



# Van der Waay

## Top Cleaner

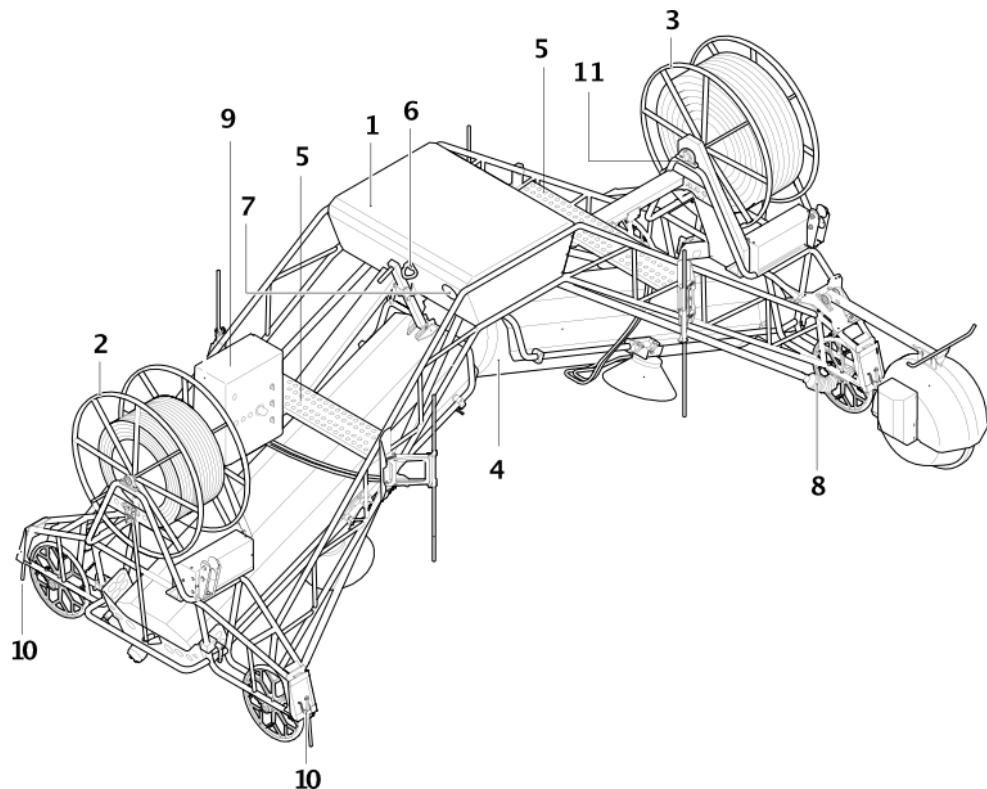
In this annex you will find explanations of most of the items offered in the quotation.



# TOP CLEANER ROOF WASHER

Top Cleaner roof washer standard edition  
[TCK320/400/427/450/480]

