

Assembly instructions

Roller Shutter for BR 14x-2/248-2



Please read these instructions carefully and completely before commencing the assembly.



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1. Safety Instructions and Warnings

These instructions explain the installation of the pre-assembled AluTeam roller shutters for Kits series 14x-2 and 248-2. The assembly in accordance with these instructions forms the basis for the warranty in accordance with valid EU law.

To create a fault-free roller shutter **always follow the work instructions** described here, in particular, the following warnings, **otherwise the warranty is voided**. Contact us immediately in the event of any uncertainties.



1.1 Check scope of delivery

Please check the delivery for completeness using the enclosed packing list. Immediately report any transport damages to the forwarder. Please understand that we reserve the right to make changes to the scope of delivery in Form, equipment and Technology. **The scope of delivery generally includes:**

- 1 pre-assembled roller shutter according to order confirmation
- 1 x set of horizontal guide rails with end stop
- 1 x rubber roller door seal, left side
- 1 x rubber seal for roller door, right side
- rivets MD150031 - for mounting the guide rails
- these installation instructions
- 1 stick-on label of notes on safety and inspection instructions

The aluminum panels supplied are quality powder-coated on the outer side. Only in case of special customer preference are the panels bright-rolled. Their preparatory treatment requires special care and experience. A guarantee for the paint adhesion is dispensed with in this case. You can also repaint powder-coated rolling gates later through roughening, priming and cover-painting.



suspended loads
on the crane



falling
objects



danger of
crushing



falling parts
or assemblies



danger of
falling



falling-down
load

1.2 Safety and Warning instructions for the installation

AluTeam normally does not precisely know how the roller shutter is going to be used. As the vehicle builder, you must adjust the order and further processing of the kit to the needs of your customers as well as to the installation guidelines of the chassis manufacturer.

- Never position screws or bolts at an angle. The screws must not tilt. Connect components only in direct contact with the supplied screws and only once! Third-party or used screws endanger operational safety. Always use new screws for repairs.

Please pay attention to your own safety and that of your employees. Working with kits bears risks. Therefore, be cautious at all times, and it is especially imperative that:

... when **unloading** with a forklift, slide the pallet onto the forklift prongs completely. Place down construction sets on flat surfaces only and secure them against tilting, tipping over and falling down.

... always **wear a helmet during crane work** and only lift assemblies vertically and not at an angle! Never walk under high loads! The suspension in the crane must always be above the centre of gravity of the assembly!

... **comply with legal specifications**, such as vehicle licensing regulations. This is the responsibility of the vehicle manufacturer.

... note that component parts can have zinc protrusions and sharp edges. Therefore always **wear safety gloves**. Likewise you should **wear safety shoes** since heavy parts can fall down.

1.3 General safety instructions and warnings

Attention: The roller shutter is approx. 70 - 100 kg in weight. Strong springs keep it in balance. Damage can lead to malfunctions and accidents. Therefore, **please observe these instructions and be sure to pass them on to your customers:**

- **Check** all parts for secure fastening **before use**. Loose fixing is to be retightened or replaced. Check the webbing, the tension ropes, belts, rollers and hinges. Replace them immediately if they are damaged!
- **During use check** the interlocking and the opening function. If these are stiff, oil the interlocking of rollers, bearings, hinges, rails and spring shaft with light creeping-oil. Bearings which are not oiled seize up with rust.
- Only qualified persons may implement **further repairs**. Without precise knowledge do not attempt to adjust the spring shaft which is under stress or replace damaged ropes yourself.
- **Never block off the rails and gate area**. When the shutter is in motion, the gate area must be free of obstacles. Do not activate defective and blocked gates!
- **Toppling over of the loading area** can cause life-threatening accidents! Caution; the gate belt can tear! Therefore never use the belt for ascent or descent.
- Before starting the drive, **the gate must be closed and locked**. Driving with open gate damages it.



ACCIDENT HAZARD!



WARNING!

General safety instructions and warnings



Toppling over of the loading area can cause life-threatening accidents!

Caution! The gate belt can tear!

Never use the belt for ascent or descent.



When the shutter is in motion, the gate area must be free of obstacles.

