Assembly and Operating Manual

GEDA® 200 Z

Rack and pinion hoist
for goods

Lifting capacity: 200 kg

Year of construction: .....

Serial number: .....

GEDA® ORIGINAL

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1 Preface

Who should read this assembly and operating manual?

- Assembly and operating personnel working on the machine
- Maintenance personnel for the machine (cleaning/servicing)

What does this assembly and operating manual contain?

In this assembly and operating manual you will find instructions regarding

- Intended use
- Residual risks
- Safety
- Installation
- Operation
- Troubleshooting
- Customer service

This assembly and operating manual communicates important information that is a prerequisite for working safely and economically with the machine. The assumption is made that the machine is equipped with all possible options.

What you should do straightaway.

Read this assembly and operating manual carefully before assembly and commissioning, and observe all notes especially the safety instructions.

What does this assembly and operating manual not contain?

This assembly and operating manual is not a repair manual.

You will not find documents about repair work in this assembly and operating manual.

What you should consider when re-selling the machine?

If you sell the machine, pass on these assembly and operating instructions with the annual inspection entries and spare parts list to the purchaser.

2 Safety

2.1 Explanations of symbols and notes

2.1.1 Health and safety symbol

You will find this symbol next to all safety instructions where there is a risk to the life and limb of persons. Observe these instructions and conduct yourself with care.

2.1.2 Caution note

CAUTION Is found at points where special information and/or rules and prohibitions regarding damage prevention are given to prevent damage to the equipment.

2.1.3 Note

NOTE Is found at points where information is given about using the machine economically or instructions are given regarding the correct working procedure.

2.2 General safety

The machine is built according to the current status of technology and is safe to operate. However, it is a feature of its work processes that the machine has parts and points that cannot be protected without impairing the function and operating capacity of the unit. For this reason, good personal safety practice is required to protect personnel and equipment. Hazards can arise from this equipment if it is used incorrectly by untrained personnel or for purposes contrary to the designated use.

- Before transporting, assembling, commissioning, dismantling and maintenance, read and observe the machine assembly and operating manuals and safety notes.

Read and understand the assembly and operating manual first; during work is too late!

- Keep the operating manual accessible in close proximity to the machine.
- The generally valid, legal and other binding provisions for accident prevention and environmental protection in the respective country in which the machine is being operated are considered a supplement to the assembly and operating manual (e.g. wearing personal protective gear such as hard hat, safety shoes, etc.)
- Observe attached notices and warning signs.

- Only work while wearing close fitting clothing, safety shoes and hard hat. Do not wear jewellery such as necklaces and rings. There is a risk of injury from getting caught or being pulled in.
- Find a doctor immediately if there are any injuries or accidents.

Consequences of not complying with safety instructions
Non-compliance with safety instructions can result in danger both for persons as well as for the environment and the machine. Non-compliance can lead to the forfeit of any compensation claims.

Requirements on user personnel
See section 3

2.3 Operating safety

- The machine must be set up and dismantled according to this assembly manual and under supervision by expert personnel appointed by the contractor.
- Install the equipment so it is exactly vertical and stable and secure it.
- Observe the loadoadbearing capacity of the equipment.
- Only use the machine in technically fault-free condition and conscious of safety and risk, while observing the operating manual.
- Faults which could impair safety must be remedied as soon as possible. If there are any changes to the equipment which affect its safety or its operating behaviour, shut down the machine immediately and report the malfunction to company management or its authorized representative.
- Do not make any changes, mount parts on or modify the machine. This also applies to installing and adjusting safety features, such as e.g. limit switches.
- Do not change, remove, override or bypass safety devices.
- Immediately renew damaged and/or removed notices and warning signs as well as safety labels.
- If work is interrupted, switch off the machine at the main switch and secure against switching on again with a padlock.

Fig. 1 Main switch

- In situations that present a risk to the operating personnel or the machine, shut down the machine by pressing the EMERGENCY STOP button.

- Bring down and shutdown machine when wind speeds are >72 km/h. (Wind force 7-8, wind moves trees and impedes pedestrians!)

Fig. 2 EMERGENCY STOP button

2.3.1 Inspection procedures

The **GEDA Star** is a machine in compliance with the EC machinery directive 2006/42/EC. A copy of the conformity declaration is reproduced in this operating manual.

Tests after each installation → see section 8.7

The following tests have already been carried out at the factory:
- Dynamic test with 1.1x useful load.
- Electrical tests according to EN 60204
- Function tests.

Recurring inspections:

- Inspections before commissioning, recurring inspections and intermediate inspections must be carried out according to national guidelines.

NOTE
GEDA recommends that you carry out a recurring inspection on an annual basis. In the case of increased use and strain (e.g. multi-shift operation), carry out inspections at shorter intervals.

- The results of the recurring inspection can be recorded in writing in the appendix.

2.3.2 Safety notes for assembly, operation and transport

- Before starting work at the place of use, acquaint yourself with the working environment, e.g. obstacles in the work and traffic area, ground loadbearing capacity and necessary safeguarding of the construction site from public transport.
- Only load and transport equipment that has been carefully dismantled, packed and securely lashed down.
- Always secure the machine against unauthorized use (de-energize).
- Position the load carefully on the platform; material that tends to slip or is higher than the platform or could fall must be secured (think about sudden winds).
- Do not stand or work beneath the platform.
- Do not place objects under the platform.
- Load the platform centrally, observe maximum loadbearing capacity.
- Store material at a safe distance of at least 50 cm from moving parts of the machine.

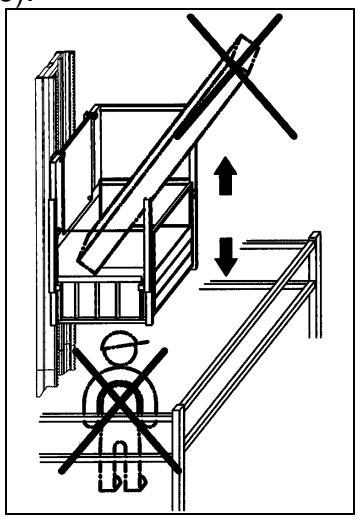


Fig. 3 Safety notes

- Check for damage and defects that can be detected from the outside. Immediately report any changes or malfunctions determined to the company management or its authorized representatives. If necessary, shutdown and secure machine immediately.

2.3.3 Safety instructions for maintenance

- Remove mains plug before any maintenance work.
- When working under the platform, the platform must be secured using appropriate means (e.g. bolts, mast clamps, fall brake, etc.)
- Only allow servicing and repair work to be carried out by authorised, qualified persons. In this case, pay attention e.g. also to the special risks present during work on electrical systems.
- Refit properly all safety devices removed once maintenance work is complete.
- Independent conversions or changes to the machine impair safety and are not permitted.
- Spare parts must correspond to the technical requirements of the manufacturer. Recommendation: Only use original spare parts from GEDA.

2.4 Promoting use of operating manuals

Operating manuals are rules that a contractor puts together for safe operational procedures. This refers to binding instructions that the contractor issues within the context of his management rights. Employees are obliged by accident prevention guidelines to follow these instructions.
The general obligation of the contractor to create operating manuals and make them public must be derived from the "General Instructions" accident prevention guideline. According to this guideline, the contractor must fulfil the instructions for preventing work-related accidents and must instruct the insured party about risks occurring during their work and the measures for averting said risks. These requirements can be fulfilled with the aid of operating manuals.

This operating manual supplements national guidelines on accident prevention and environmental protection.
EN 60204-1 and EC Directive 89/655/EEC regarding basic instructions for safety and health protection when work equipment is being used by employees during work.