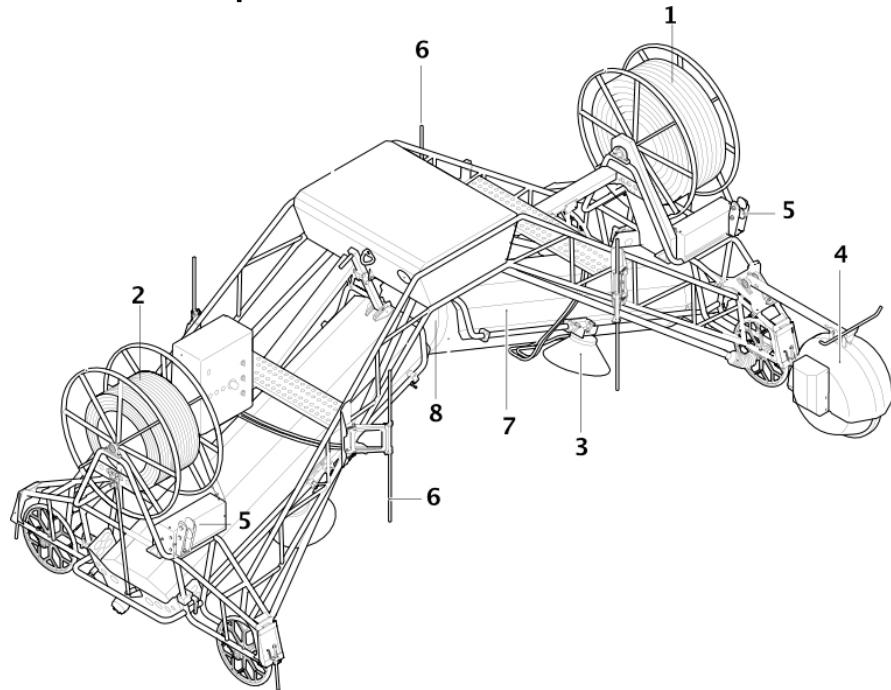




### Standard features:

1. Extremely reliable hydraulics that guarantees optimum performance, also at very low temperatures (0.5°C)  
A separated hydraulic reel arrangement that enables the user to arrange the hose and cable reel independently, so there will be as few reel interruptions as possible
2. Cable reel
3. Hose reel
4. UV proof brushes with height adjustments
5. Steps in the frame so the machine can be climbed safely
6. Certified anchor points (2 pcs) in accordance with NEN-EN795
7. Watertight LED lights so the machine is also visible in the dark
8. Protective covers of the drive shaft's joints
9. Control cabinet with:
  - optical interruption notification
  - emergency stop button
  - dosing pump selection switch
10. Sensors in front of the wheels stop the machine at the end of the greenhouse
11. Sensors at the reels will stop the machine if the reels are not rolling

## Roof washer provisions:



1. [128002] High pressure hose  $\frac{1}{2}$ "
2. [200075] Power supply cable QWPK 4 x 1.5 mm<sup>2</sup> or for North American market [171060] Power supply cable UL/Csa 4 x 2.5 mm<sup>2</sup>
3. [TCK001] Adjustable disk brushes (2 pcs)
4. [TCK002S(400/480)] Gutter brush narrow or [TCK002B(400/480)] Gutter brush wide
5. [TCK003] Hose and cable guides on reels roof washer
6. [TCK004] Open window safety protection (4 pcs)
7. [TCK005] Lightweight roller brush splash guards
8. [TCK006] Brush drive modification

### [TCK001] Adjustable disk brushes (2 pcs)



These disk brushes (2 pieces), clean the bottom of the windows, or the gutter rim.

### [TCK002S(400/480)] Gutter brush narrow



Electrically driven, high speed gutter brush for steel gutters. It automatically turns in the right revolution direction, taking the slope of the roof into account.

## [TCK00B(400/480)] Gutter brush wide



Electrically driven, high speed gutter brush for aluminum gutters. It automatically turns in the right revolution direction, taking the slope of the roof into account.

## [TCK003] Hose and cable guides on reels roof washer



The hydraulically driven guides prevent the hose and cable from becoming trapped on the reels. This minimizes the chance that the roof washer will get stucked halfway across the greenhouse.

## [TCK004] Open window safety protection (4 pcs)



This protection detects a (partially) opened window and stops the roof washer immediately, after which it will drive backwards, away from the window, and stops again.

## [TCK005] Lightweight roller brush splash guards



By equipping the machine with these lightweight, polycarbonate brush covers, the recently washed glass will not become filthy due to splashing dirt anymore. The roof washer itself will also remain a lot cleaner too.

## [TCK006] Brush drive modification



This adjustment to the brush drive is necessary when two adjacent gutters are connected by an expansion joint. The hydraulic brush motors are moved from the bottom to the top of the brushes.

