

Sunblind cleaner LR-180-GTR

Operating instructions

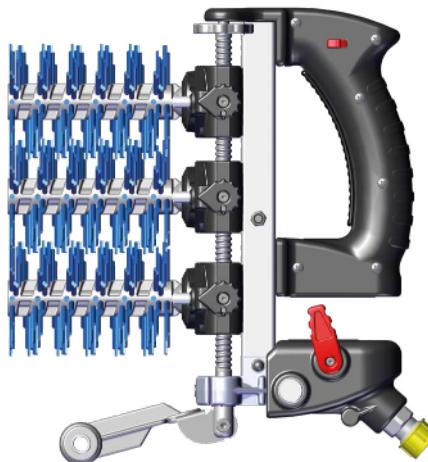
Year of construction 2010 ...

SN 0006...

LR-180-GTR

BA 0304972 R00 2020-08

Operating instructions for the
LR-180-GTR



■ MADE
IN
GERMANY

Clean^{tecs}

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Notes

Notes

A large grid of blue dots on a white background, intended for handwritten notes. The grid consists of approximately 20 columns and 30 rows of dots.



It is **IMPORTANT** that you read these operating instructions
CAREFULLY BEFORE USE and
KEEP THEM FOR FUTURE REFERENCE.

Visit our homepage at regular intervals and check whether there is a more up-to-date version of the operating manual.

The operating instructions are intended for...

LR-180-GTR from year of manufacture 2010, serial number 0006.
The revision level of the operating instructions is R00.



Components and functions of the LR-180-GTR

Here you will find information about:
Components of the system, tools for maintenance.

Explanation of notices

Safety notices

The notices are for your safety. The notices can be found in the general safety section and are always accompanied by an action that requires specific attention.

 DANGER	Failure to comply will lead to serious injury or death.
 WARNING	Failure to comply may lead to serious injury or death.
 CAUTION	Failure to comply may lead to injuries.
 NOTICE	Failure to comply may lead to material damage and impair the function of the product.

Note: ... Additional information about product operation.



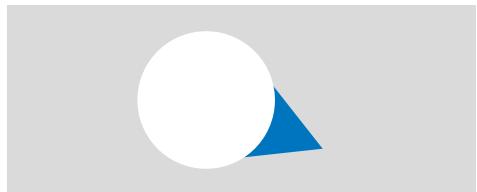
Explanatory information

You will find these notices in the illustration area with a grey background. They help you to find the right figure for the heading in the text, understand the details better, follow steps, understand movements and identify the position in the room.

Image title



The title of the image indicates the **text** to which the figure belongs.



The detailed view highlights areas that are important.



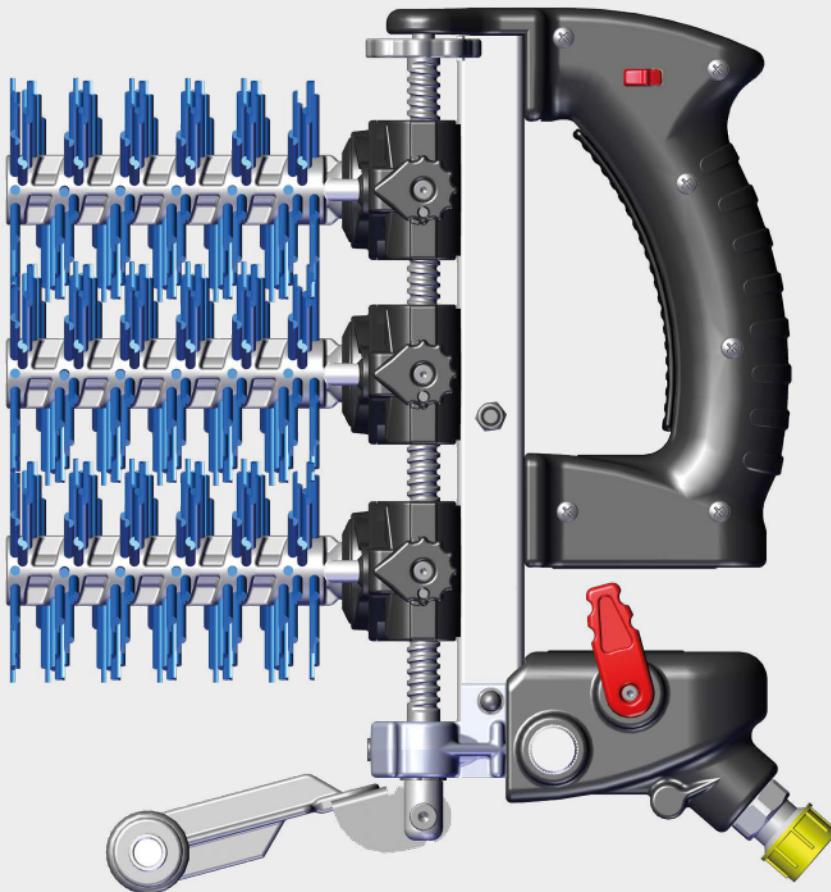
The numbers on the figures refer to the steps in the explanatory text. They always start again from [1] on each double page.



The red arrows always indicate a movement.

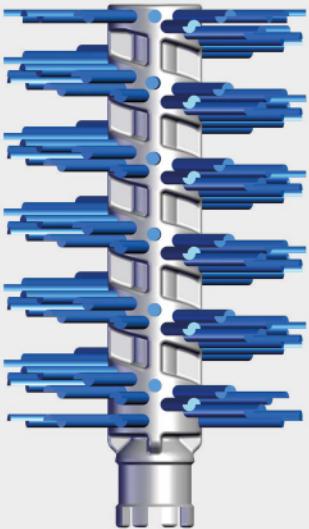
Overview of the components and scope of delivery of the LR-180-GTR sunblind cleaner