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1. Check the interlocking and the opening function. If these are stiff, oil the interlocking of rollers, bearings, hinges, rails and spring shaft with light creeping-oil. Bearing which are not oiled seize up with rust.
2. Replace damaged rollers, bearings and hinges.
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4. Never block off the rails and gate area. When the shutter is in motion, the gate area must be free of obstacles. Do not activate defective and blocked gates!
5. Toppling over of the loading area can cause life-threatening accidents! Caution: the gate belt can tear! Therefore never use the belt for ascent or descent. ACCIDENT HAZARD!

Before starting the drive

The gate must be closed and locked. Driving with open gate damages it.

Maintenance, service, spare parts

1. Lost or damaged safety instructions must be replaced. Never paint over safety instructions!
2. High-pressure cleaners or aggressive solvents can damage the paint coat and the seals.
3. Use only original SCHNEIDER spare parts.
4. In case of subsequently mounted attachments or changes to Schneider components, pay particular attention to corrosion protection. Above all, you must always prevent contact corrosion caused by different materials.

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- **Lost or damaged notes on safety** are to be replaced. Never paint over notes on safety!
- **High-pressure cleaners or aggressive solvents** can damage the paint coat and the seals.
- **Use only original AluTeam spare parts.**
- In case of subsequently mounted attachments or changes to AluTeam components, **pay particular attention to corrosion protection.** Above all, you must always prevent contact corrosion caused by different materials.

1.4 Copyright

The copyright of these instructions belongs to AluTeam. They are only intended for the professional installation company and its staff, and its contents may not, either completely or in part, be:

- Duplicated
- Distributed or
- Communicated in any other manner.

Infringements may result in civil and criminal penalties!

2. Preparatory work/human resources

AluTeam kits can be assembled in any well-equipped workshop. 1 - 2 fitters with training as a vehicle or vehicle body builder or equivalent training are required for the installation of the roller shutter. Implement the following preparations beforehand:

- Unload the construction set carefully and exercise caution. Avoid damages e.g. from impact or the toppling over of components. **Lifted loads entail hazards! It is important that you observe the safety and warning instructions on page 3.**
- Do not begin the installation until you have the tools you need and all components with no damages are available.

2.2 Required tools and equipment

Make sure you have the following equipment and tools ready before beginning the installation:

- Tape measure
- Precision compressed air or battery powered screwdriver or drilling machine
- 2 vise-grip wrenches
- Welding device or rivet device for diameter $d = 5 \text{ mm}$ & $d = 6,5 \text{ mm}$
- Hammer
- Drill bit $d = 5 \text{ mm}$ / $d = 6,5 \text{ mm}$ / $d = 8 \text{ mm}$
- Steel rods approx. 450 mm long $\varnothing 13 \text{ mm}$ ca. 450 mm long
- Bolt spanner SW 11, SW 13, SW 14 (15)
- Hexagonal socket wrench SW 4
- Stepladders
- Screw clamps
- Hand lamp
- 2 wood pieces approx. 50 x 50 x 100 mm
- Safety shoes and safety gloves



