

Assembly instructions DP25 HR

Roller Shutter



Art.-Nr. 410.610.097

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 AluTeam roller shutters: **DP25HR/DP25**. 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 pair of horizontal guide rails
- 1 pair of vertical guide rails
- 1 spring shaft
- 1 set aluminum panels (number is indicated on the packing list)
- 1 pair of side seals
- 1 carton with small parts
- these installation instructions, as well as an installation drawing
- 1 stick-on label of notes on safety and inspection instructions
- 1 spare parts list (partial)

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.



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. Bearing 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.

suspended loads
on the crane

falling
objects

danger of
crushing

falling parts
or assemblies

danger of
falling

falling-down
load



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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Before use

1. Check all parts for secure fastening before use. Loose fixing is to be retightened or replaced.
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During use

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.
3. 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. ACCIDENT HAZARD!
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. Use only original SCHNEIDER spare parts.
3. 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.

AluTeam Fahrzeugtechnik GmbH, Brockhagener Str. 88, D-33649 Bielefeld, Phone + 49 (0)521 - 41 73 11 - 0

- **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

2.1 Personnel requirements / preparation for installation

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.

AluTeam kits can be assembled in any well-equipped workshop! 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 lang
- 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

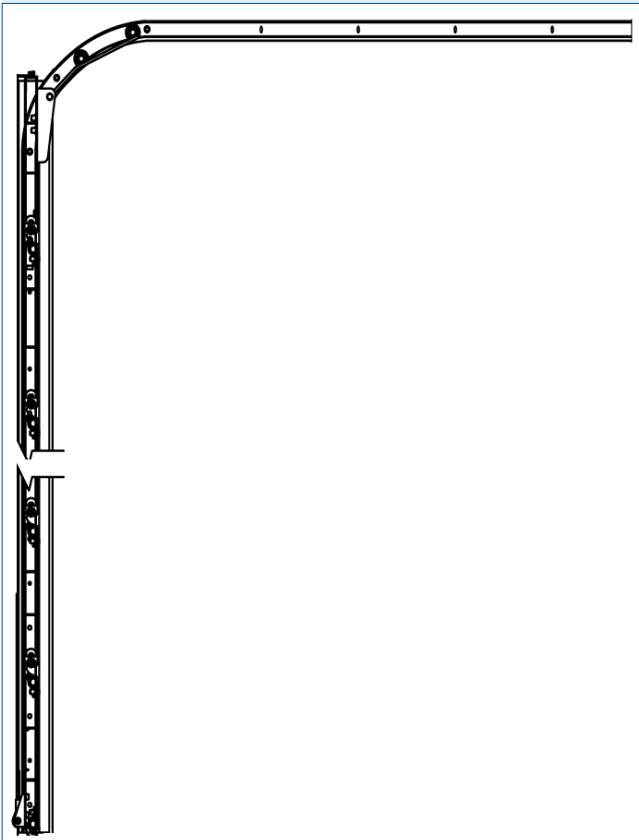


Fig. 3.1.1

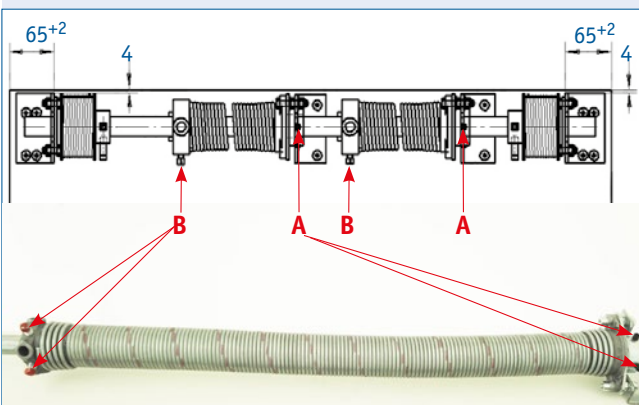


Fig. 3.1.2

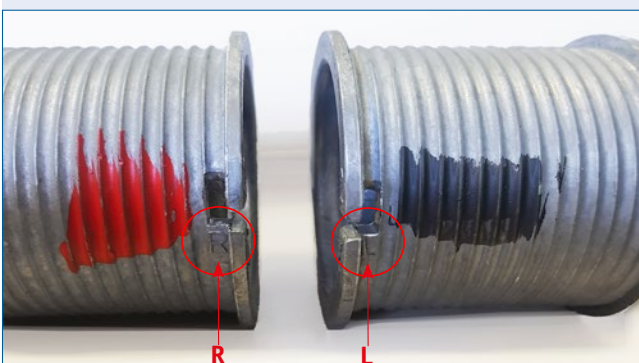


Fig. 3.1.3

Tip: The inner edges of the corner pillars and the shutter lintel must be on one level. So that penetrating water does not flow through the gate to the loading space, the shutter sill should be sloped outwards. Even better is to attach a step approx. 20 mm high 60 - 100 mm behind the roller shutter. Two run-off bores \varnothing 8 mm allow penetrating water to flow again off. A straight shutter sill with a max. bending deflection of 2 mm is important for the function of the lower shutter seal.