2.5 Employees must be informed about the following:

- The potential risks when working with the platform and the necessary protective measures and codes of conduct including instructions in the case of danger or about first aid.
- Type and scope of regular inspections for a safe working environment
- Maintenance
- Remedying operational faults
- Environmental protection
- Safe handling of electrical equipment.

- The user must ensure cleanliness and clarity at the place where the machine is set up by using instructions and checks.
- The responsibilities during setting up and removal (assembly), as well as during operating and maintenance, must be clearly regulated by the user and adhered to by all persons so that no unclear competencies occur with regard to safety.
- The user must be obliged to operate the machine only in fault-free condition. He is obliged to report immediately his supervisor any changes occurring to the equipment that affect safety.
- Observe attached notices and warning signs.
- The operator shares responsibility for ensuring that no unauthorized persons remain near the machine.

3 Intended use and area of application

The machine is an construction site lift erected temporarily and intended exclusively for conveying goods and building materials during construction work. Any other use going beyond this, such as e.g. transporting persons, is not considered intended use. The manufacturer/supplier is not liable for any damage resulting from this. The user bears sole responsibility for this risk.

- The GEDA hoist may be used both as an installation hoist for the construction of scaffolds and for the transport of goods during construction work.
- Landing level safety gates are required at each point of transfer to the building. The hoist may only be operated once these landing level safety gates have been installed.
- The danger zone, excluding the access point to the platform, shall be cordoned off and identified.
- Only authorised persons are permitted to ride the platform, and only for the purposes of assembly and servicing work. Special measures are required for such operations.
- Use a fall protection on the front side (hang a rope over the ramp on the platform railing).
- The hoist shall only be operated from the platform (use an extension lead for the controls).

The following belongs to intended use

- that the assembly, operation and maintenance provisions (assembly and operating manual) provided by the manufacturer are complied with.
- that the foreseeable misconduct of other persons is taken into consideration.
- that national guidelines are observed.

Consequences of use of the equipment contrary to the intended use:

- Danger for life and limb of the user or a third party.
- Damage to machine and other tangible assets.

Requirements of assembly personnel

The machine shall only be assembled, operated and maintained by authorized persons who can be guaranteed to act properly on the basis of their training or knowledge and practical experience, and who are aware of the hazards. These persons must be appointed by the contractor for assembly, dismantling and maintenance tasks.

Operating personnel

The machine may only be operated by persons who can guarantee to handle it appropriately based on their training or knowledge and practical experience. These persons must

- be appointed by the contractor to operate the machine
- be correspondingly instructed and informed about the risks
- be acquainted with the assembly and operating manual
- observe national regulations.

3.1 Residual risks

There are residual risks in spite of all the precautions met.
Residual risks are potential and non-obvious risks, such as e.g.:

- Injuries from uncoordinated work
- Hazard from malfunction in the control system
- Hazard when working on the electrical system
- Hazard from damage to the lifting equipment
- Hazard from an incorrectly secured load falling
- Hazard from high wind speeds (> 72 km/h).
- Hazard on entering and leaving the platform.

4 Technical data

4.1 General

GEDA 200 Z

- Loadbearing capacity	200 kg
- Output of the drive	1.3 kW 230 V/50 Hz
- Power consumption	8.6 A
- Maximum starting current	approx. 35 A
- Drive tractive power:	4,500 N
- Lifting speed:	approx. 20 m
- Weights:	
Basic unit without platform	140 kg
Platform	46 kg
- Maximum assembly height:	35 m
- Trigger speed of fall brake	approx. 30 m/min
- Space requirement for hoist (width x depth x height)	See section 4.2
- Maximum projecting ladder length during erection:	4 m
- Maximum projecting ladder length during operation:	3 m
- Maximum fastening interval:	4 m
- Anchoring forces:	See section 4.2
- Length of ladder part:	2 m/1 m
- Weight of a ladder section:	24 kg/12 kg
- Ground pressure	See section 7.1
- Maximum dynamic pressure:	
during assembly	q = 100 N/m² (45 km/h)
while operating	q = 250 N/m² (72 km/h)
while shutdown	EN12158-1 (platform on ground)
- Noise emission values (measuring point: 1 m away from the platform at a height of 1.6 m)	< 78 dB (A)

Lifting equipment

- Swivelling frames (may be inserted on the right and the left)	19 kg
- Platform (internal dimensions 140 x 80 x 110 cm)	46 kg
- Scaffold components bracket (1½" pipe constructed on site)	6 kg

Extensions to basic unit

- Ladder section 2 m* with gear rack, cable routing and quick-release lock	24 kg
- Ladder section 1 m* with gear rack, cable routing and quick-release lock	12 kg
- Rail bracket (1½" pipe constructed on site)	6.5 kg
- Wall bracket (only in conjunction with rail bracket	6 kg

Landing door

- "Simple" loading point protection rails	29 kg
- Limit switch start clamp for landing stop	2.6 kg

Accessories

Small main cabinet on site	8 kg
Cable drum 33 m, 3 x 2.5 mm²	8 kg
20m extension lead for control system (5-pole)	5 kg

***CAUTION**

For reasons associated with static strength, only ladder sections with diagonal welded reinforcements (1) may be used for the GEDA 200 Z.

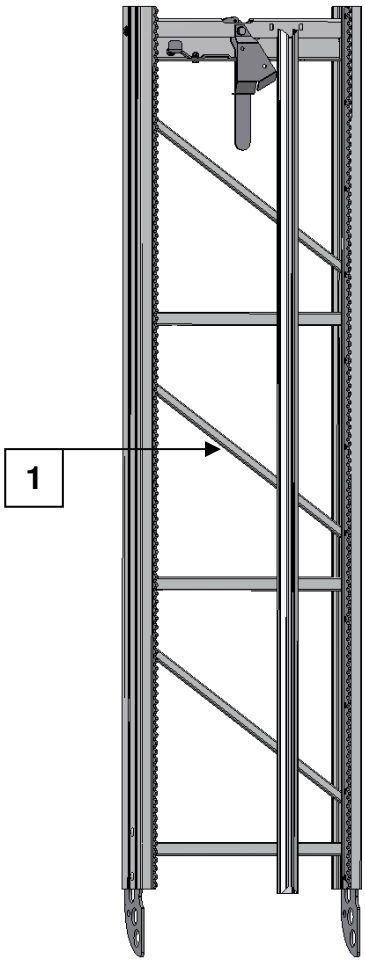
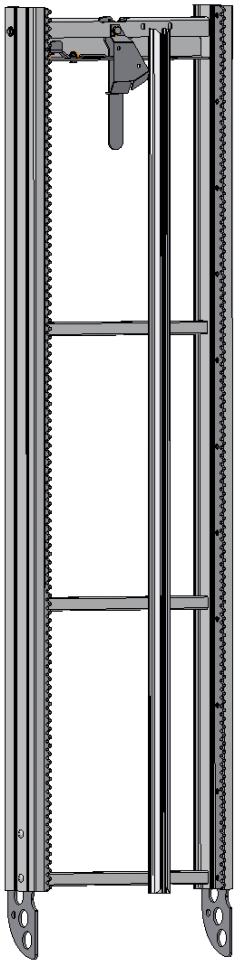
Ladder section with reinforcement for <u>pivoting platform</u> (GEDA 200 Z) 1 m ladder section part no. 02507 2 m ladder section part no. 02506	**Ladder section without reinforcement for <u>rigid platform</u> (GEDA COMBILIFT 250 Z)** May **<u>not</u>** be used with the GEDA 200 Z.
	