1

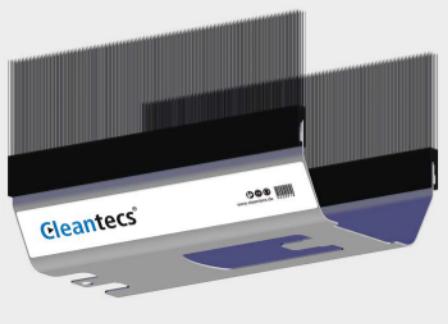




2



3



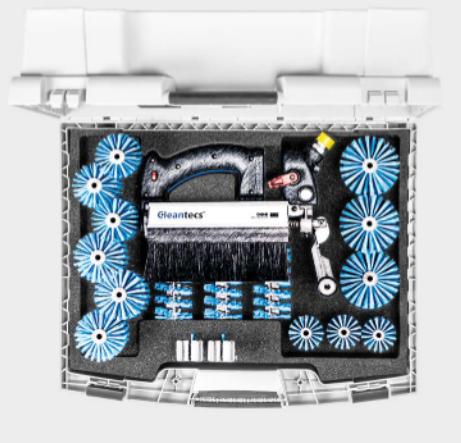
1 Basic unit

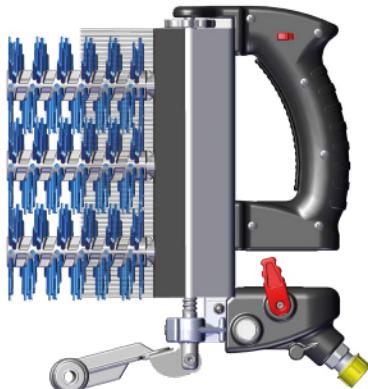
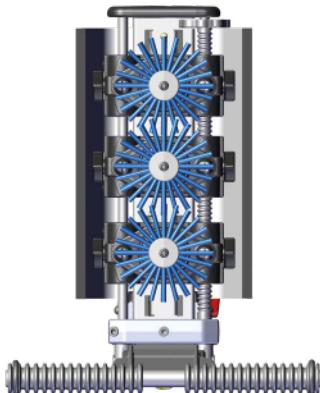
2 Round brush

3 Optional accessories: Splash guard

4 Optional accessories: Transport case

4





How does the LR-180-GTR work?

The LR-180-GTR sunblind cleaner consists of a chassis with handle, a guide tube for the drive housings and round brushes for the cleaning work. For positioning at a designated point, the LR-180-GTR has a support stand which, by folding, fulfils the function of an additional handle.

A high-pressure cleaner and a high-pressure hose are absolutely necessary for operation.

The LR-180-GTR cleans the sunblinds with its three rotating round brushes.

The energy supply for the rotation is provided by high-pressure water generated by a high-pressure cleaner. The high-pressure water is fed into the guide tube by means of a start-stop switch and sprayed onto the energy-converting

turbine wheels via a ceramic nozzle in the individual drive housings. This converts the impact energy into mechanical movement.

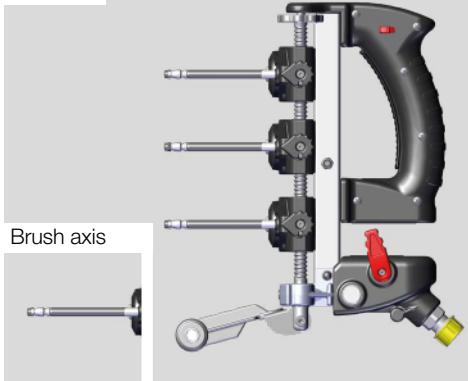
After the drive work is completed, the water is used through nozzles on the gearbox housing to wet the sunblinds and then to wash off the loosened dirt.

The water for operating the cleaner must be at least partially desalinated, i.e. free of limescale.

This is important, in order not to create deposits on the cleaned sunblind and to avoid damage in the water turbine drive due to looping effects.



Basic unit



Brush axis

Drive housing



Handle



Threaded rod



Components and their function

Basic unit: The base consists of the basic unit, to which the round brushes are attached according to the size of the sunblinds.

Brush axis: The brush axis is the guide of the round brush. A detent sleeve is mounted on the tip of the brush axle. The round brush engages in this via a spring-loaded ball.

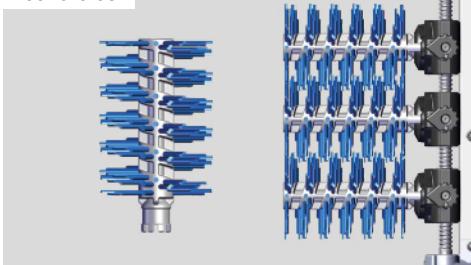
Drive housing: The turbine and the gearbox are located in the drive housing. Here, the stored energy in the water is converted into mechanical energy.

Handle: The LR-180-GTR is held and guided during work by a handle that can be easily removed to dismantle the drive housings for cleaning and repair work.

Threaded rod: The threaded rod is used to change the distance between the drive housings simultaneously. This allows the LR-180-GTR, together with the matching round brush, to be adjusted to the sunblind that is to be cleaned.



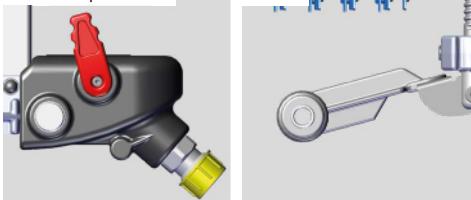
Round brush



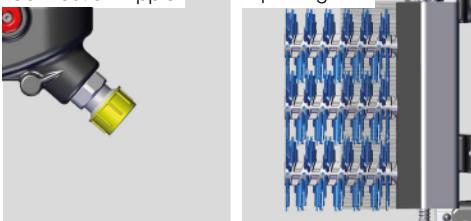
Nozzle



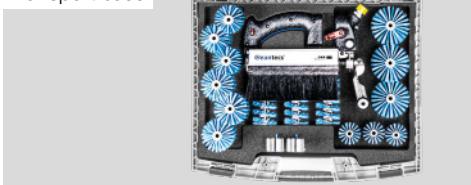
Start-stop switch



Connection nipple



Transport case



Round brush: The round brush removes the dirt from the sunblind. The round brush is available to fit different sunblind sizes.

Nozzles: The nozzles on the right and left of the drive housing wet the sunblinds with water and wash away the loosened dirt from the slat. The nozzles can be adjusted to the size of the round brush.

Start-stop switch: The start-stop switch releases or blocks the flow of water to the turbines.

Stand: The stand enables the sunblind cleaner to be parked in position safely. In addition, it serves as a handle for holding when in the folded-back position.

Connection nipple: The high-pressure hose coming from the high-pressure cleaner is connected to the connection nipple.

Splash guard: The splash guard reduces the water mist that moves towards the operator and increases the wash-off effect (optional).