3.1 Installation of guide rails, spring shaft and striker plate

- Place the **vertical guide rails** flush in the angles of the corner pillar. Align their top edge with the dimension indicated in the installation drawing. Below there remains approx. 10 mm open space to the sill. The vertical guide rails must indicate the same location and separation distance to the roof, so that the horizontal rails have the same height later.
- Mount the guide rails absolutely parallel and in rectangular form on the shutter sill. Check this through matching the diagonal dimensions.
- Fix the guide rails with steel blind rivets \varnothing 6.5 mm or through welding (40 - 50 mm joint every 300 - 400 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.

- Position the **horizontal guide rails** at an angle of 90° to the vertical guide rail (see Fig. 2.2.1 & installation drawing) in extension of the radius and parallel to the roof.
- For a sufficiently long gate runout, install the horizontal guide rail as far as possible in the length supplied. Then the gate does not impact the end stops. If you must shorten the rails for reasons of space, then place on a suitable stop with a shock absorber. The guide rail pairs are parallel and are to be installed at the same separation distance from each other.
- Likewise fix the horizontal guide rails similar to the vertical guide rails. Note a flat transition of both rails, otherwise the running rollers snag here. If required, the transition is to be reworked.
- To **install the spring shaft** (Fig. 3.1.2) first fix the outer brackets (welding or rivets) if these are not welded to the vertical rail.

Attention: On the cable reels there is either a L or an R. Install the reel with the R on the driver's side (Fig. 3.1.2)!

Exkursus: 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 are used for post-tensioning only.



An uncontrolled loosening of the set screws and spring brackets or spring heads relaxes the spring suddenly and can lead to injuries! (Fig. 3.1.2, Fig. 3.1.3).

- Loosen the set screws of the cable reel and align the spring shaft so that both shaft ends are at the same separation distance from the bracket support. Shift the cable reel outwards against the corresponding bracket support and retighten the set screws lightly.

