

# SHADEONE® Twister-Sail Crank-operated height adjuster

## Installation, Operation, Maintenance & Care

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All measurements in this document are metric. To convert from metric (meters, centimeters and millimeters) to imperial (feet and inches) visit this website:  
[http://www.onlineconversion.com/length\\_common.htm](http://www.onlineconversion.com/length_common.htm)



Passion for shade

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EXPLANATION OF SYMBOLS: **SAFETY INSTRUCTIONS AND IMPORTANT INFORMATION**



This symbol indicates essential information that is important for the safety of individuals or for the functionality of the Twister-Sail.



This symbol indicates essential product information for the person installing the Twister-Sail.



This symbol indicates deviations from the standard **SHADEONE®** Twister-Sail installation process.



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## 1. SAFETY INSTRUCTIONS AND WARNINGS; INSTALLATION INFORMATION

### 1.1 GENERAL SAFETY INSTRUCTIONS



Disregarding the applicable instructions for installation and/or operation could endanger the individuals involved.



It is very important that the installation and operating instructions are observed. Disregarding these instructions absolves the manufacturer of liability.




Country-specific legal requirements regarding occupational health and safety and accident prevention must be observed. In particular, work undertaken at great heights calls for specialised personal protection. The instructions provided on the product and its packaging must be observed.

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## 2. INSTALLING THE CRANK-OPERATED HEIGHT ADJUSTER

This installation guide is intended to be an addendum to the installation guide for the **SHADEONE®** Twister-Sail. This is because integrating the crank-operated height adjuster results in minor changes to the Twister-Sail's installation process.

Deviations from the standard **SHADEONE®** Twister-Sail installation process shall be marked using the information note  Deviation.

### 2.1 LIST OF COMPONENTS FOR CRANK-OPERATED HEIGHT ADJUSTER

- Column(s) with integrated height adjuster
- Hand crank for operating the height adjuster

## 2.2 INSTALLING THE CRANK-OPERATED HEIGHT ADJUSTER

Below are the chapter titles that feature deviations from the standard **SHADEONE®** Twister-Sail installation guide.

### 2.2.1 INSTALLATION INSTRUCTIONS AND RESTRICTIONS

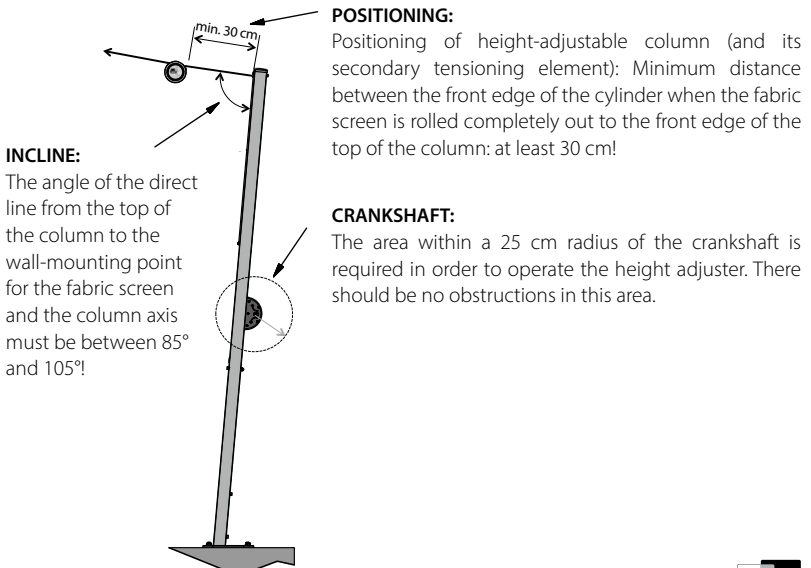


**Deviation:** (Additionally, see diagram below)

- Positioning of height-adjustable column (and its secondary tensioning element): Minimum distance from the front edge of the cylinder when the fabric screen is rolled out completely to the pulley head of the tensioning elements: at least 30 cm!
- The angle of the direct line from the top of the column to the wall-mounting point for the fabric screen and the column axis must be between 85° and 105°! (Example: If the column is vertical, the maximum angle of the fabric screen's incline is 15°)
- Crankshaft: The area within a 25 cm radius of the crankshaft is required in order to operate the height adjuster. There should be no obstructions in this area – choose the height of the crankshaft accordingly!