3. Installation of the roller shutter

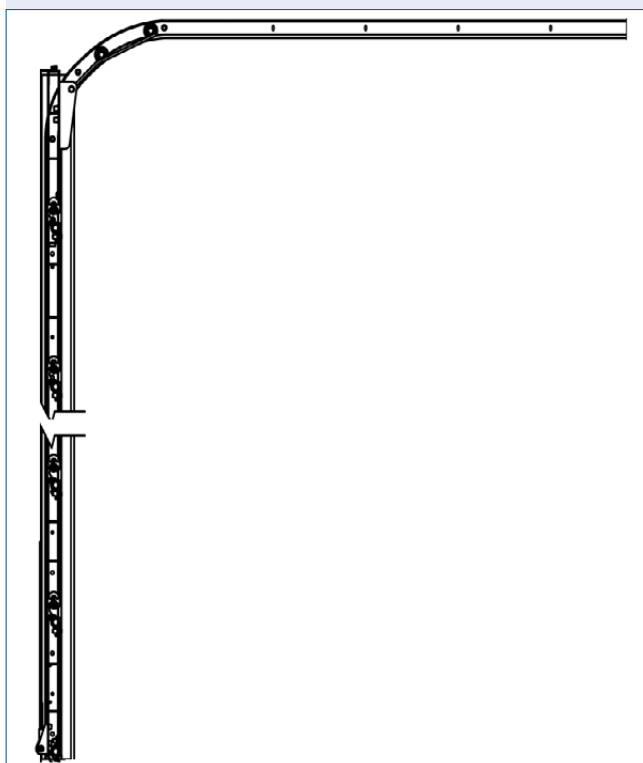


Fig. 3.1

Before carrying out any assembly and adjustment work, first check that all the necessary components are on the pre-assembled roller shutter and in the accessory pack. This includes the horizontal guide rails, the pre-assembled vertical guide rails, as well as the stop buffer at the end of the rails and the spring shaft consisting of

- 2 x pre-tensioned spring with spring bearing
- 2 x cable drum with bearing
- 2 x steel cable

3.1 Assembly of the horizontal guide rails

- The **vertical guide rails** must indicate the same location and separation distance to the roof and be pre-assembled parallel and at right angles to the door sill. For checks, match the diagonal dimensions.
- Position the **horizontal guide rails** at an angle of 90° to the vertical guide rail. They are parallel and are to be installed at the same separation distance from the roof. Note a flat transition of both rails, otherwise the running rollers snag here. If required, the transition is to be reworked. Fasten the rails with rivets MD150031 Ø 4,8 mm.

Tip: A seal seam through a 1K PU sealant compound e.g. Sikaflex prevents the intrusion of water between frame column and guide rail.



Fig. 3.2.1

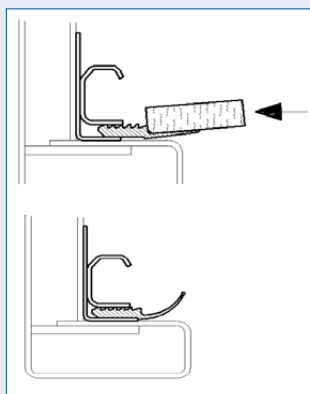


Fig. 3.2.2

3.2 Attaching the side roller rubber roller door seal seals

In the standard scope of delivery, the side seals are **already fitted**. If this has not been done, proceed as follows:

- Shorten the side seals to the dimension of the transition height + 20 mm.
- Open the shutter and slide the seal (Fig. 3.2.2) down onto the sill, beginning in the gap between the vertical guide rail and the rail angle.
- Press in the seal by placing a wood piece onto the location of the seal provided for that and hammering this securely into its seating over the whole length (Fig. 3.2.3). Fix the upper end of the side sealing with a bolt or riveting on the camber.

Tip: Increase the level of the sealing of the roller shutter by bonding the lower edge of the side sealing to the sill.

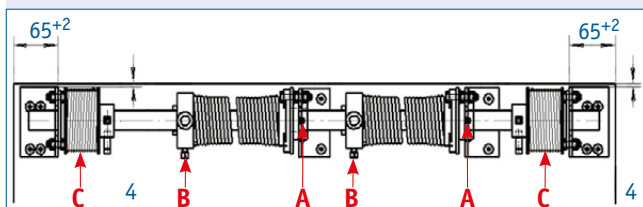


Fig. 3.3.1

3.3 Pre-assembled spring shaft

- Check whether all components of the spring shaft of the spring shaft are mounted in the correct position (Fig. 3.3.1). The two cable drums **C** must be mounted on the outside of the console bearings, the ends of the spring shaft must have the same distance to the bearings.

Caution: On the cable drums there is an **L** or an **R**. The reel with the **R** belongs on the driver's side (Fig. 3.3.2)!

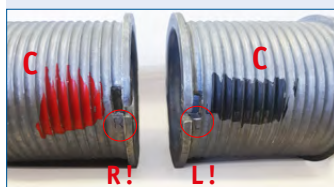


Fig. 3.3.2

The spring shaft is prestressed with a force of approx. 80 kg. You may not loosen the setscrews **A** on the spring brackets until after the installation of the spring shaft when both ropes fit properly tight on the cable reels. The set screws **B** on the spring heads only serve to fix the spring on the shaft.