Fig. 4 Comparison of ladder sections

4.2 Anchoring forces and space requirements

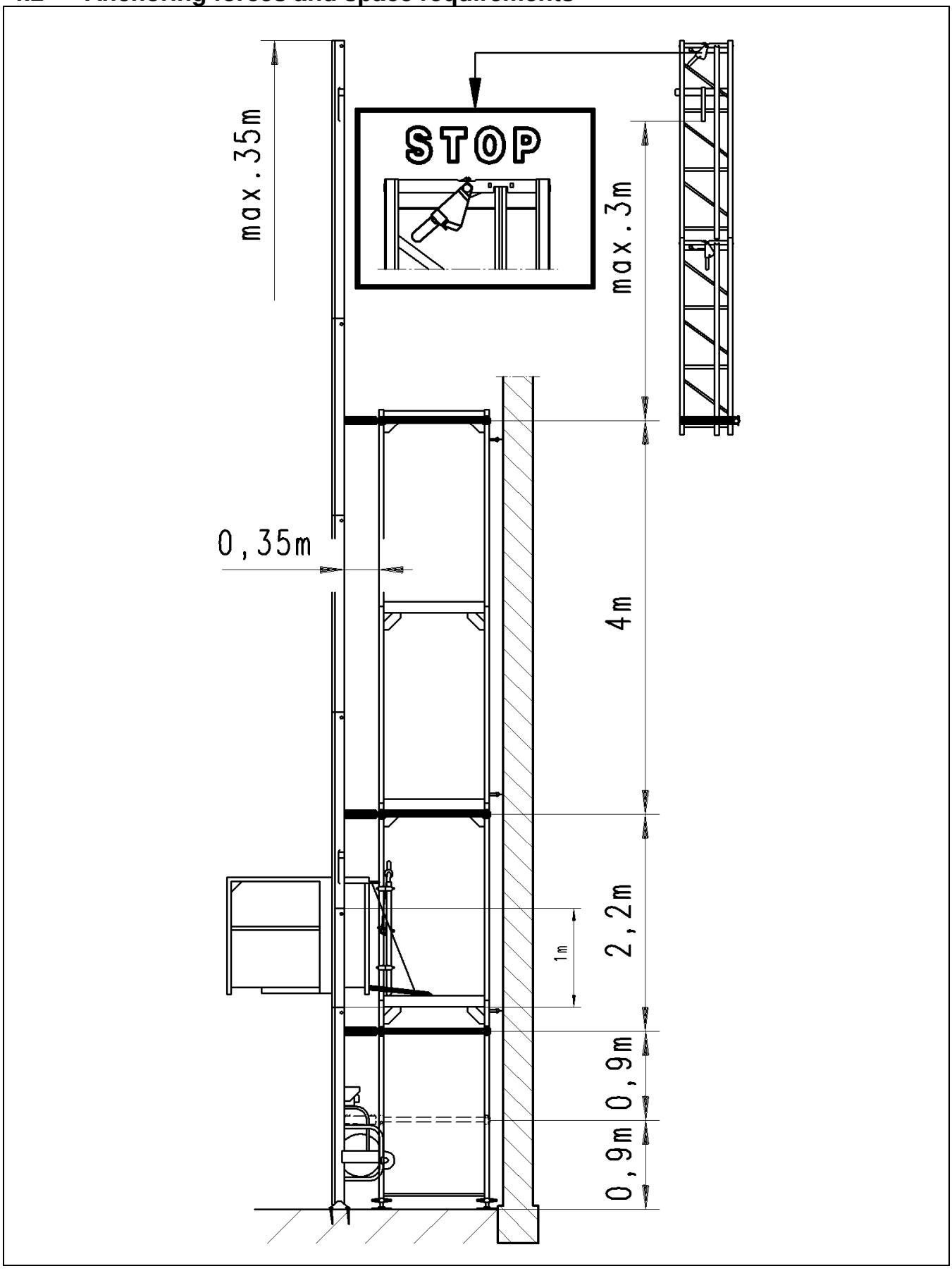
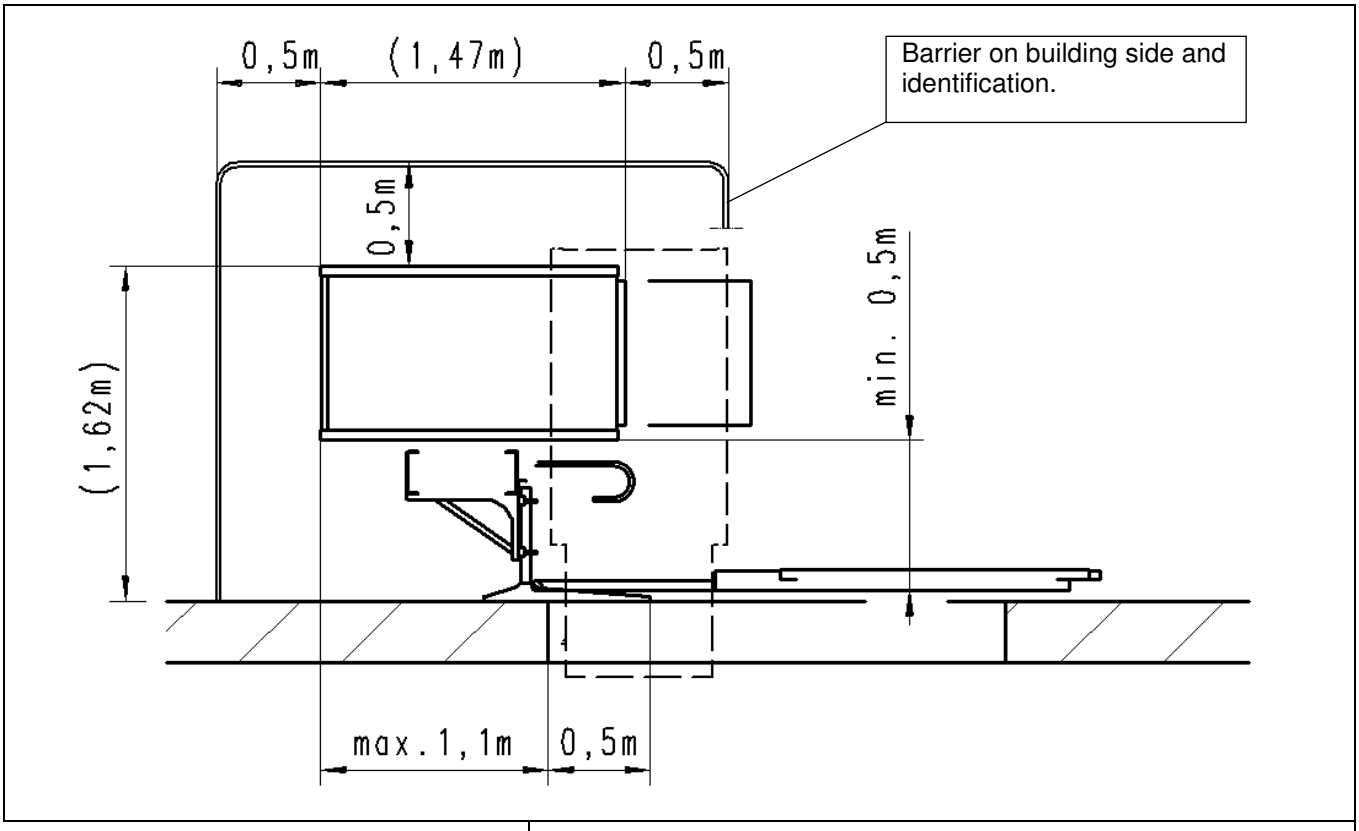


Fig. 5 Space requirements and vertical spacings

The anchoring loads are to be found in the tables below. The peak forces occurring for the represented assembly geometry are given; they do not yet include any safety factors.
The anchoring forces apply for all the wind regions in Europe. Extreme locations may require exceptions.