Carrying case: The transport case provides a safe means of transport for all available round brushes and accessories (optional).



Intended use

Here you will find the following information:
For what purposes may the LR-180-GTR be used,
where may the LR-180-GTR be used, who may use
the LR-180-GTR?



Intended use

The LR-180-GTR is designed for cleaning sunblinds on external Venetian blinds.

Improper and prohibited use

The LR-180-GTR must not be tampered with.

Requirements of the system user

The user of the LR-180-GTR works in the commercial sector.

Operator: The user has received sufficient and appropriate instruction about the tasks assigned to him and possible dangers in the event of improper behaviour. Tasks that go beyond the scope of the product's normal operation may only be carried out by the operator if this is specified in these instructions and the operator has expressly entrusted the user with this.

Specialist staff: Due to their professional training, expertise and experience, as well as their knowledge of the relevant standards and regulations, the specialist staff are able to carry out the work assigned to them and to independently recognise possible dangers and avoid hazards.

The following groups of people are not allowed to operate the LR-180-GTR:

- ▶ People with limited physical, sensory or mental capacities
- ▶ Children and young people under 18 years of age
- ▶ Persons who have not been trained

Space requirements

- ▶ Space requirements for storage:
W 300 mm x L 320 mm x H 260 mm
- ▶ The following working area is required: Horizontal 2,000 mm, vertical 1,000 mm

Power specifications for the required high-pressure cleaner

- ▶ Pressure 120 bar
- ▶ Flow rate 10 l/min
- ▶ Temperature Cold water

Performance data in normal operation

The following performance data applies for the LR-180-GTR:

- ▶ Working pressure between 100 and 120 bar, approx. 1,300 revolutions per minute.
- ▶ Noise level in normal operation 71 decibels.

Performance limits for operation

- ▶ The LR-180-GTR may be operated at a maximum of 140 bar.
- ▶ The LR-180-GTR requires a volume flow of 10 litres per minute.
- ▶ The water temperature must not rise above 40 °C at its peak.

Water quality for operation

- ▶ The LR-180-GTR is operated with partially desalinated water.



EC Declaration of Conformity

Der Hersteller / Inverkehrbringer

TEV Jäger mbH
Grundweg 10
89250 Senden

erklärt hiermit, dass folgendes Produkt

Produktbezeichnung: Lamellenreiniger
Modellbezeichnung: L-180-GTR
Seriennummer: 0006
Handelsbezeichnung: LR-180-GTR
Modelle mitbewertet: LR-270-GTR, LR-90-GTR, LR-50-GTR, LR-180-Standard, LR-90-Standard,
LR-180-CF-GTR, LR-180-GTR-SP
Baujahr: 2010
Beschreibung:
Maschine mit angetriebenen Rundbürsten für die Reinigung der Lamellen von Jalousien.

Allen einschlägigen Bestimmungen der angewandten Rechtsvorschriften (nachfolgend) - einschließlich deren zum Zeitpunkt der Erklärung geltenden Änderungen - entspricht. Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller. Diese Erklärung bezieht sich nur auf die Maschine in dem Zustand, in dem sie in Verkehr gebracht wurde; vom Endnutzer nachträglich angebrachte Teile und/oder nachträglich vorgenommene Eingriffe bleiben unberücksichtigt.

Folgende Rechtsvorschriften wurden angewandt:

Maschinenrichtlinie 2006/42/EG

Folgende harmonisierte Normen wurden angewandt:

EN 60335-2-79:2012 Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-79: Besondere Anforderungen für Hochdruckreiniger und Dampfreiniger (IEC 60335-2-79:2012 (modifiziert))
EN ISO 12100:2010 Sicherheit von Maschinen - Allgemeine Gestaltungsleitsätze - Risikobeurteilung und Risikominderung (ISO 12100:2010)

Name und Anschrift der Person, die bevoilächtigt ist, die technischen Unterlagen zusammenzustellen:
Patrick Geiger

Ort: Senden
Datum: 06.09.2021

(Unterschrift)
Anton Jäger


(Unterschrift)
Patrick Geiger

General safety instructions

Important instructions for safe use of the system and for ensuring safe cleaning.



For your safety

Important instructions for safe use of the system. These instructions enable you to protect yourself and others from dangerous situations and injuries.

DANGER



Danger to life in severe weather conditions

- Never work during a storm.
This prevents the risk of being struck by lightning.

WARNING



Risk of injury from falling

- Use a fall-arrest system.
This will protect you from injuries from falling off the roof.

CAUTION



Risk of injury from defective hoses and connections

- Check all high-pressure hoses and connections for damage.
This will protect you from being injured by escaping hard water jets.

CAUTION



Risk of injury from defective high-pressure components

- Always replace defective high-pressure hoses and high-pressure screw couplings with new parts.
This prevents injury caused by parts flying about.

CAUTION



Illness from lowering of body temperature

- Be sure to wear water-repellent clothing.
This protects you against illness caused by lowering of the body temperature.



CAUTION



Risk of injury during installation

- Wear gloves during installation.
This will protect your skin from abrasions and pinching.

CAUTION



Risk of injury due to incorrect assembly of connectors

- Always check connection points.
This prevents injury caused by connector components breaking loose and being flung around.

CAUTION



Risk of injury due to falling

- Check your working area for unevenness and obstacles.
This will protect you from injuries resulting from a fall.

CAUTION



Risk of injury from overloading/strain

- Take regular breaks.
This will prevent injuries caused by physical and mental overload and fatigue.

CAUTION



Illness and hypothermia caused by bad weather

- In bad weather, wear suitable protective clothing.
This will protect you from illness caused by hypothermia.

**⚠ CAUTION****Risk of injury due to parts being flung away**

- ▶ Check the surface to be cleaned for objects before starting cleaning.

This will protect you from injuries caused by parts being flung away.

⚠ CAUTION**Risk of injury from flying dirt and parts**

- ▶ Wear safety goggles when working.

This will protect you from injuries caused by flying dirt and loose parts.

⚠ CAUTION**Damage to hearing on account of too much noise**

- ▶ Wear hearing protection while working.

This will protect your hearing from damage caused by excessive noise.

⚠ CAUTION**Risk of injury from inadvertent start-up**

- ▶ Always disconnect the sunblind cleaner from the pressure washer before performing maintenance work.

This prevents harm to persons or property caused by inadvertent start-up of the system.