Fig. 3.3.3



Danger: An uncontrolled loosening of the set screws and spring brackets or spring heads relaxes the spring suddenly and can lead to injuries



Fig. 3.4.1



Fig. 3.4.2

3.4 Rope guide

- To ensure correct unwinding of the ropes, check that both are **evenly tensioned** and rest in the grooves of the cable reel (Fig. 3.4.1).
- To retighten the rope, loosen the screws on the cable reels. Stretch the reel until the rope tightens and does not sag. Tighten the screws and check again.
- To prevent the rope from jumping over at the cable reel, it must unwind towards the centre of the rear frame. Unwinding at a 90° angle allows the rope to jump over. If the rope unwinds at a 90° angle, it will jump over. When the roller shutter is closed, the rope runs at a slight angle $< 90^\circ$ from the upper edge towards the centre of the rear frame (Fig. 3.4.2).



Fig. 3.5.1

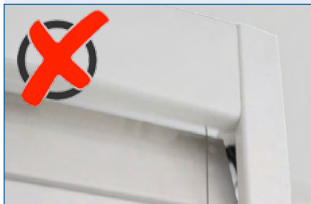


Fig. 3.5.2



Fig. 3.5.3

3.5 Adjusting the Top Panel

- If the top panel is at a 90° angle to the roller shutter, there is no air gap between the rear frame and the panel. If an air gap is visible, the top panel is incorrectly adjusted (Fig. 3.5.1 - 3.5.2).
- Now adjust the top panel. Loosen the four screws of the guide plate and move it vertically until the top panel is flush with the roller shutter. The guide plate must be aligned at right angles to the upper edge of the panel (Fig. 3.5.3).

Caution: If the guide plate is mounted at an angle, the rollers will be unnecessarily loaded.

3.6 Adjusting the Spring Force

- **Check the function of the spring shaft**, by opening and closing the roller shutter completely. It should stay in the horizontal when it is approx. 1 m opened. If the gate lifts by itself the spring is too tight, if it lowers by itself the spring is too weakly stressed.

The roller shutter is optimally adjusted when it is balanced and pulls up by itself when pushed upwards for a short time.

Caution: If the roller shutter is forcibly pushed up, the spring shaft works than the cable reels. This causes the panels to move faster than the ropes can wind up correctly on the cable reels. In the worst case, the ropes skip and break. Point out proper handling to your customer!

- Before adjusting the spring force, lock the shutter. First loosen the locking pin of the locking fork (Fig. 3.6.1) and turn it until the hook is over the closing opening. Use the handle to push the roller shutter downwards (Fig. 3.6.2).
- Guide the locking hook into the closing opening and lock the locking fork again with the second locking pin (Fig. 3.6.3).