Section for close-off hooks

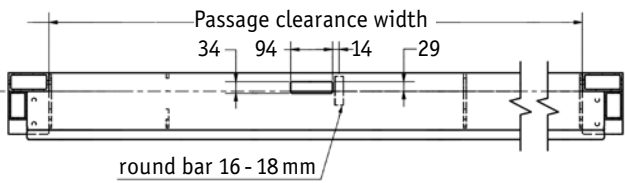


Fig. 3.1.4

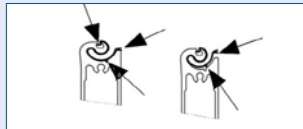


Fig. 3.2.1

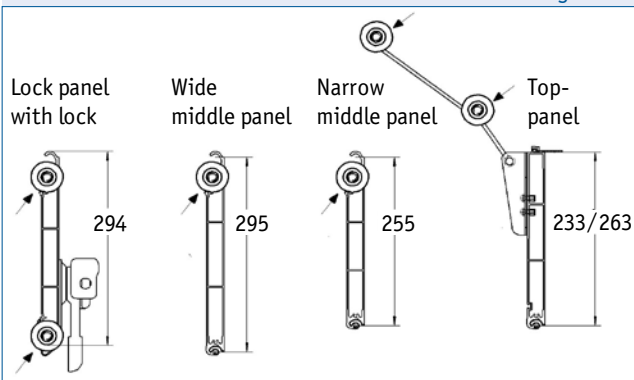


Fig. 3.2.2

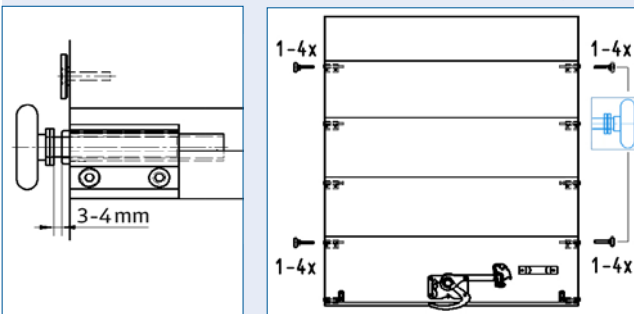


Fig. 3.2.3

Fig. 3.2.4

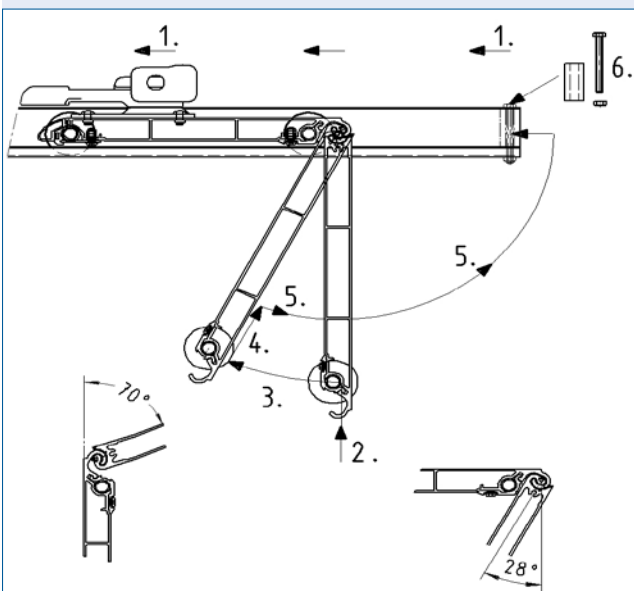


Fig. 3.3.1

- The two inner spring supports must now be at the correct position behind the door lintel. Underlay the brackets in order to avoid any possible deforming of the shaft. The shaft may not sag! Fix the middle spring supports securely through welding, screwing or riveting to the lintel.
- If the springs are not prestressed or loosened unintentionally, at least 100 mm separation distance must remain between the rotating spring head and the next-the following part on the spring shaft, since the spring extends in length during later fixing. Slide the spring elements on the shaft as appropriate. Rotating and static parts may not touch each other.
- Make the opening for the roller shutter according to the installation drawing on the left side (Fig. 3.1.4).

3.2 Installation of the aluminum panels and the gate wing

- Place the panels into the structure so that the top panel with the top sealing is located below. The articulated link seal must be fixed-located on the panel (Fig. 3.2.1) in this case, and the V-shaped sealing lip on the profile section edge.
 - If this not the case, press the sealing lip back lightly onto the seal until you feel a definite latching engagement.
 - Slide the running rollers into the plastic sockets. The rollers for the uppermost panel (top panel) are inserted into the double roll brackets where two rolls per side are employed here (Fig. 3.2.2).
 - In order to balance tolerances in the rail separation (max. + 5 mm), underlay the marked rollers with 1 to 4 underlay washers (Fig. 3.2.3). The rolls must still have another 3 - 4 mm play at the narrowest location in the rail.
- Caution:** As a result of the underlay washers, the gate remains fixed at right angle to the guide rail (Fig. 3.2.4). It does not wander or roam on the rail and lasts longer. If you do not mount the washers, the thrust rings can be damaged.

3.3 Hang the gate into the guide rails

- Guide the floor panel with the running rollers into the rails, the lock faces towards the roof, the floor sealing points towards the door opening. Slide the panel approx. 1 m into the rail and secure it against unintentional rolling away.
- Take a middle panel with inserted running rollers and washers, where these are prescribed, and press this upwards until the slot of the hinge engages into the hooks of the panel located in the rail. Hold the rollers with the open hook side down for opening the door (Fig. 3.3.1). **The panels may not indicate any side misalignment, so that the articulated link can be joined without any problem.**
- Slope the panel slightly in the door opening direction (approx. 28°). Slide the panel under this angle upwards.
- Rotate the panel into the horizontal and slide it into the rail.
- Repeat these procedures for all middle panels.