4.2.1 Anchoring forces when erected with wall bracket against a wall



Anchoring interval = maximum 4 m
Load bearing capacity = maximum 200 kg

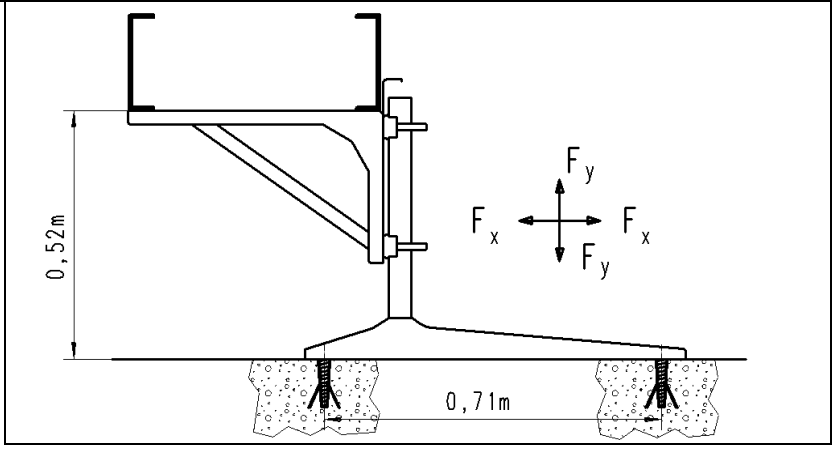


Fig. 6 Anchoring with wall bracket

Anchoring forces with maximum track projection	
F_x	F_y
1.08 kN	3.33 kN

The values in the table apply for each anchorage point

4.2.2 Anchoring forces when erected against a scaffold

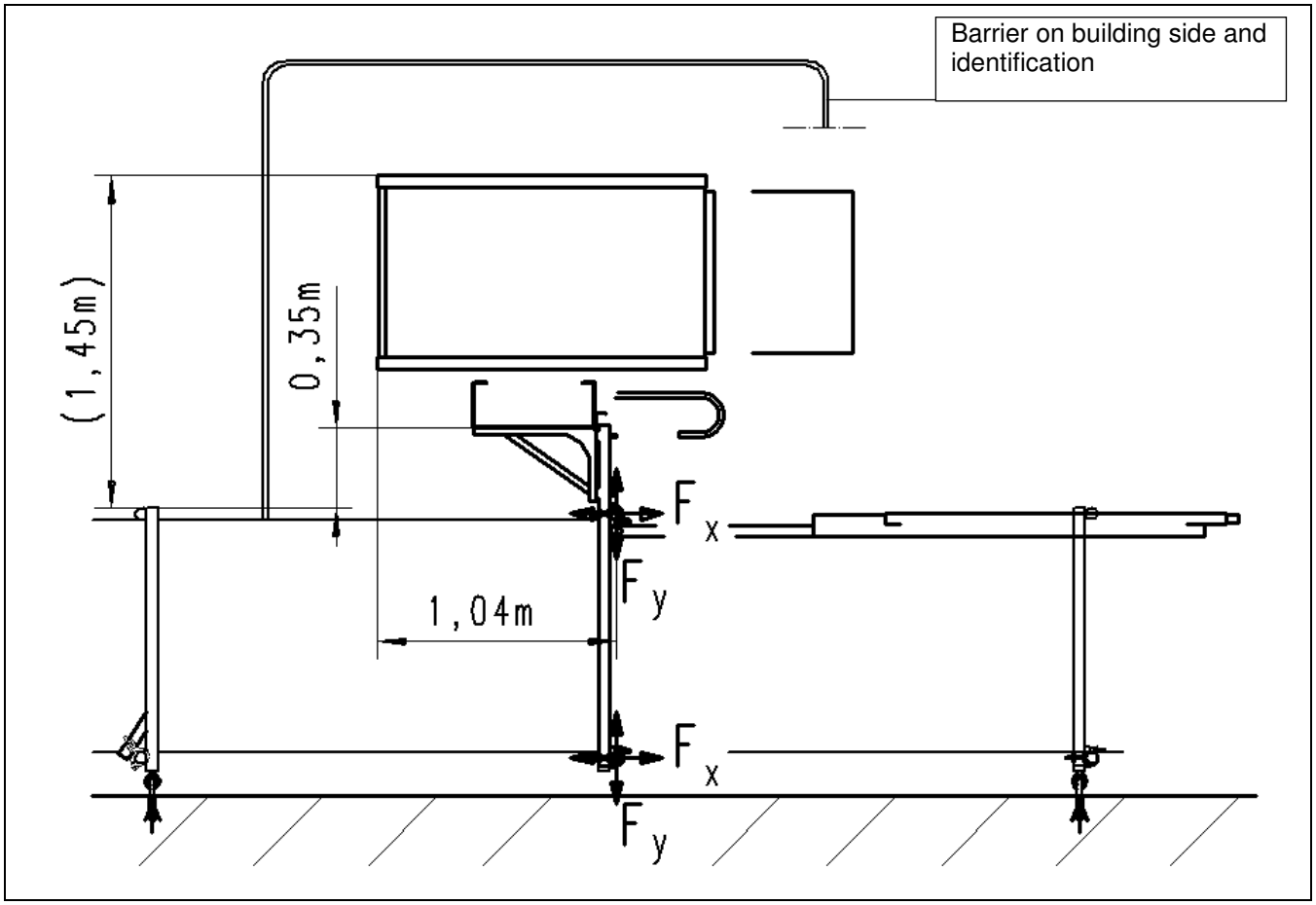


Fig. 7 Anchoring to the scaffold

Anchoring interval = maximum 4 m
Load bearing capacity = maximum 200 kg

Scaffold bay depth = 0.7 m

Anchoring forces with maximum track projection	
F_x	**F_y**
2.94 kN	1.50 kN

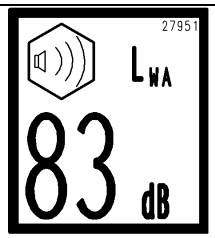
The values in the table apply for each anchorage point

Scaffold bay depth = 1.0 m

Anchoring forces with maximum track projection	
F_x	**F_y**
2.70 kN	1.53 kN

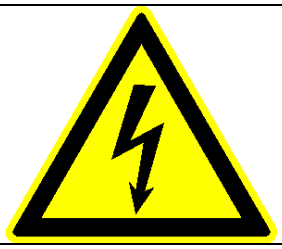
The values in the table apply for each anchorage point

4.3 Summary of the notice plates

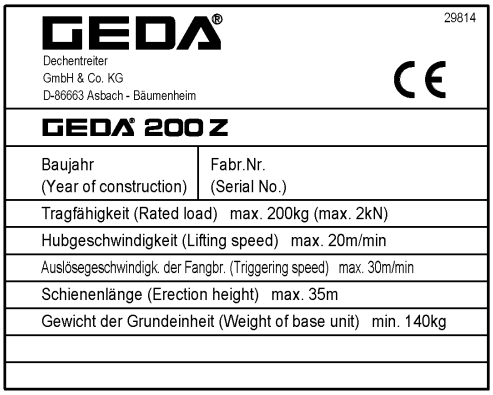


Part no. 27951(carriage)