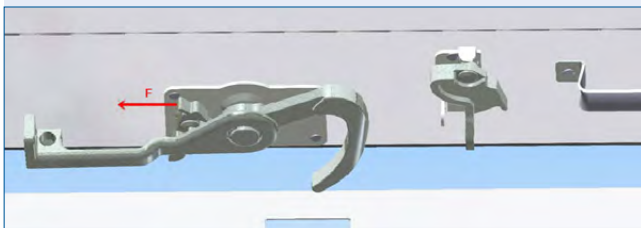


Fig. 3.6.1

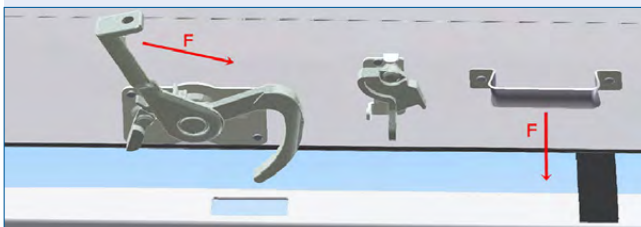


Fig. 3.6.2



Fig. 3.6.3



Fig. 3.6.5

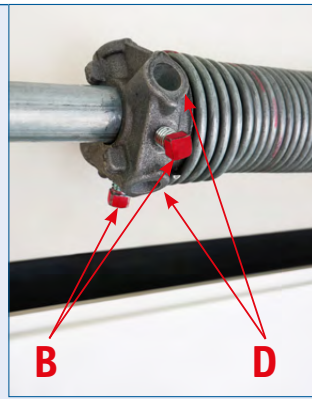


Fig. 3.6.6



Fig. 3.6.7



Fig. 3.6.8

Tip: The spring tension is also indicated by the spiral red markings (Fig.3.5.1). The spring tension increases with the number of turns you see. Many markings mean a high spring tension. The spring force should be set the same for both springs (indicative value 12-13 visible spirals) to ensure optimal load distribution.

- To **adjust the spring force** first tighten the grub screws **A** of the spring shaft firmly to fix the shaft (Fig. 3.6.5).
- Now insert a tensioning rod into an accessible hole **D** of the rotating spring anchor and loosen the set screws **B** (Fig. 3.6.6). Hold the tensioning rod very securely, because it will now be loaded with the whole spring force.



Caution: Employ only solid (steel) clamping bars \varnothing 13 mm, 450 mm long Screwdrivers or wedge-shaped rods are unsuitable and can lead to injuries!

- To increase the spring tension (Fig. 3.6.7) turn the tension rod clockwise. Use a second tension rod as a fixation. 2-3 quarter turns are sufficient.
- To reduce the spring tension (Fig. 3.6.8) turn the tension rod counterclockwise.
- Now tighten the set screws **B** (Fig. 3.6.6) again, and loosen the grub screws **A** (Fig. 3.6.5) on the spring shaft.
- Repeat the process for the second spring.
- Check the readjustment as described at the beginning of this chapter described. If necessary, readjust the spring force.

4. Finishing work, Maintenance, Service

- For the **first lubrication** use a light, standard, penetrating oil in the spray can. Oil by light spraying at the following locations:

Upper roller holder, running roller, spring shafts and springs over the entire length, articulated link pin of the lock and lock protection.

- For the **final control** check of the assembled rolling gate, open and close the roller shutter 5 to 6 times. It must run easily and not snag. The lock must be capable of being closed with normal pressure.
- **Check** whether **all four seals** fit correctly. Check in particular the tightness at the seal joint on the left and right. Bond the vertical seal with the sill. **Treat all seals** with commercially available rubber care spray that is free of silicones, such as Würth 0890110.
- Check whether **the ropes are evenly tensioned and are correctly wound on the reel**. An uneven tensioning leads to a higher level of wear of the roller shutter and premature failure because a rope can jump from the cable reel.
- Check whether all four **set screws of the two cable drums are tightened securely**. If a cable reel were to race on the spring shaft, the roller shutter will jam and must be repaired.
- **Note the identity number** on the rating plate of the shutter. Attach this to your documents for later spare part procurement.



- **To maintain the roller shutter**, check all parts for secure fastening at regular intervals, but at least once a year. Loose fastenings must be tightened or replaced.
- Check the **webbing, pull ropes, running rollers and hinges**. In case of damages replace them immediately!
- The ropes must be evenly tensioned and lie correctly on the reel windings. Uneven tension leads to higher wear of the roller shutter and premature failure because a rope can jump off the reel.
- **Oil** the lock, rollers, bearings, hinges, rails and the spring shaft with light penetrating oil. If they are not oiled, they will rust solid.
- **Treat all seals** with commercially available rubber care spray that is free of silicones, such as Würth 0890110.
- **Lost or damaged safety instructions** must be replaced. Never paint over safety instructions!

Our Service:

You will receive fast support for questions regarding assembly:

Phone: +49 (0)521-41 73 11-30

E-Mail: m.wismueller@aluteam.de



5. Spare Parts, Disposal of worn-out parts

- Only use original AluTeam spare parts. **On our website you will find a current spare parts list.** Spare parts can be ordered either from your designated sales representative or:

Phone: +49 (0)521-41 73 11-0

E-Mail: info@aluteam.de



All component parts can be delivered as scrap **for recycling.**



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