4.8x16 mm	600	€		€	
535712	Galv. drillscrew Hex. 5,5x25 mm	3800	€		€	
538740	Galv. S-hook no.40 L=40 mm	500	€		€	
553000	Galv. nut M6	3200	€		€	
553016	Galv. tap bolt M6x16 mm	1300	€		€	
553035	Galv. bolt M6x35 mm	250	€		€	
553065	Galv. bolt M6x65 mm	550	€		€	
554000	Galv. nut M8	3000	€		€	
554005	Galv. lock-nut M8	700	€		€	
554040	Galv. bolt M8x40 mm	350	€		€	
554050	Galv. bolt M8x50 mm	100	€		€	
554100	Galv. bolt M8x100 mm	250	€		€	

555005	Galv. lock-nut M10	220	€		€	
555060	Galv. bolt M10x60 mm	220	€		€	
611005	Rapid all-steel stapler	2	€		€	
611006	Box Stainless Steel staples 24/8 (1000 pcs.)	5	€		€	
611530	Bit for self-tapping screw VP+	2	€		€	
481018	SS cable VP+ Ø3 mm 7x7 (1000 m)	37	€		€	
481400007	ValkPolyCord L=7 m	439	€		€	
482520	Galv. wire VP+ Ø2 mm (1000 m)	33	€		€	
485035	Reel polyester wire black (1800 m)	126	€		€	
485503	Cloth pull rope white - appr. 500 m	33	€		€	
486004000	PVC clip pipe white 14x1 mm L=4000 mm	570	€		€	
488010	Galv. wire strainer compact	105	€		€	
488012	Galv. wire strainer nr. 3	1470	€		€	
488030	Galv. wire rope clip 1/8"	300	€		€	
488040	Galv. carabiner 6x60 mm	330	€		€	
500506470	ValkPolyProfile L=6470 mm	2093	€		€	
503406480	Galv. tube VP+ 42,4x2 mm L=6480 mm REDUC	106	€		€	
508206500	Square tube 50x50x2 mm L=6500mm REDUC	106	€		€	

Greenhouse 1

29 April 2022

192.0 M