Fig. 3.3.2

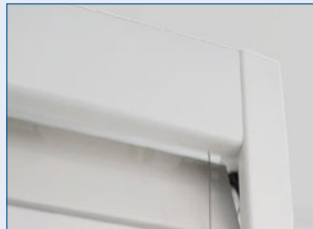


Fig. 3.3.3



Fig. 3.3.4



Fig. 3.4.1



Fig. 3.4.2

- Slide the partially assembled door to the end of the rail and hang the top panel in the same way as the other panels.
- After the folding up, introduce the double rolls into the rails. **If the panels cannot be folded up free-running then the hinge connection is not threaded correctly or is damaged.** Never fold up the panel with force, otherwise you can damage the seal! This fault mostly occurs when a panel side is folded up too early before the hook latches correctly into the slot.
- Adjust the top panel so that there is no air gap between the portal and panel (Fig. 3.3.2). If an air gap is visible, the top panel is incorrectly adjusted (Fig. 3.3.3).

Loosen the four screws of the guide plate (fig. 3.3.4) and move it vertically until the top panel is flush with the rear frame. The guide plate must be aligned at a right angle to the upper edge of the panel! (If the guide plate is mounted at an angle, the rollers will be unnecessarily loaded.)

- Mount the limit stops at the end of the horizontal guide rail with the bolts supplied and slide the roller shutter carefully down into the vertical position.



Caution: The gate wing has a weight of approx. 90 kg and is not yet spring-supported. Only experienced fitters should implement the lowering of the gate. The force of the gate becomes increasingly greater the further you slide the gate into the vertical!!

3.4 Placing on the rope, adjusting the roller wheel brackets

- Loosen the two set screws of the left cable reel and coil the hook ed-in rope. It must be located exactly in the screw-thread shaped grooves of the drum. Rotate the reel until the rope is tightly tensioned and forms a vertical line (Fig. 3.4.1).
- Slide the cable reel against the support of the rail bracket and tighten both setscrews securely on the reel so that any slipping on the shaft is excluded. Repeat this procedure on the right-hand side.



Caution: The cable reels must be located fixed on the flanged bearings. The ropes must have the same tension and be located exactly in the trace grooves of the cable reel.

- Check the stretching behaviour of the ropes when the roller shutter is closed. Pull the ropes in the middle. If the rope gives way too much, tighten it. If the rope is only slightly stretched, it is taut enough. To tighten the rope, loosen the screws on the rope reels and turn the reel until the rope is taut and not sagging. Tighten the screws and check again.
- To prevent the rope from jumping over at the rope reel (Fig. 3.4.1), it must unwind towards the centre of the rear frame. 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° from the upper edge towards the centre of the rear frame (Fig. 3.4.2).
- After the ropes are fixed correctly, please loosen the 4 set screws (A), on the spring brackets of the prestressed spring shaft. Hold the roller shutter on the upper panel while you are loosening the fourth bolt, in order to prevent an uncontrolled upward movement of the gate in case of a possibly too strongly stressed spring.

The set screws remain (unscrewed far enough) in the brackets for the fixing of the spring shaft in case of possible repairs.



Fig. 3.4.3

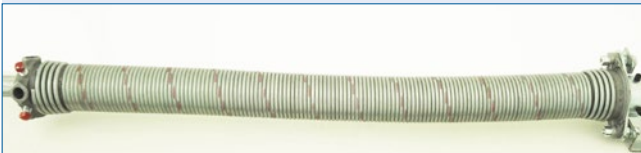


Fig. 3.5.1



Fig. 3.5.2

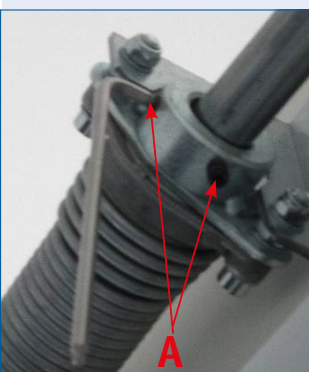


Fig. 3.5.3

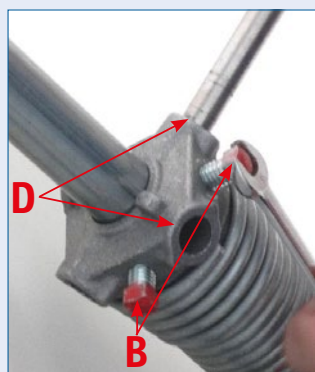


Fig. 3.5.4

- Remain in the super structure and interlock the shutter with the lock. Adjust the upper double roll brackets until the upper panel is in a straight vertical line with the remaining gate segments. Then tighten the screws securely.