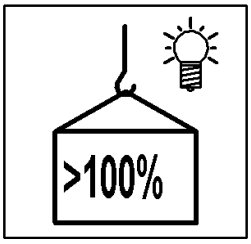
Part no. 14657(carriage)



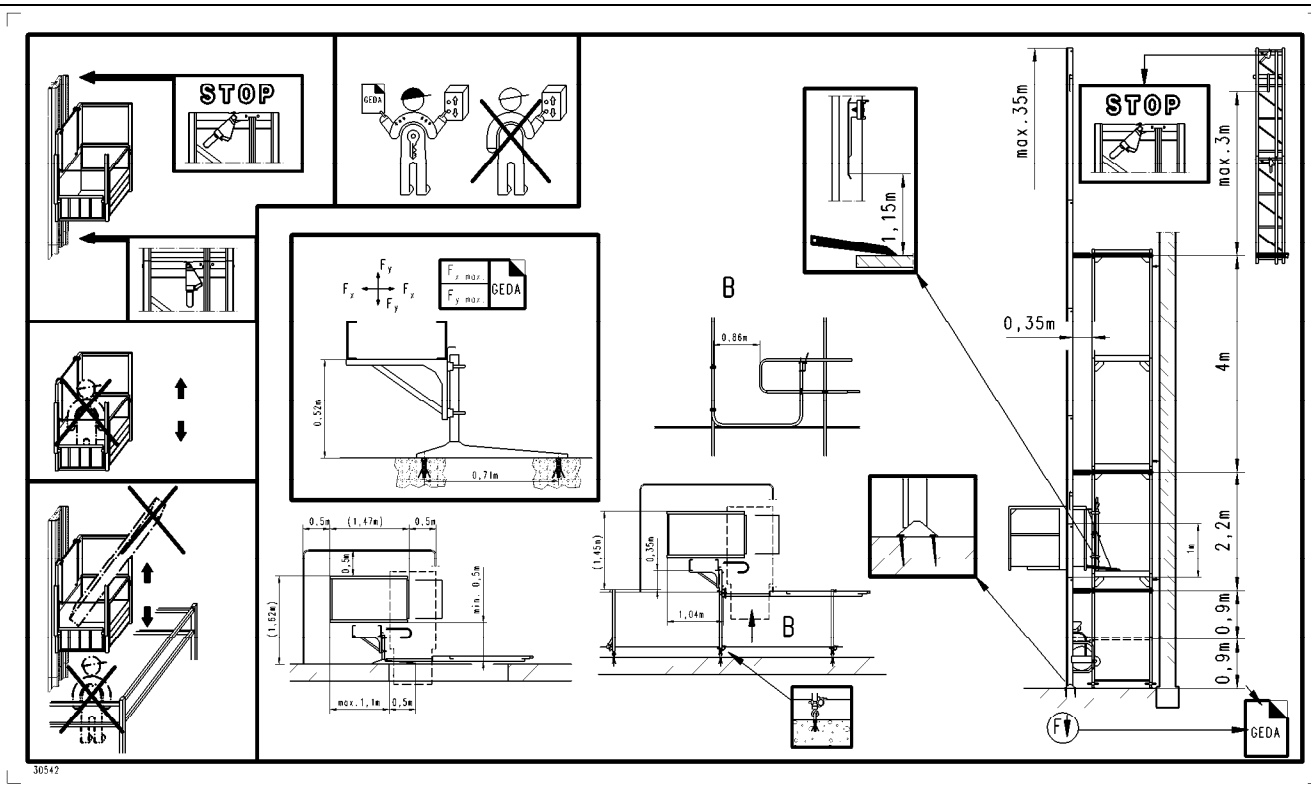
Part no. 05242
(base unit switch box)



Rating plate (carriage)



Part no. 14523
(carriage switch box)



Part no. 30542(carriage)

5 Description

The GEDA 200Z rack and pinion hoist is a vertical hoist for use by scaffolders and construction workers for the transport of goods and building materials.

- It is operated with the ground control (manual control).
- The ground control is a mobile manual control plugged into the switch box in the basic unit. For installation purposes, the manual control must be fitted with a special extension lead for this manual control.
- The hoist is fitted with an overload device. This switches off travel in both directions in the event of the load reaching approximately 110 % of the payload.
- Operation is only permitted at wind speeds of up to 72 km/s (20 m/s ≈ wind force 8). If wind forces are greater, the platform must be lowered to ground level and work must be stopped.
- The load bearing capacity is 200 kg.
- The complete installation of the hoist includes the safety equipment for the loading and unloading points (see section 8.6).
- The danger zone, excluding the access point to the platform, shall be cordoned off and identified.