The tensioning elements [normal tensioning elements and those for the height-adjustable column(s)] are installed in line with the Twister-Sail **SHADEONE®** installation guide, using appropriate fixing materials. The Twister-Sail is installed by following the **SHADEONE®** Twister-Sail installation guide, up to and including the point where the columns or wall-mounted tensioning units are set up.

### REQUIREMENTS FOR INSTALLING THE TWISTER-SAIL WITH CRANK-OPERATED HEIGHT ADJUSTER (PLEASE CONSIDER THESE BEFORE BEGINNING THE INSTALLATION PROCESS)





### 2.2.2 ATTACHING THE TENSION CABLE

**Deviation:** Whenever a height-adjustable column is installed, the hand crank that is embedded inside the crank housing should be used to lower the tension cable until it stops at the very bottom. From this point, follow the **SHADEONE®** Twister-Sail installation guide and continue with the steps for attaching the tension cable up to the point of tensioning of the Twister-Sail.

### 2.2.3 TENSIONING THE TWISTER-SAIL



**Deviation:** For any installation of a height-adjustable column, before beginning to tension the tension cable using the tensioning crank, the hand crank that is embedded inside the crank housing should be turned in order to raise the tension cable until it stops at the very top. In doing so, the tension cable will slacken to a greater or lesser degree, depending on the installation situation. From this point, the tensioning crank is turned anti-clockwise to re-tension the tension cable so that it is no longer slack. This position is used as the zero point for the following values for the number of crank turns. You can now continue to follow the steps in the **SHADEONE®** Twister-Sail installation guide regarding tensioning.



**Deviation:** The values for the number of crank turns is different for height-adjustable columns. Using the zero point that was established previously for counting the number of crank turns, the basic pre-tensioning value is 45 turns and the maximum number of turns is 100. You can now continue the installation by following the steps in the **SHADEONE®** Twister-Sail installation guide up to the point of attaching the restraint cables.

### 2.2.4 ATTACHING RESTRAINT CABLES TO THE TENSION CABLES



**Deviation:** For this step, the Twister-Sail not only needs to be fully rolled out but the tension cable **also needs to be raised to the very top.**

You can now continue to follow the steps in the **SHADEONE®** Twister-Sail installation guide up to the point of commissioning.

## 2.3 COMMISSIONING



Before commissioning the Twister-Sail, remove all items (e.g. ladders, tools, etc.) that are in or below the Twister-Sail's range of movement.

During the test runs, nobody should be in this area due to the danger caused by potential malfunctions.



**Deviation: Before the Twister-Sail is rolled out, always ensure that the tension cables for the height-adjustable columns are raised to the very top. The tension cables for the height-adjustable columns can only be lowered using the hand crank once the Twister-Sail has been rolled out completely.**



When the cylinder is rolled up, the tension cables for the height-adjustable columns are **not** to be lowered. This could otherwise lead to the height-adjustable columns being overloaded and permanently damaged, and the Twister-Sail could also be damaged!



**Deviation: Before the Twister-Sail is rolled up, it is important to check that the tension cables for the height-adjustable columns are raised to the very top. The Twister-Sail should only be rolled up if this condition is met.**



If the tension cables for the height-adjustable columns are in their lowered state and the Twister-Sail is rolled up, this can lead to the height-adjustable columns being overloaded and permanently damaged, and the Twister-Sail could also be damaged!

**The deviations and instructions in this chapter are to be expressly communicated to the user or end customer so as to prevent malfunctions and damage.**