## [SPARA] Spare parts kit A Top Cleaner



This kit contains the following maintenance/ first aid parts for both the roof washer and platform:

- 8 x [122115] Bearing Koyo Ø25 UP005J
- 1 x [9793] Swivel SS Full Flow 1/2" F-M
- 2 x [10099] Switch lever SS 6x1mm, Telemecanique
- 4 x [179050] Universal joint cover
- 2 x [12398] Sensor IFM M18 short model IGS202
- 4 x [170411] Spring for wheel switch stainless steel
- 1 x [10433] Pressure switch 1/4" 10-20B
- 1 x [114070] Limit switch Telemecanique / schneider XCKJ10559-D
- 2 x [9378] Telemecanique aluminum switch lever 6mm
- 1 x [7971] Chain spray 400 ml
- 1 x [2155] Grease gun with pipe
- 1 x [10406] Cartridge Heavy Duty Grease

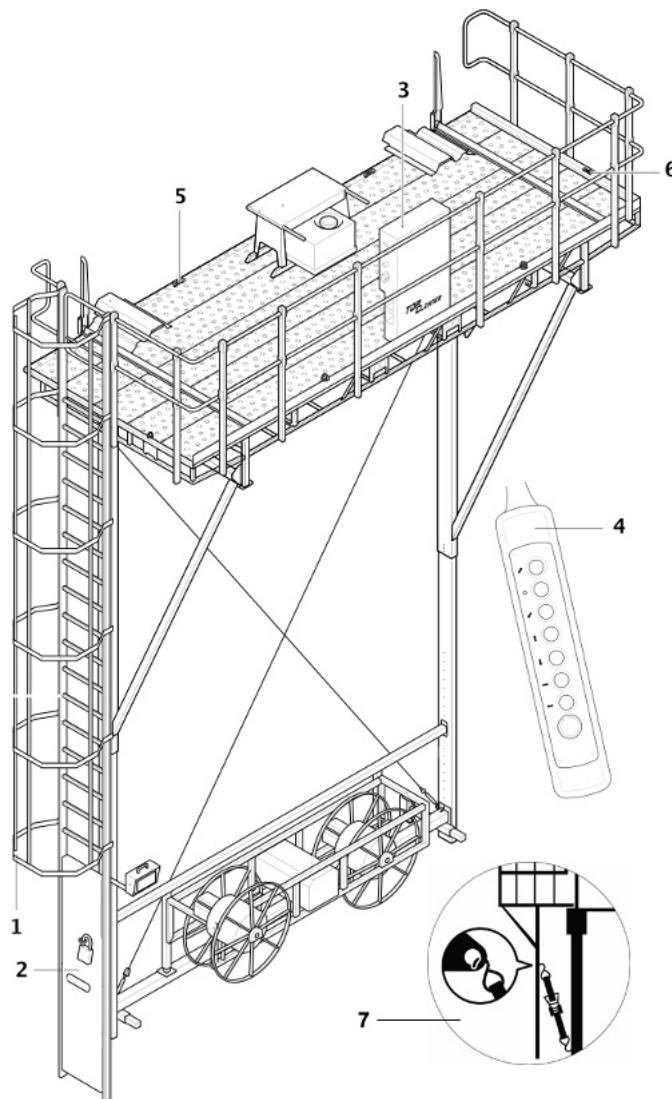
# TOP CLEANER PLATFORM/ AUTOMATION

**Top Cleaner platform, standard edition, manual control  
[TCP320/400/427/450/480MAN]**

The roof washer and platform are controlled manually by means of a wired remote control and will therefore always need someone attending. The platform is positioned in front of the greenhouse gutters, after which the ramps are controlled until they are positioned in the gutters. When the roof washer is back on the platform again, you can simply push the remote control to move it sideward to the next roof where it automatically stops.