NOTICE**Risk of damage from frost**

- ▶ Do not allow the sunblind cleaner to become frozen. This may cause damage to the components

This protects the sunblind cleaner from frost damage.

NOTICE**Risk of damage from overheating**

- ▶ Switch the pressure washer off when cleaning work is completed or during longer breaks.

This prevents damage to the pressure washer.



Safe operation

Here you will find information about: choosing a safe cleaning location, sources of danger in the working area, sources of danger when working.



Working safely

This describes how to work safely with the LR-180-GTR.

Selecting a safe starting point

- ▶ Essentially, the place of use and its accessibility determine the starting point for the cleaning work.
- ▶ Before setting up the system, carry out an inspection and consider how and where you want to work safely.
- ▶ The starting point for cleaning must be easily accessible.

Awareness of hazards in the working area

- ▶ Ensure that there are no trip hazards in your working environment.
- ▶ Ensure that you do not create any trip hazards with your equipment.

Safety when cleaning

- ▶ When cleaning, make sure that you do not damage any components of the sunblinds.

Checking and preparing high-pressure equipment

- ▶ Check the high-pressure connections for damage before starting work.
- ▶ Check the high-pressure hose for damage before starting work.



WARNING

Risk of injury from falling

- ▶ Use a fall-arrest system. This will protect you from injuries from falling off the roof.



WARNING

Risk of injury from falling parts

- ▶ Check the surface to be cleaned for parts that could fall. In this way you will protect yourself and other persons from injury from falling parts.



CAUTION

Risk of injury due to slippery surface

- ▶ Check the surface for any situations that may facilitate slipping. This will protect you from falling and injuring yourself.



CAUTION

Risk of injury to uninvolved persons

- ▶ Check whether unauthorised persons are in the work area. This will prevent personal injury due to collisions.



Notes

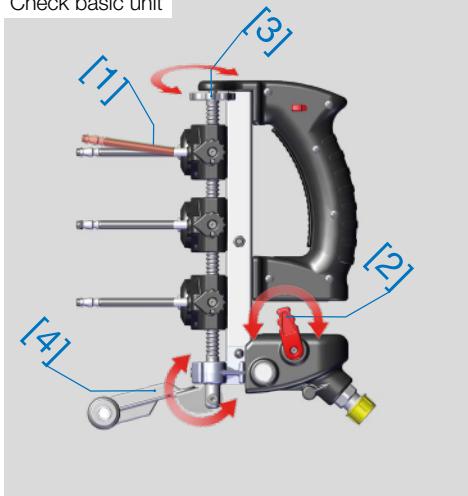


Commissioning the LR-180-GTR

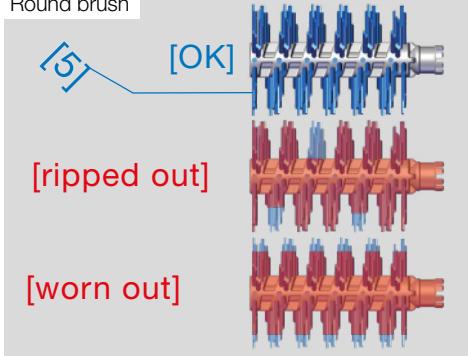
Here you will find information about preparing the LR-180-GTR for work.



Check basic unit



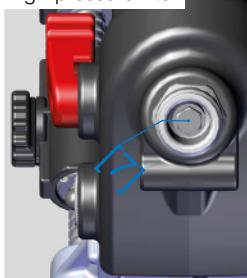
Round brush



Connection nipple



High-pressure filter



Preparation for connecting the sunblind cleaner

In this step, the sunblind cleaner is prepared for connection.

Unpacking and checking new products

- After unpacking the LR-180-GTR, please check that all components are present and that there is no damage.

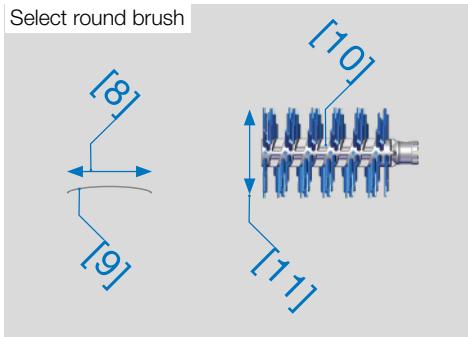
Checking before connection

- Always check the LR-180-GTR for damage before connecting it:

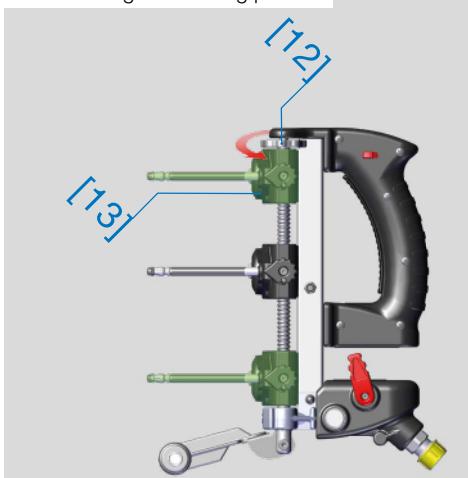
- Basic unit
 - Brush axes [1] straight
 - Start-stop switch [2] movable
 - Adjusting spindle [3] movable
 - Foldable stand [4]
- Round brushes
 - Bristles [5] torn out
 - Bristles [5] worn out
- Connection nipple
 - Thread [6] without damage
 - High-pressure filter [7] present



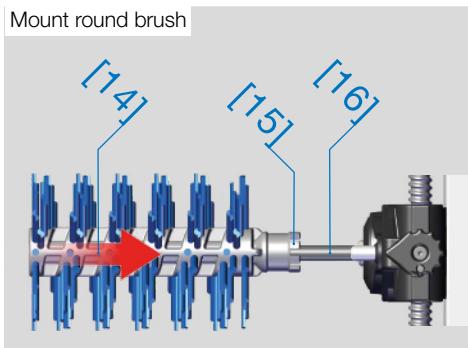
Select round brush



Drive housing in mounting position



Mount round brush



Select round brush

To select the right round brush for your cleaning, measure the width [8] of a sunblind [9]. The diameter [11] of the matching round brush [10] corresponds to the sunblind width.

Example:

If your sunblind has a width of 80 mm, you need the round brush with diameter 80 mm.