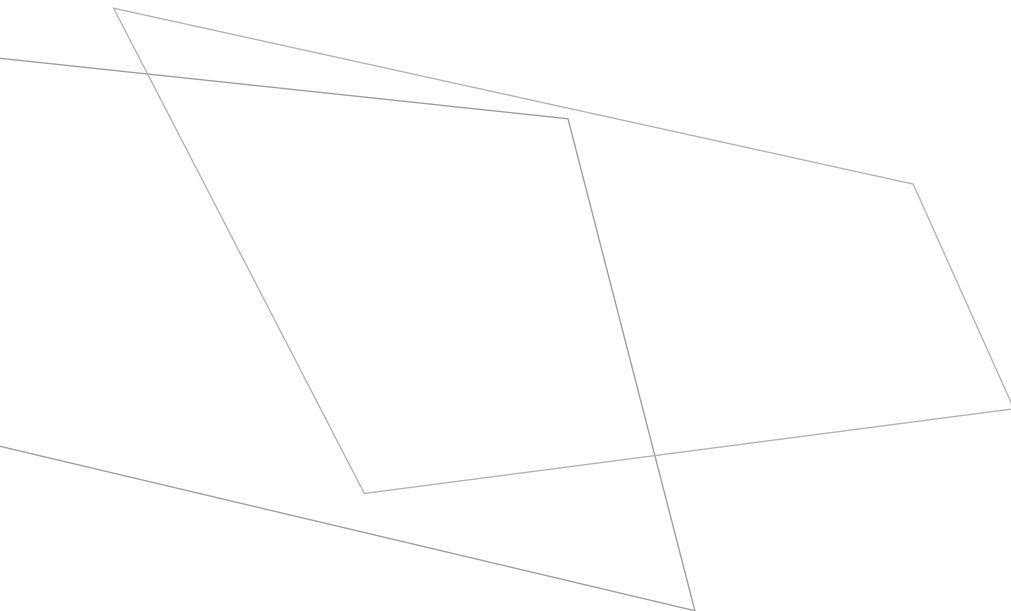
## 2.4 DISASSEMBLY



Ensure that there are no unauthorised persons in the area around the Twister-Sail. Disassemble the Twister-Sail by following the assembly instructions in reverse. **(Important: Use the cylinder clamps!)**



# Operating instructions



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### 3. **BASIC INFORMATION**

Thank you for buying a crank-operated height adjuster for the **SHADEONE**® Twister-Sail from shadesign.

In order for your product to operate for a long time and without any faults, careful attention must be given to these operating instructions. It is important to follow these instructions in order to ensure the safety of the individuals involved. It is important that the instructions in the operating instructions document are observed.

Disregarding these instructions absolves the manufacturer of liability.

Please also observe any instructions provided on the product and its packaging. We request that you retain these instructions for the system's installation, operation, maintenance and care, and that you pass them on to the new owner if you should happen to sell it.

These instructions are an addendum to the instructions for the standard version of the **SHADEONE**® Twister-Sail and they focus on the crank-operated height adjuster that has been installed.



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## 4. INTENDED USE

The shadesign crank-operated height adjuster is first and foremost intended as a product to adjust the height of the shadesign Twister-Sail. Any different or additional uses shall be deemed as contrary to the intended use. The manufacturer assumes no liability for damages resulting from such uses. No modifications, additions or alterations may be made to the system without the permission of the manufacturer. Defective system components must be replaced immediately. Only the manufacturer's original replacement parts may be used. There is no guarantee that components from other manufacturers have been designed and manufactured to bear sufficient loads and comply with safety standards. Placing additional loads on the Twister-Sail's crank-operated height adjuster by hanging objects onto it can lead to the system being damaged or falling down and is therefore not permitted. Installation and maintenance work must only be carried out by qualified specialists.

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## 5. OPERATING THE TWISTER-SAIL

### 5.1 UNROLLING THE TWISTER-SAIL USING THE CRANK-OPERATED HEIGHT ADJUSTER

**Before the Twister-Sail is rolled out, always ensure that the tension cables for the height-adjustable columns are raised to the very top. The tension cables for the height-adjustable columns can only be lowered using the hand crank once the Twister-Sail has been rolled out completely.**



When the cylinder is rolled up, the tension cables for the height-adjustable columns are **not** to be lowered. This can lead to the height-adjustable columns being overloaded and permanently damaged, and the Twister-Sail could also be damaged!

### 5.2 ROLLING UP THE TWISTER-SAIL USING THE CRANK-OPERATED HEIGHT ADJUSTER

**Before the Twister-Sail is rolled up, it is important to check that the tension cables for the height-adjustable columns are raised to the very top. The Twister-Sail should only be rolled up if this condition is met.**



If the tension cables for the height-adjustable columns are in their lowered state and the Twister-Sail is rolled up, this can lead to the height-adjustable columns being overloaded and permanently damaged, and the Twister-Sail could also be damaged!