5.1 Equipment

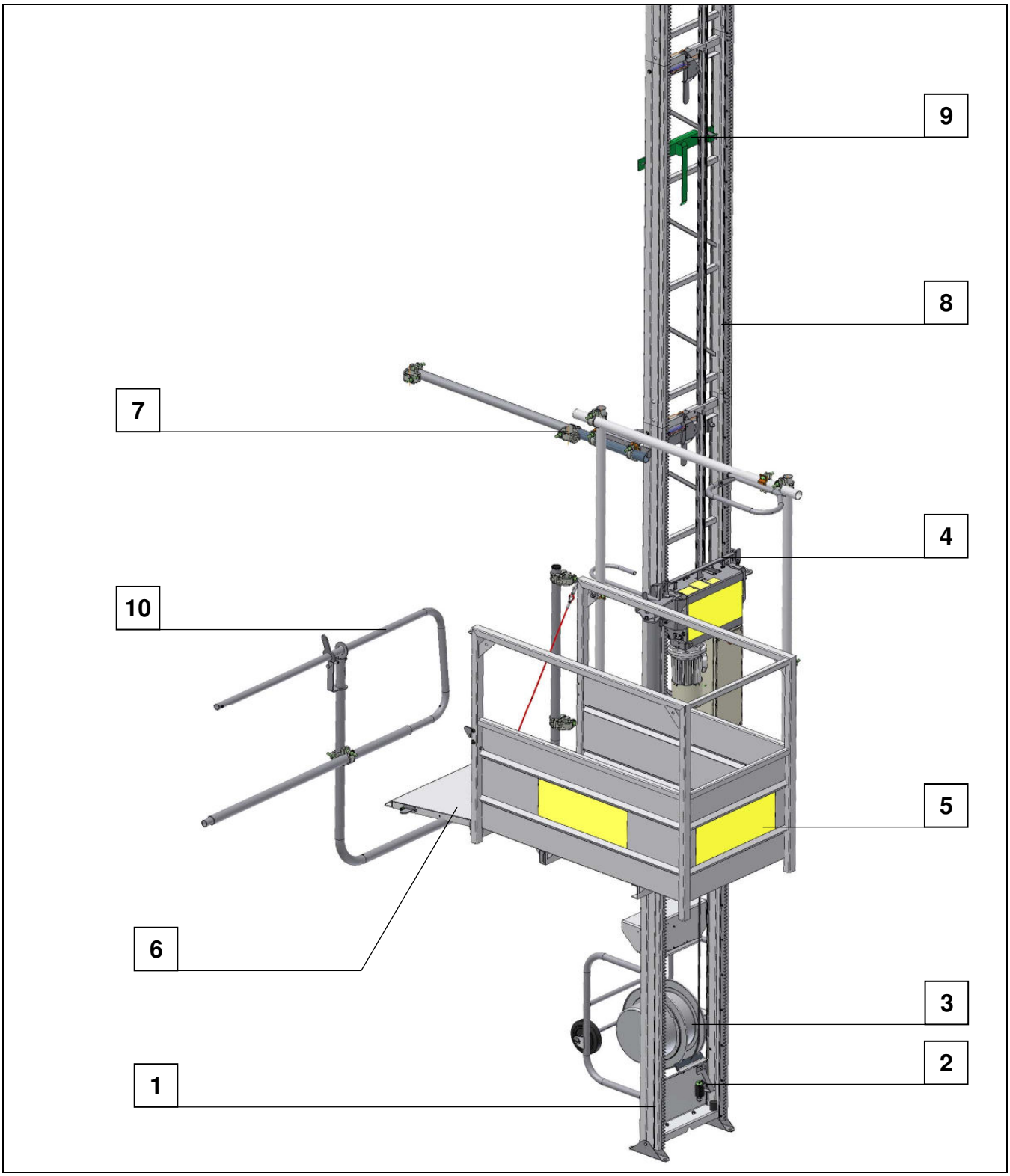


Fig. 8 GEDA 200 Z

1	Base unit with basic mast	6	Loading gate
2	Down limit switch	7	Rail bracket with fastening tube
3	Spring-loaded cable reel	8	Ladder section
4	Assembly protection bar	9	Limit switch bracket for up or down limit switch
5	Platform	10	"Simpel" fall protection

Electrical equipment and drive

1 = Drive motor
2 = Spring-loaded cable drum with trailing lead
3 = Main switch
4 = Socket (grey) for manual control
5 = Base unit switch box
6 = Manual control (ground control)
7 = Switch box on carriage

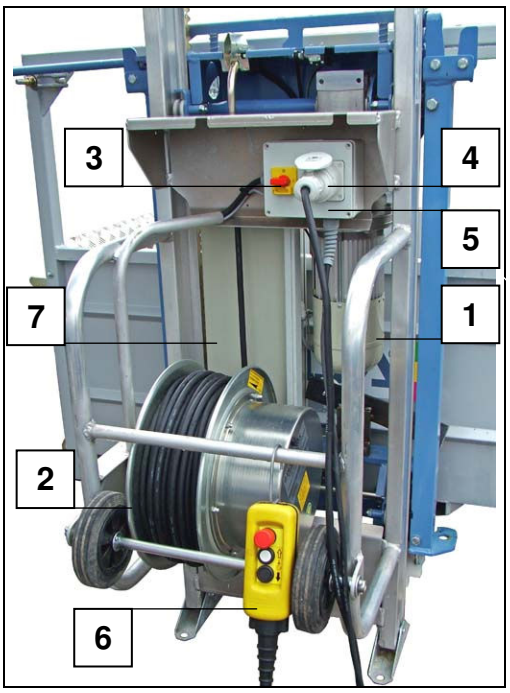


Fig. 9 Electrics on base unit

Manual control

The cable for the plug-in control is 5 m long.

1 = EMERGENCY STOP button
2 = UP button
3 = DOWN button
4 = Hook

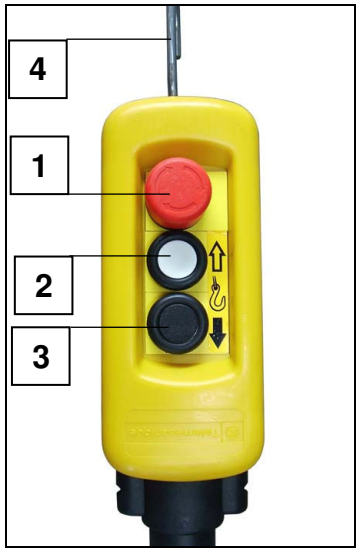


Fig. 10 Manual control

Carriage switch box

1 = Carriage switch box
2 = Overload indicator lamp
3 = Drive unit

Fig. 11 Carriage switch box

Wheels

Wheels (1) for transporting the base unit.

- Tilt the base unit until it can be wheeled away standing on its wheels.

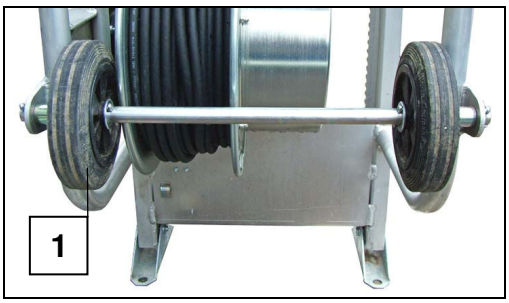


Fig. 12 Wheels

Assembly protection bar

A protection bar (1) which immediately stops the platform travelling in either direction when operated is mounted on the upper side of the carriage to protect persons during installation and maintenance work.

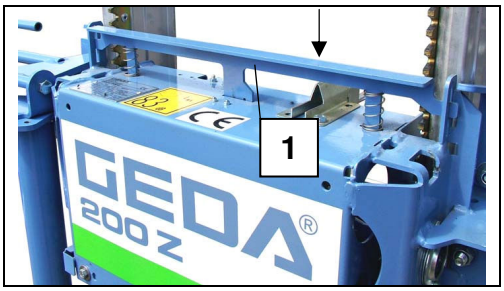


Fig. 13 Assembly protection bar

5.2 Accessory components

5.2.1 Retainer for scaffolding

- Bolt the vertical tubes (3) to the platform rail using the scaffold couplers.
- Fit a crosspiece (2) at an easily reachable height (approximately 2 m) using scaffold couplers.
- Clamp the scaffold parts holder (1) to the crosspiece.

NOTE

The 1½" tubes are not supplied.

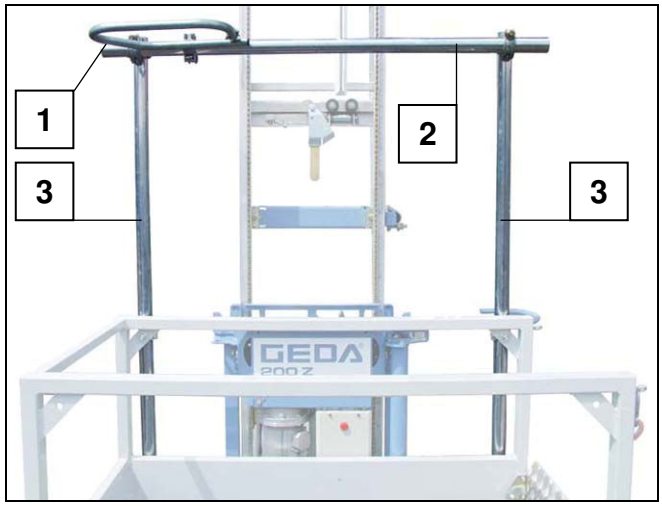


Fig. 14 Scaffold parts holder

Weight: 8.9 kg

Tools required:

2 ring or open-jaw spanners (width across flats 22)

5.2.2 Level control

A level control which can be used to access up to three levels selectively is offered as an accessory for transporting materials to a number of levels.

1 = Control box
2 = Limit switch approach plate
3 = Level limit switch

NOTE
The limit switch leads are 15m long. An extension is required for levels located higher than this.