## Platform standard features:



1. Approved cage ladder\*\*.
2. Anti-climb barrier including padlock
3. Control cabinet, manual steering
4. Wired remote control
5. Certified hoisting points (4 pcs) in accordance with NEN-EN-ISO 3266
6. Certified anchor points (4 pcs) in accordance with NEN-EN 795
7. Storm anchoring provisions

\*\*To comply with local regulations, platform ladders destined for North America are equipped with a fall arrest device instead of a cage, when the gutter height exceeds 7 meters.

## Different platform provisions and options:

[200078] QWPK 4 x 4mm<sup>2</sup> or [171061] UL/ CSA 4 x 4 mm<sup>2</sup>  
[128012] PVC hose 1" including Geka couplings L = 50m



Remarks: maximum length the platform can drag is 125 meters!

[TCP002M] or [TCP002A] or [TCP002GH] Pressure water pump



This powerful pressure booster pump delivers a pressure of 70 bars, to ensure a large amount of water at the brushes. The pump is placed on top of the platform and can be drained easily during frost.

Remarks:

- TCP002M for manual controlled platforms only. Pump must be switched on/off manually.
- TCP002A for automatic controlled platforms only. Pump starts/stops automatically.
- TCP002GH will be placed inside the greenhouse, against the gable. For automatic controlled platforms with reels only. Pump starts/stops automatically.

## [TCP001] Electric folding platform undercarriage



The platform undercarriage is electrically folding/unfolding, and height adjustable.

This option makes it possible to easily move the platform with greenhouse roof washer from greenhouse to greenhouse using suitable lifting equipment.

### Remarks:

- the cage ladder is replaced by a sliding ladder with a fall arrest device.
- not possible in combination with options [TCP005] and [TCPA02]

## [11592] 4 way lifting sling (4 x 1,000 KG) L = 3m



## [TCP005] Reel assembly underneath platform



### Remarks:

- to be used if the Top Cleaner is controlled by the climate computer [TCPA02].
- hose and cable to be connected on an outlet halfway the gable.
- always in combination with a water pump inside the greenhouse [TCP002GH]
- not possible in combination with electric folding undercarriage [TCP001]

## [TCPA01] Automatic control



In the display (HMI) you can set the desired number of roofs to be washed automatically. During the washing cycle the display provides information about the status at that moment. The display is fully menu-driven in several languages.

### Remarks:

The windows must be closed manually before starting the machine.

## [TCPA02] Interface with climate computer

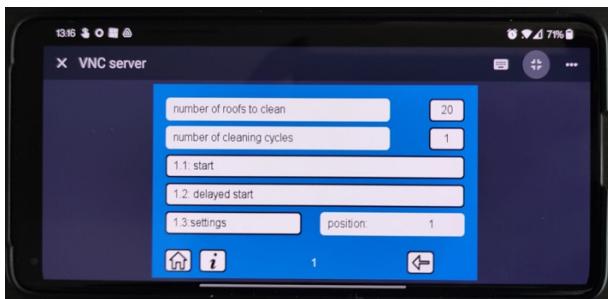


The automatic edition can be further automated by means of a connection with your climate computer. This enables you to set certain parameters in a "washing program", such as window position, maximum wind speed and minimum/maximum outside temperature. When the start conditions are met, the windows are closed automatically, and the roof washer will be automatically started. When the greenhouse needs ventilation, the climate computer will stop the release automatically, after which the roof washer will stop on the platform as soon as it returns and waits for a new release.

### Remarks:

- only in combination with Automatic control [TCP01]
- not possible in combination with electric folding undercarriage [TCP001]

## [TCPA03] IXON 4G router for remote control



By means of a 4G router you will be able to control and monitor the roof washer from a mobile device and desk/ laptop. Another great advance is that Van der Waay can troubleshoot from a distance as well.

# TOP CLEANER CROSSING PLATFORM

**Top Cleaner crossing platform, standard edition, manual control  
[TCP320SUS/400SUS/427SUS/450SUS/480SUS]**

This special platform is suspended between two greenhouses so that the greenhouse roof washer can wash both greenhouses. The controls are the same as for the standard platform. Given the dimensions, this platform is not suitable for transporting and moving to other greenhouses.