Mount round brush

Mounting the round brush on the brush axis:

- ▶ Turn the threaded spindle [12] until the lower and the upper drive housing [13] are the greatest distance apart.
- ▶ Guide the round brush [14] with the driving crown [15] onto the brush axis [16].

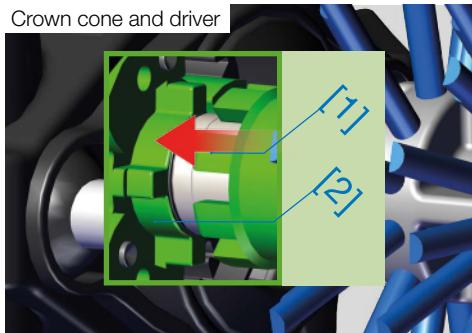
⚠ CAUTION

Risk of injury during installation

- ▶ Wear gloves during installation. This will protect your skin from abrasions and pinching.



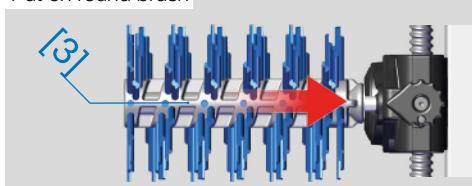
Crown cone and driver



- ▶ Align the pegs [1] of the driving crown with the recesses of the driver [2].
- ▶ Push the round brush [3] on until it engages [4].

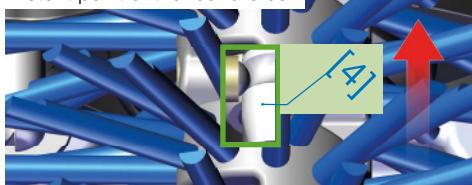
Please note: Always apply the force for mounting and dismounting parallel to the brush axis. Avoid putting lateral pressure on the brush axle.

Put on round brush

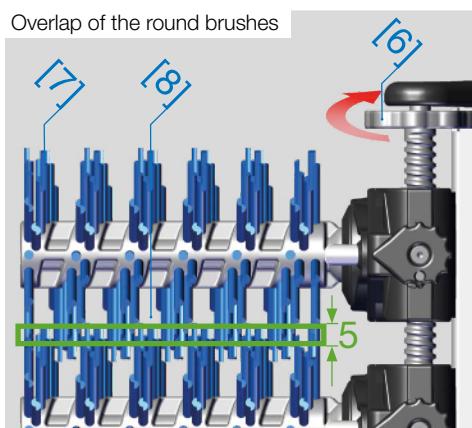


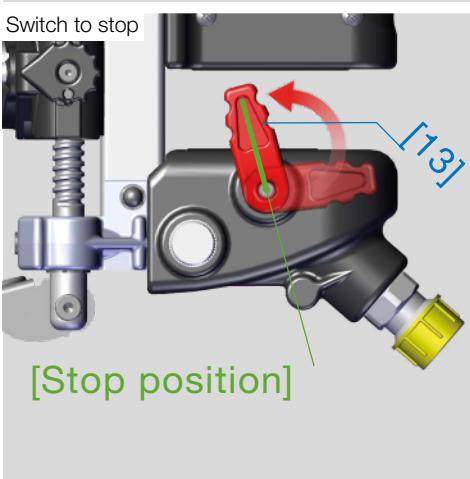
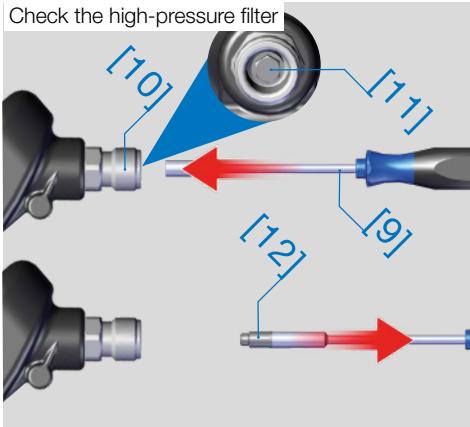
- ▶ If the round brush does not engage, pull the round brush back again and repeat the alignment.
- ▶ Turn the threaded spindle [6] until the bristle bundles [7] of the round brushes opposite each other overlap by approx. 5 millimetres [8].

Detent point of the round brush



Overlap of the round brushes





Check the high-pressure filter in the connection nipple

- ▶ Take a socket spanner [9] and position it onto the connection socket nipple [10] until it stands up on the high-pressure filter [11].
- ▶ Turn the socket spanner until it engages. Screw in a counter-clockwise direction until the high-pressure filter [12] can be loosened.
- ▶ Check the high-pressure filter and the connection nipple for dirt.
- ▶ Clean or replace the high-pressure filter if necessary.
- ▶ Clean the connection nipple of impurities with low-pressure water. Be careful not to flush dirt particles into the LR-180-GTR.
- ▶ Screw the high-pressure filter back in clockwise, hand-tight.

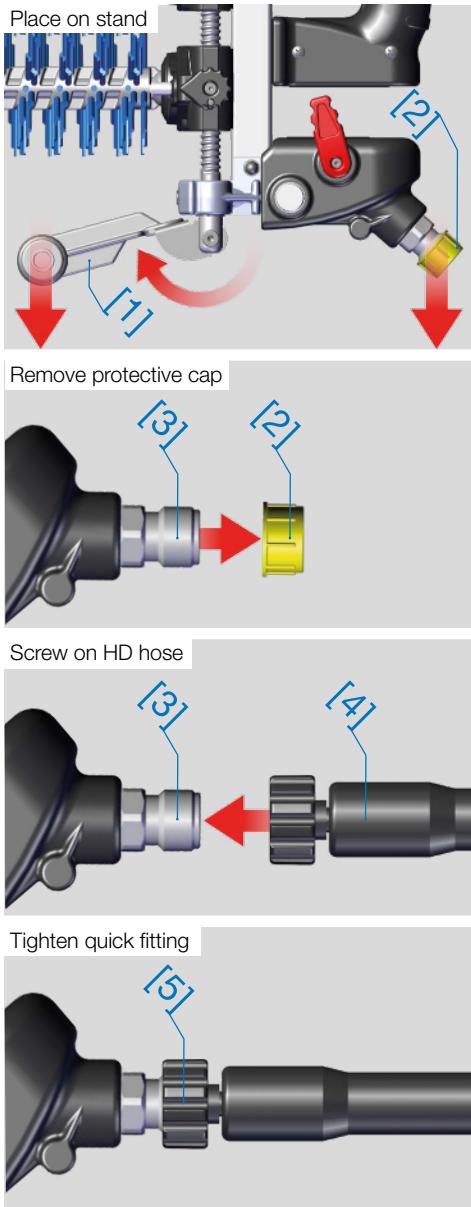
Preparing the high-pressure cleaner

Connect the high-pressure cleaner according to the operating instructions of the unit.