3.5 Testing and 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.

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**, insert a tensioning rod into the accessible hole (D) of the rotating spring anchor (Fig. 3.5.2, 3.5.4). Loosen both set screws (B) and hold the tensioning rod very securely. It now absorbs the spring force of up to 50 daN.



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

- Tighten the spring through lifting the tension rod by a quarter turn. Insert the second tension rod into the following lower hole of the spring anchor. Take the upper rod out and tighten again a quarter turn. Generally 2 to 3 quarter turns suffice for the adjusting.

Retighten both set screws securely. Repeat the procedure on the second spring.

- To release the spring, proceed in exactly the same way but you rotate the spring anchor in the opposite direction through lowering the tension rods.

- **If the spring shaft is not prestressed**, proceed as follows:

- Tighten the set screws (A) to fix the shaft in place. (Fig. 3.5.3). Roll the ropes tightly onto the rollers as described. Fix these flush on the bracket supports on the spring shaft. Tighten the set screws of the cable drums securely.

- Determine the number of necessary rotations of the spring anchor for the stressing of the springs. Divide the height of the rolling gate wing in mm by 250 and add 3 rotations; Example: Gate height 2.125 : 250 = 8.5 + 3 = 11.5

- Release the set screws (B) of the left spring bracket (Fig. 3.5.4) and stress the left-hand spring (see above) through lifting and displacing the clamping bars. Check the number of rotations by counting the marks which become visible during winding as a spiral coil. After reaching the correct number, tighten the set screws (B) securely. Repeat the procedure with the right-hand spring.

- Check again that both ropes are tight and unfasten the four set screws (A). Check the function of the roller shutter as described.

4. Finishing work

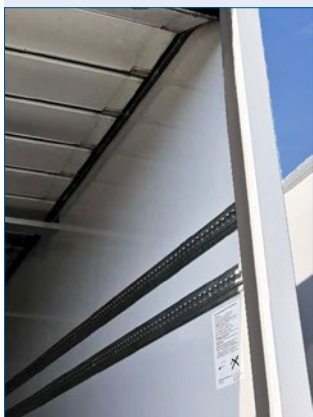


Fig. 4.1

Hammer in seal with a piece of wood

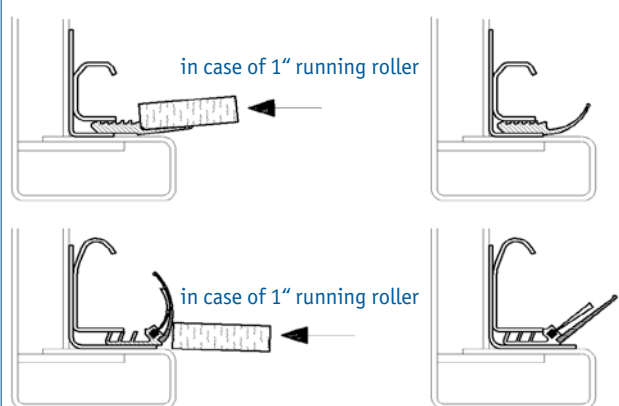


Fig. 4.2

- For the **placement of the two side seals** shorten these to the dimension of the transition height + 20 mm.
- Open the shutter and slide the (Fig. 4.1) down directly 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. 4.2).
- 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.*

- 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.

- Check whether all four seals fit correctly (Fig. 4.1). 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.
- 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 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.
- Check whether the inspection instructions are attached on the floor panel inside or on the side wall inside.
- Note the identity number on the rating plate of the shutter. Attach this to your documents for later spare part procurement.