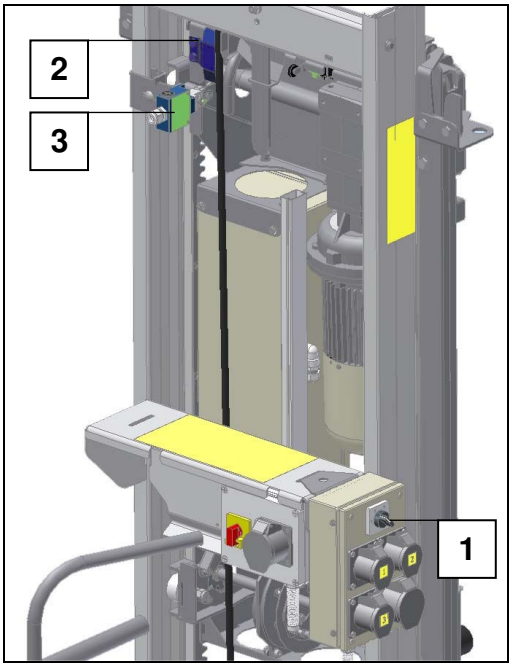


Fig. 15 Level control

Assembling the level control

- Hook the control box (1) into the top of the sliding carriage.

NOTE
The control box may be hooked into either side of the sliding carriage.

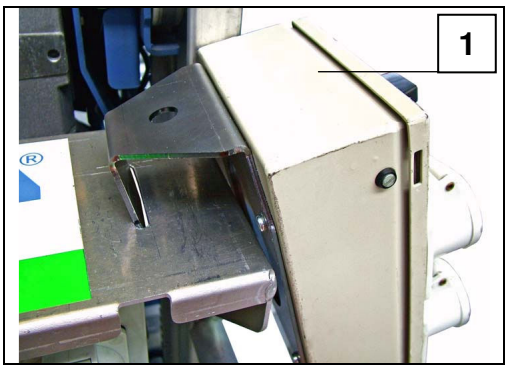


Fig. 16 Attaching the control box

- Fit the limit switch approach plate (2) on the sliding carriage next to the trailing cable holder (4) using the bolts supplied (M8x18mm).

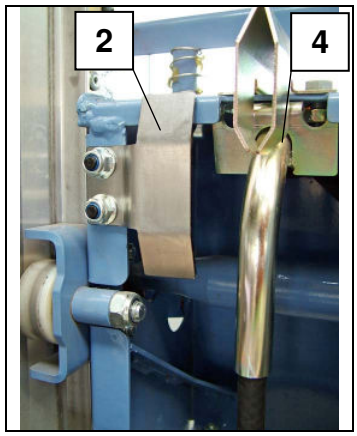


Fig. 17 Fitting the approach plate

- Fit the limit switch (3) at the desired stops on the right-hand ladder rail (looking towards the building).
- Clamp the clamp to the building-side leg of the ladder.
- The limit switch roller must face the gear rack.

Distance between level floor and limit switch roller approximately 1.17m

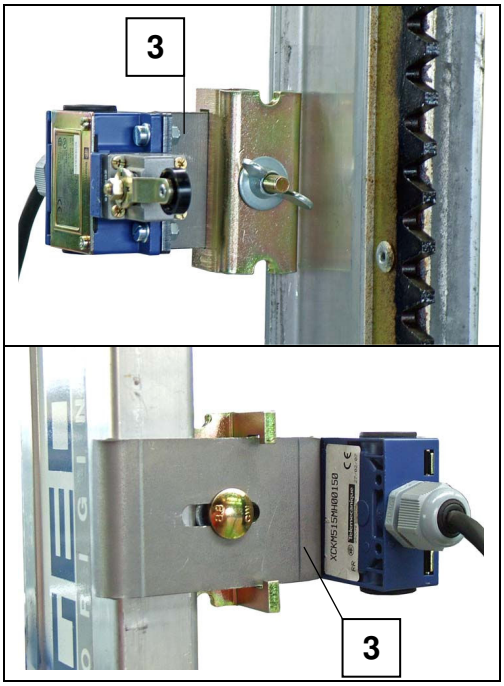


Fig. 18 Fitting the level limit switch

- Route the limit switch lead to the control box and plug in there.

CAUTION
Carefully roll up the excess cable and bind with a ball cable tie. - Otherwise it presents a hazard from catching on something or from the cable being damaged.

- Connect the control box.
- Plug supply lead (5-pin connector) from the control box into the socket on the switch box of the base unit (5).
- Plug limit switch lead from the first level into socket no. 1.
- Plug limit switch lead from the second level into socket no. 2.
- Plug limit switch lead from the third level (if present) into socket no. 3.

Fig. 19 Connecting the control box

- Plug hand-held controller into the 5-pin socket (6).

Using the level control

- Switch selector switch (7) to position "1".
- Platform halts at the first level limit switch on the ascent.
- Switch selector switch (7) to position "2".
- Platform halts at the second level limit switch on the ascent.
- Switch selector switch (7) to position "3".
- Platform halts at the third level limit switch on the ascent.
- Switch selector switch (7) to position "4".
- Platform halts at the approach plate of the UP limit switch on the ascent (see section 8.5).

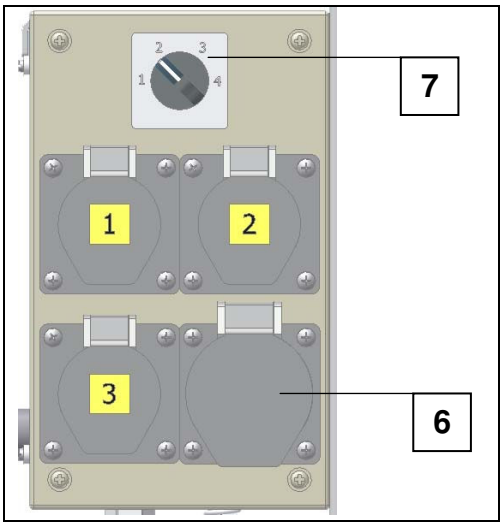


Fig. 20 Level control switch box

NOTE: The level limit switches are not active on the descent.

6 Transport

Have the hoist transported by experienced and capable persons. (See section 4 for the weight of the base unit.)

Receiving inspection of the hoist

- Check the shipment for transport damage and for completeness according to your order.
- Immediately notify the carrier (haulage company) and dealer if there is any transport damage.

7 Requirements for the site of installation

7.1 Foundation / ground pressure

Supporting ground

- Level supporting ground capable of taking maximum load.
- If this is not available then use the load-distributing sole plates.

Ground pressure

Useful load on the equipment	200	kg
Mass per ladder	24	kg
Length per ladder	2,0	m
Height of base unit	2,0	m
Unladen weight with platform	205	kg
Base area without sole plates (ladder shoes)	0,022	m²
Base area with sole plate (e.g.: 20 cm x 70 cm board)	0,140	m²

	Assembly height in m						
	6	**10**	**15**	**20**	**25**	**30**	**35**
Number of ladders required	2	4	7	9	12	14	17
Total weight (kg)	450	495	550	605	660	715	770
Ground pressure without sole plate (kN/m²)	**204**	**224**	**249**	**274**	**299**	**324**	**349**
Ground pressure with sole plate (kN/m²)	**32**	**35**	**39**	**43**	**47**	**51**	**55**

7.2 Electrical connection (on site)

- A site power distribution point providing 230 V/50 Hz, with an RCD and slow-blow 16 A fuse is required on site.
- Use a 3 x 2.5 mm² rubber-insulated flexible cable (maximum 50 m) and route it directly to the site power distribution point without connecting other consumers along the way, to avoid any voltage drop and hence a power loss in the motor.

NOTE

If the power supply is poor, unplug any other current consumers.

- Plug in the manual control in the foot and the mains connector in the on-site power supply. - The hoist is ready for operation.