Connect the LR-180-GTR to the high-pressure cleaner

Connecting the sunblind cleaner to the high-pressure cleaner:

- ▶ Rinse the high-pressure hose by starting the high-pressure cleaner and stopping it again after 30 seconds.
- ▶ Check whether the start-stop switch [13] is set to stop.



- ▶ Place the LR-180-GTR on its stand [1] and protective cap [2].
- ▶ Remove the protective cap [2] from the connection nipple [3].
- ▶ Screw the high-pressure hose [4] of the high-pressure cleaner to the connection nipple [3].
- ▶ Tighten the quick fitting [5] of the high-pressure hose hand-tight (5-7 Nm).

NOTICE

Risk of damage due to impurities in the water

- ▶ Never operate the Sunblind cleaner without a high-pressure filter. This prevents damage caused by impurities in the water.

CAUTION

Risk of injury due to defective hoses and connections

- ▶ Check all high-pressure hoses and connections for damage. In this way you will protect yourself from injuries caused by a hard water jet that splashes out.

CAUTION

Risk of injury due to incorrect installation of the joints

- ▶ Always hand-tighten and check the joints. This will protect you from injuries caused by uncontrolled flying joints.

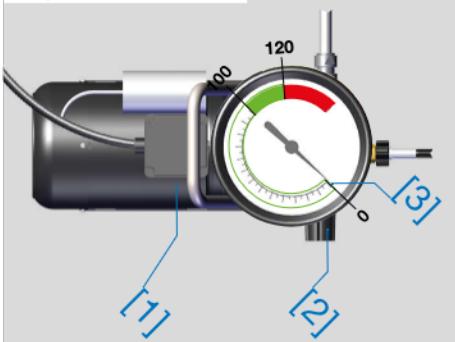


Working with the LR-180-GTR

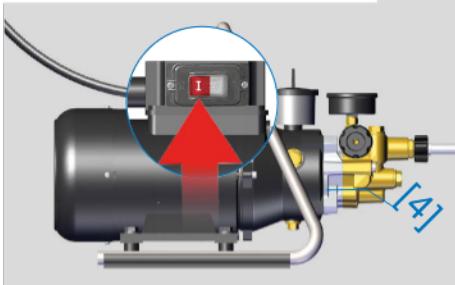
Here you will find information about working with the LR-180-GTR.



Set pressure to minimum



Switching on the high-pressure cleaner



Hold on to the handle



Working with the LR-180-GTR

Here we describe how to work with the LR-180-GTR sunblind cleaner:

- ▶ How do I start the LR-180-GTR?
- ▶ How do I hold the LR-180-GTR when working?
- ▶ Where do I start the cleaning process?
- ▶ How do I place the brush rollers between the sunblinds?
- ▶ How do I move the LR-180-GTR when cleaning?
- ▶ How do I stop the LR-180-GTR?
- ▶ What should I do if working with the LR-180-GTR is interrupted for longer periods?

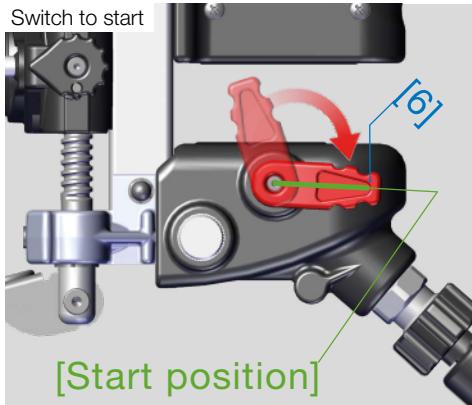
How do I start the LR-180-GTR?

When the LR-180-GTR is connected to the pressure washer, check that the start-stop switch is in the stop position.

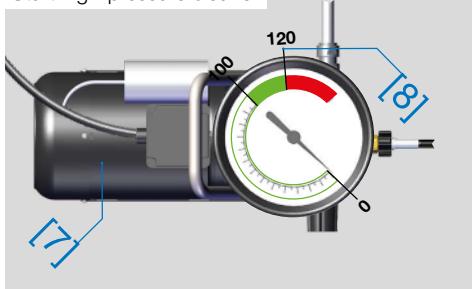
- ▶ Set the high-pressure cleaner [1] on the pressure regulator [2] to the lowest pressure [3].
- ▶ Start the high-pressure cleaner [4].
- ▶ Hold the LR-180-GTR with your hand on the handle [5].



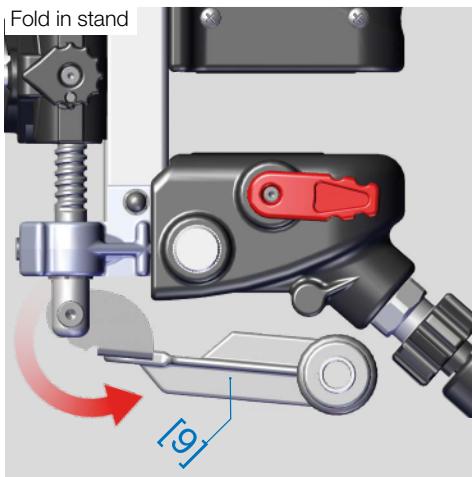
Switch to start



Start high-pressure cleaner



Fold in stand



- To set the round brushes in rotation, switch the Start-Stop switch [6] to "Start".
- Increase the pressure from the high-pressure cleaner [7] to the working pressure of 120 bar [8].

How should I hold the LR-180-GTR when working?

- When working, the stand [9] must be folded back.