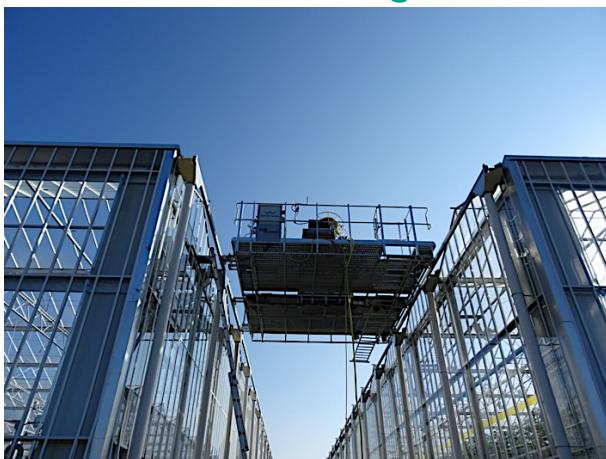


## [SUS002] Hydraulic lifting and rotating platform for crossing platform



After the last roof of the first greenhouse has been washed, raise the hydraulic scissor platform, turn the roof washer 180 degrees, and lower the platform again. The roof washer is now ready to wash the second greenhouse.

## [SUS003] Electric lifting ladder for crossing platform



When the platform needs to cross a corridor, the cage ladder is replaced by an electrically hoisting ladder. When not in use, the ladder hangs horizontally below the platform.

# SPRAYING COATINGS OR SHADING AGENTS WITH THE TOP CLEANER

The Top Cleaner roof washer can optionally be equipped with a set of spray booms and control unit, for the application of shading or coating products.

## [TCKS01] Spray booms (3 peaks) for coating application



The spray booms cover a total of three roofs in one pass. Each spray boom is equipped with several Teejet nozzles with ceramic spray tips, mounted on stainless steel tubes.

The opening and closing of the nozzles are controlled automatically from the Coating Control Box (CCB). The operator therefore does not have to ride along on the roof washer and can safely remain on the platform.

On the CCB the driving speed can be set to a maximum of 25 meters per minute.

## [TCKS04] Single spray boom



This spray boom sprays a soap mixture onto the next roof during a wash cycle. The detergent is supplied by the dosing pump option [TCKS05].

## [TCKS05] Dosatron® dosing pump assembly, 10% max, acid proof



With this plug & play dosing pump it is possible to dose a cleaning detergent during a wash cycle. With the standard foreseen selector switch on the roof washer, you can determine when the dosing pump is in operation.

For the use of this pump a spray boom [TCKS04] is required.

## [SPARB] Spare parts kit B Top Cleaner



This kit contains the following parts for the spray option:

- 36 x [17001] Teejet nozzle red ceramic XR11004VK
- 36 x [17002] Teejet nozzle brown ceramic XR11005VK
- 36 x [17008] Nozzle gasket Teejet, 10x19x3mm
- 2 x [1111201] Nozzle cap Uni-Cap blue
- 2 x [8003] Nozzle Holder
- 1 x [7748] measuring can 3,0L PP

## Stationary pump units and spray carts

To apply coatings and shading agents, a decent pump set is required. Each set is equipped with; a Comet diaphragm pump, mixing tank(s), mechanical stirrer(s), a flow meter, and a hose reel.

The sets developed by Van der Waay are tailored for use in combination with the Top Cleaner.

These units can of course also be used for the removal of the coating. In that case the tank is filled with a mixture of coating remover and water, which is then sprayed on the roof with the spray booms on the roof washer.