### 5.3 GENERAL INFORMATION ABOUT THE TWISTER-SAIL WITH CRANK-OPERATED HEIGHT ADJUSTER:



The Twister-Sail may only be operated by people who have been briefed or who have read and understood these operating instructions. Particular caution is required regarding people who are unable to properly assess the risks arising from incorrect use. Never let children play with the operating units! If required, mount the pull-cord fitting somewhere they will not be able to reach.



Twister-Sails by shadesign should only be operated if checks have been made to ensure that there are no obstacles in the Twister-Sail's range of movement.



Do not touch the tension cable while the Twister-Sail is rolling out! Things can become trapped in moving parts, which poses a risk of injury.



Only use appropriate and approved ladders or other climbing aids when maintaining, repairing and cleaning the system. Climbing aids must not be leant against or secured to any Twister-Sail components. Ensure that any climbing aids are stable and have sufficient grip. Never hold onto the system – this could result in injuries and falls! The Twister-Sail fabric screen and the tension cable are flexible and can buckle and/or give way.



For safety reasons, please ensure that the system is not accidentally operated while work is underway on the system. It should be made clear – by placing an appropriate sign next to the pull-cord fitting – that work is underway on the system and that it must not be operated.



In frosty conditions, there is the danger that the formation of ice will cause the rolled up fabric screen to freeze solid. If this happens, the system should never be violently tugged! The system should only be operated again once it rolls down when the pull-cord is simply let up.



Foreign bodies or heavy soiling on the fabric screen must be removed immediately, since they risk causing damage to or ruining the Twister-Sail.



If the weather is windy, very rainy or snowy, the Twister-Sail must be rolled up in order to protect it from potential damage. For this reason, the Twister-Sail should not be left rolled out during periods of absence either.



If the Twister-Sail is being uninstalled or replaced, please refer to the applicable disposal regulations.



If you should happen to give away or sell the system, it is important that you also pass on these instructions for its installation, operation, maintenance and care.



If the fabric screen gets damp or even wet, the Twister-Sail should be rolled out as soon as possible so that it can dry (risk of formation of mould and black spots, which risks damaging the fabric and its seams).

# Guide to care and maintenance

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## 6. CLEANING AND CARE



Use appropriate climbing aids!



No Twister-Sail system components or cover plates should be opened or removed during cleaning and care. If necessary, contact a specialist company.



Severe accumulation of dirt can lead to the system becoming stiff or being damaged, and it reduces the lifespan of the product. You should therefore regularly remove any dirt adhering to the fabric screen.



Do not use pressure washers, scouring agents or scouring sponges for cleaning the fabric screen! Do not use solvents such as alcohol or petrol!

### Cleaning the product:

A soft brush or a hand brush can be used to remove dirt from the Twister-Sail. Clean the fabric screen with a mild liquid detergent and rinse thoroughly with cold water. The Twister-Sail frame can be cleaned with a standard cleaning product and wiped down with a damp cloth. The fabric screen must be allowed to dry after being cleaned.

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## 7. MAINTENANCE AND REPAIR



Safe use of the Twister-Sail is only possible if the system is regularly inspected and maintained.



No lubricants or sprays are to be used near the cylinder or near any plastic components.

The Twister-Sail has restraint cables at both tensioning elements. A restraint cable temporarily prevents any loss of function and the associated consequences that would arise if the Twister-Sail's tension cable snapped (e.g. due to mechanical damage or wear). If the tension cable were to snap, the restraint cable would assume its load-bearing function until it was possible to replace the defect tension cable.



You can tell that a tension cable has snapped if the restraint cable has assumed the load and if the cylinder is suddenly hanging unusually low. The Twister-Sail should now be immediately rolled up and should not be used until it has been repaired by a specialist. Both the tension cable and the restraint cable that was used must be replaced!

The Twister-Sail must be regularly inspected for signs of wear and damage to the fabric screen, operating cord, tension cable and restraint cable. If any damage is identified, the repair should be undertaken by a specialist or a suitable service supply company. Twister-Sails that are in need of repair must not be used.





*All weather protection systems!*

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