WARNING

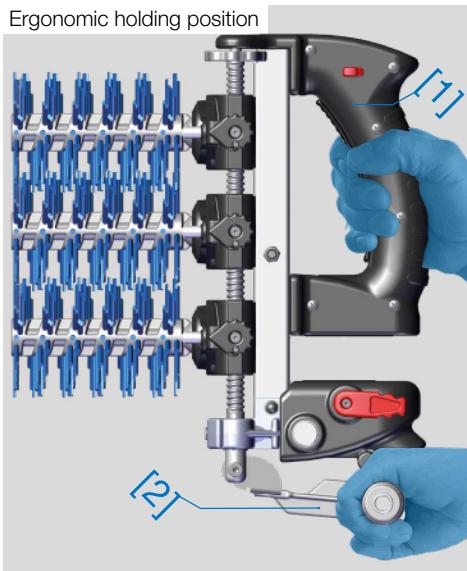
Risk of injury due to excessive operating pressure

- Do not operate the Sunblind cleaner above the specified maximum operating pressure.

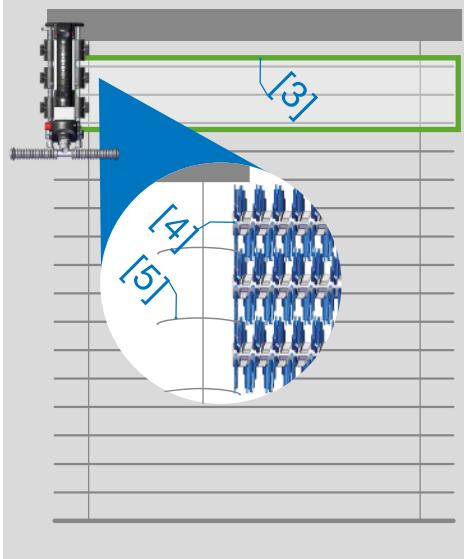
In this way you protect yourself from injuries caused by connecting parts being flung away in an uncontrolled manner.



Ergonomic holding position



Starting point for cleaning



- Hold the LR-180-GTR with one hand on the handle [1] and with the other hand on the stand [2]. This allows you to hold and guide the machine in an ergonomic movement.

Where do I start the cleaning process?

- Start the cleaning process from the upper sunblinds [3].

In this way, you also soak the soiling of the sunblinds underneath.

How do I place the round brushes between the sunblinds?

- When working with rotating round brushes, slide the brushes [4] into the gap between the sunblinds [5].

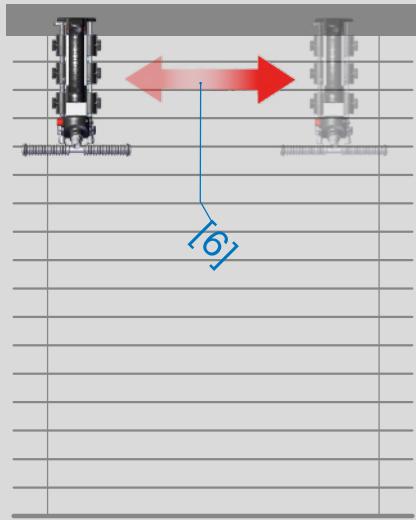
⚠ CAUTION

Risk of injury due to falling

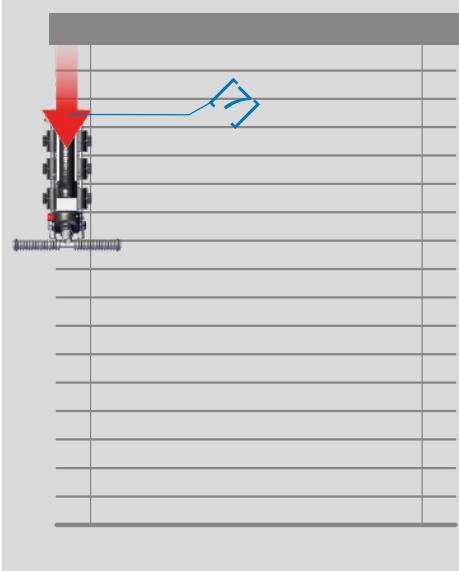
- Check your working area for unevenness and obstacles. This will protect you from injuries resulting from a fall.



Cleaning movement



Moving the LR-180-GTR



How do I move the LR-180-GTR when cleaning?

- ▶ Push the machine slowly and horizontally over the sunblinds with a right-left movement [6].
- ▶ Repeat the procedure until the sunblind has been satisfactorily cleaned.
- ▶ Then move the machine vertically [7] and repeat the process.

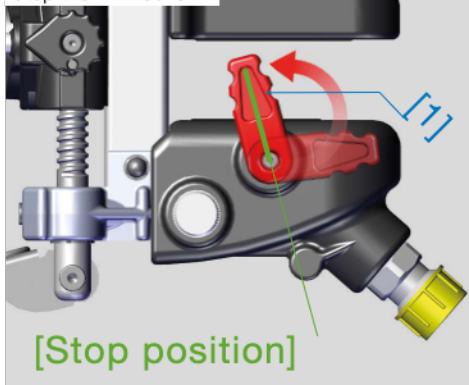
CAUTION

Risk of injury due to slippery surface

- ▶ Check the surface for any situations that may facilitate slipping. This will protect you from falling and injuring yourself.

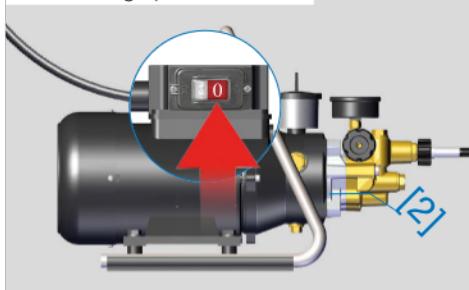


Stop the LR-180-GTR

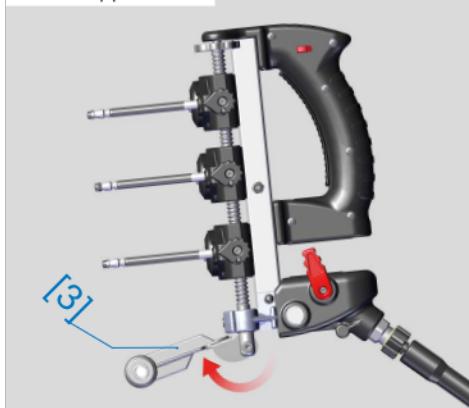


[Stop position]

Switch off high-pressure cleaner



Fold in support stand



How do I stop the LR-180-GTR?

- To switch off the rotation of the round brushes on the LR-180-GTR, set the start-stop switch [1] to the "Stop" position.