[960E1600] Chalking pump unit 1,600 L



- Comet IDS960 series, diaphragm pump
- 57 L/minute - max pressure 50 bar
- Flow meter
- Electric drive 400/480V - 50/60Hz 5.5kW
- 1.600 L tank including stainless steel electric drive mixer, sufficient for 10,000 m<sup>2</sup> spray liquid
- Steel powder coated frame, including forklift holes
- Manually operated hose reel (max capacity 150 m 1/2" hose)
- 10 m supply cable with plug and 1" filling hose
- Electric outlet for power supply to roof washer

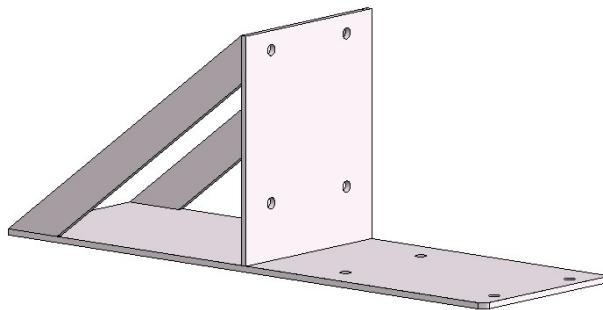
## [960E2000] Chalk pump trailer 2 x 1,000 L



- Comet IDS960 series, diaphragm pump
- 57 L/minute - max pressure 50 bar
- Flow meter
- Electric drive 400/480V - 60Hz 5.5kW
- 2 x 1,000 L tank including stainless steel electric drive mixers
- Movable chassis (powder coated) with large all terrain wheels and towing hitch for tractor
- Manually operated hose reel (max capacity 150 m 1/2" hose)
- 10 m supply cable with plug and 1" filling hose
- Electric outlet for power supply roof washer

# GREENHOUSE PROVISIONS

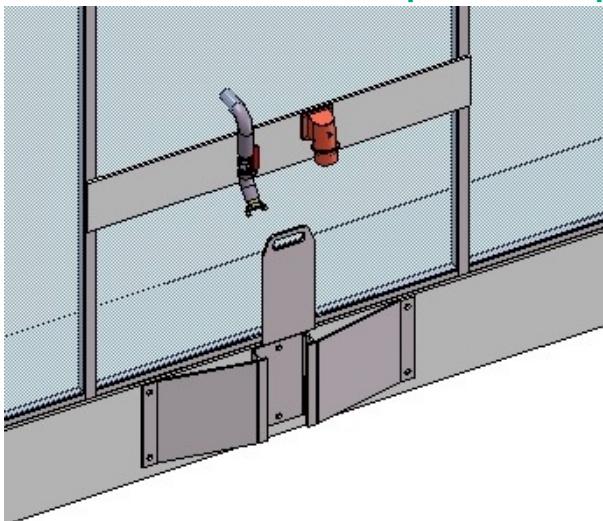
## [113525] Foundation extension plate



This aluminum plate is mounted against the side wall and its purpose is to extend the greenhouse foundation so that the platform's wheel sets cannot drive off the foundation.

Two should be mounted on each greenhouse without a bottom rail.

## [9482] Hose and cable protection plate



Protects the power cable and supply hose from being damaged by the platform's wheels driving over them.

Only needed if there is no bottom rail and the water and power connections are mounted against the wall.

# PERSONAL PROTECTIVE EQUIPMENT

When performing work on the platform, it is mandatory to be attached to the attaching points on the platform. For platforms without a cage on the ladder, a fall arrest device is mandatory, so that in combination with a harness, the ladder can be climbed safely.

## [111109] Fall arrester



Mandatory at platforms without a cage ladder.

In accordance with EN 360:2002 - Personal protective equipment against falls from a height - Retractable type fall arresters

## [111106] Harness P30 size M-XL



In accordance with EN361:2002 - Personal protective equipment against falls from a height. Full body harnesses

## [111110] Double safety lanyard with energy absorber



Standard: EN355 EN 354 CE

Length: 2 meters

### **Disclaimer**

This information is not binding. Visual and technical specifications may change due to innovation.