5. Maintenance, service, spare parts



- **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!
- 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

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

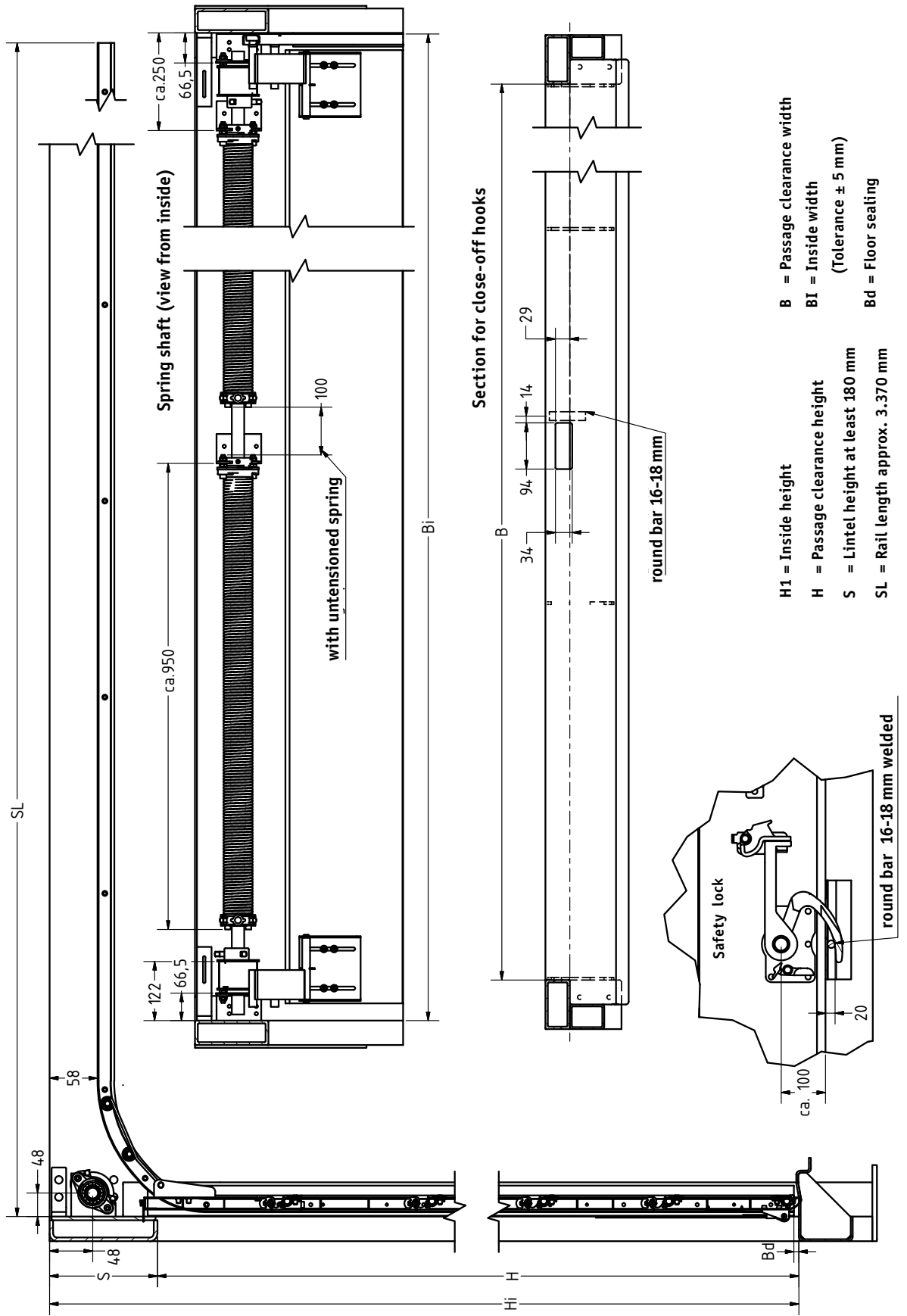


6. Disposal of worn-out parts



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

7. Installation drawing DP25 HR





AluTeam Fahrzeugtechnik GmbH
Brockhagener Straße 88, D-33649 Bielefeld
Tel. + 49 (0)521 - 41 73 11 - 0; Fax - 90
E-Mail: info@aluteam.de / www.aluteam.de

For further enquiries about assembly:
Tel.: +49 (0)521-41 73 11-30
E-Mail: m.wismueller@aluteam.de