What do I do if working with the product is interrupted for longer periods?

- In case of longer interruptions switch off the high-pressure cleaner [2].
- Fold the support stand [3] back to the front and place the LR-180-GTR on the support stand.

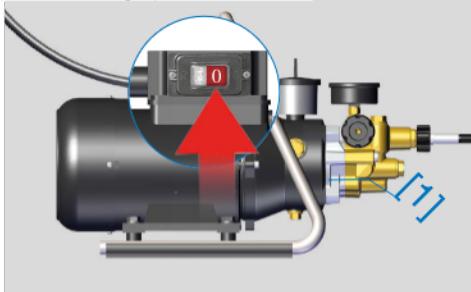


Take LR-180-GTR out of service

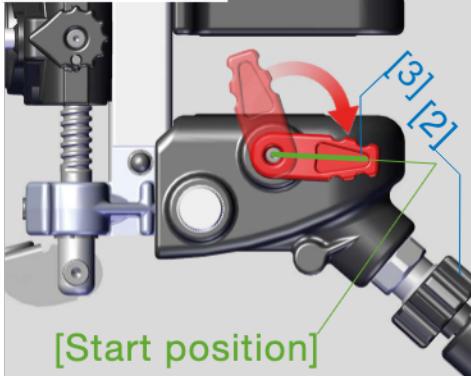
Here you will find information about dismantling
the LR-180-GTR.



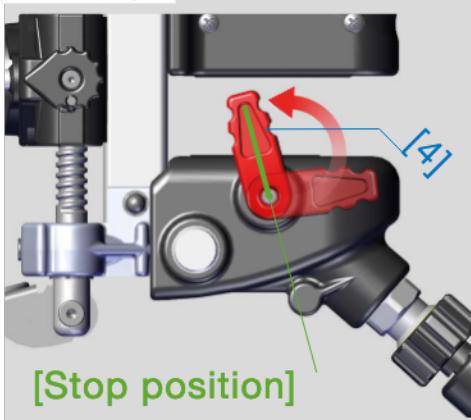
Switch off high-pressure cleaner



Reduce back pressure



Set to stop again



Disconnecting the LR-180-GTR

This describes how to take the sunblind cleaner out of operation.

How do I disconnect the LR-180-GTR from the pressure washer?

- ▶ Switch the high-pressure cleaner [1] off.
- ▶ Build up the pressure in the high-pressure hose [2] by switching the Start-Stop switch [3] to start.
- ▶ After depressurising, switch the switch [4] to "Stop" again.

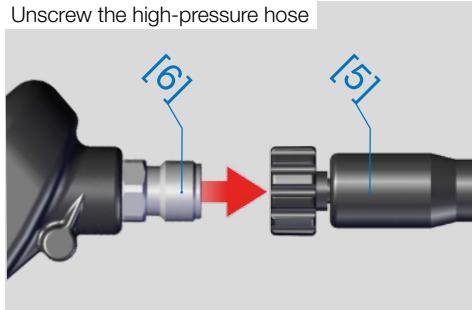
CAUTION

Risk of injury during disassembly

- ▶ Wear gloves during disassembly. This will protect your skin from abrasions and pinching.



Unscrew the high-pressure hose



Screw on protective cap



- ▶ Screw on the high-pressure hose [5] from the connection nipple [6].

- ▶ Screw the protective cap [7] onto the connection nipple [8].

Please note: Be careful not to drag your high-pressure hose with the quick connectors over dirty or dusty surfaces. This prevents dirt from getting into the high-pressure hose and being flushed into your LR-180-GTR during operation.



LR-180-GTR cleaning and maintenance

Here you will find information about how to maintain the LR-180-GTR.



LR-180-GTR cleaning and preservation

How do I clean the LR-180-GTR?

Clean the system thoroughly to remove dirt that collects in day-to-day operation.

- ▶ Switch off the high-pressure cleaner.
- ▶ Disconnect the LR-180-GTR from the high-pressure hose.

Cleaning:

- ▶ for aluminium surfaces and plastic surfaces, use cleaners containing solvents (brake cleaner),
- ▶ to clean the brushes, use soapy water as a bath. In this bath let the brushes soak and rinse them with clear water after the cleaning process.

Preserving the system

To protect and maintain the system over the storage period, preserve the components before storing them.

Preservation:

- ▶ for the aluminium surfaces, a spray oil
- ▶ for the plastic surfaces, a silicone oil
- ▶ Do not preserve the brushes, as the preservation has an influence on the cleaning result after the commissioning.

NOTICE

Risk of damage from frost

- ▶ Do not allow the sunblind cleaner to become frozen. This may cause damage to the components.
This protects the sunblind cleaner from frost damage.



Transport and storage

Here you will find information about transporting and storing the LR-180-GTR.



Empty the machine of any residual water



Screw on protective cap



NOTICE

Risk of damage from frost

- Do not allow the sunblind cleaner to become frozen. This may cause damage to the components.

This protects the sunblind cleaner from frost damage.

Transportation and storage of the LR-180-GTR

Here information is provided on the transport and storage of the LR-180-GTR.

Transport + preparation

- Check the LR-180-GTR for damage (chassis, handle, round brushes, brush axle ...).
- Clean and maintain the machine as described in the Maintenance chapter.
- Transport the LR-180-GTR to a place protected from frost, shocks and dirt.

Storage + preparation

- Set the Start-Stop switch to start. Empty the machine of water as far as possible. You can also use compressed air and blow out the LR-180-GTR via the connection nipple.
- Check the LR-180-GTR for damage (chassis, handle, round brushes, brush axle ...).
- Clean and maintain the machine as described in the Maintenance chapter.
- Store the LR-180-GTR in a place protected from frost, shocks and dirt.

Tip: In order to ensure that the LR-180-GTR remains well-protected during transport, we recommend our transport case.

Disposing of the system

Here you will find information about the disposal of the product and the associated components.



What happens to the waste?

Packaging

- ▶ The packaging is made of cardboard and can be recycled.

Chassis, brush axles, Stand, distributor, Start-Stop switch

- ▶ These components can go into metal recycling.

Handle, plastic housing, round brushes

- ▶ These components can be disposed of with non-recyclable waste.



⚠ CAUTION

Risk of injury during disassembly

- ▶ Wear gloves during disassembly. This will protect your skin from abrasions and pinching.



Notes

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