8 Installation

The hoist must be installed according to the assembly and operation instructions under the guidance of a qualified person appointed by the contractor!

This qualified person must be familiar with the assembly and operating instructions, have sufficient experience, and must be instructed in the hazards involved in working with the rack and pinion hoist.

Assembly personnel, see section 3

8.1 Safety notes

- Before each time the machine is erected, check whether all parts of the hoist such as the ladder sections with rack, electrical cables and control system, are in perfect condition. If there is any damage, do not start the lift. – Replace damaged parts immediately.
- Acquaint yourself with the working environment at the site of use, e.g. obstacles in the working and traffic areas, ground loadbearing capacity and necessary barriers between the construction site and public areas.
- Cordon off the danger zone of the machine.
- Ensure that the danger zone at the lower loading point is protected by a barrier except at the point of access to the lifting equipment.
- No persons should remain beneath the lift.
- The wind speed during assembly shall not exceed 45 km/h (= wind force 5-6).
- Comply with the national accident prevention guidelines from the industrial safety authorities and all applicable laws and guidelines.
- Fall protection shall be provided from a fall height of 2.0 m to prevent persons from falling (use only original GEDA landing doors).
- Observe the loadbearing capacity of the hoist.
- The hoist is overloaded if the red indicator lamp on the platform switch box lights up. - Immediately reduce the loading weight. In this event, control is prevented until the red indicator lamp goes out.
- The projecting ladder sections may be extended a maximum of 4m above the last anchorage point during erection. (Upper edge of carriage up to rail bracket).
- Make sure that the brickwork is able to absorb the anchoring forces. A construction expert must check whether the house front is suitable for anchoring forces of this kind. Whether plugs or through bolts are to be used will depend on this judgement.
- Conveying persons is forbidden. It is permitted to ride on the platform to carry out assembly and servicing work.

8.2 Setting up and aligning the base unit

The hoist may be erected from the platform. However, the following points must be observed:
- The platform is also provided for assembly.
- Use a fall protection on the front side (fix a rope over the ramp onto the platform railing).
- The hoist shall only be operated from the platform (use an extension lead part no. 2804 for the controls).
- 1. Set the anchorage at a height of approximately 1.8 m (where the scaffolding is below the decking).

- The base unit must be aligned parallel to the building or the scaffolding.
- Set the hoist at the bearing points on load distributing and level sole plates and align in accordance with Fig. 6 or Fig. 7. (Observe loadbearing capacity of the foundation)

NOTE
- The distance between the ladder track and the vertical scaffold post when fastening to a scaffold shall be 0.35 m.
- The distance between the ladder track and the wall when fastening to a wall shall be 0.52 m.

- Vertically align base unit from the start using a spirit level. - This must also be checked when attaching each rail bracket (anchorage point).
- Set the fastening tube (2) at a height of approximately 1.8 m (where the scaffolding is below the decking).
- Fit rail bracket into the ladder section.
- Clamp the rail bracket (1) to the rear side of the ladder rails with opened scaffold couplers. Do not tighten the couplers so that it is possible to push the rail bracket up.

- Offer the base unit with the rail bracket vertical up to the fastening tube (2).
- Set the rail bracket (1) against the fastening tube, align horizontally and secure with the two scaffold couplers (3). (Establish the distance from the wall or scaffolding, align vertically).
- Tighten rail bracket (1) at the nuts (4).

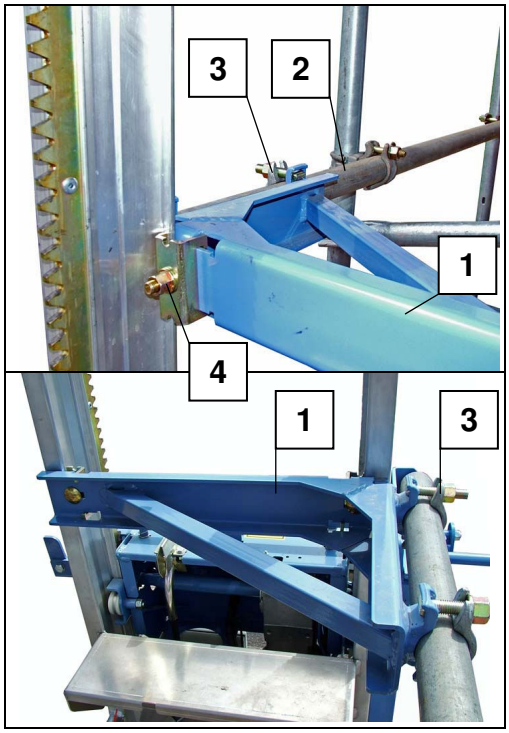


Fig. 21 Rail bracket

- Secure the foot against moving with pegs (5). Drive the pegs (5) in at an angle from the rack side of the ladder. Alternatively, the foot can also be secured with plugs.

CAUTION
If it is not possible to secure the foot, an anchorage point shall be provided at a height of approximately 0.9 m.

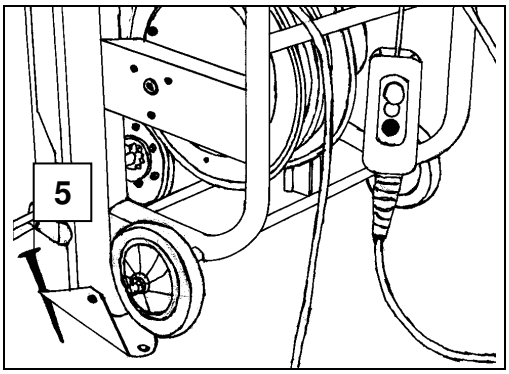


Fig. 22 Anchoring to the base unit

8.2.1 Anchoring to a scaffold

If the hoist is erected against scaffolding it must be anchored to the building.

NOTE
It may also be anchored directly to the scaffolding, if the scaffolding has been designed for the additional loading (see anchoring forces).

- Fit the rail bracket (1) into the ladder section and screw tight.
- Select the height such that the fastening tube is set beneath the decking.
- Bolt the fastening tube (2) loosely to the rail bracket with the scaffold couplers and attach to the wall with bolts and plugs or anchor with through bolts.

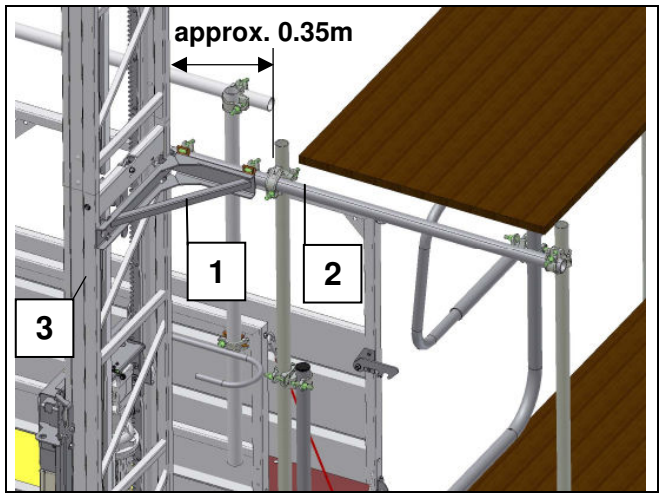


Fig. 23 Anchoring to scaffolding

- Align the ladder track (3) vertically and tighten the scaffold couplers on the rail bracket (1).

NOTE
The distance between the ladder track and the vertical scaffold post must be approximately 0.35 m.
For anchoring forces, see section 4.2.2

8.2.2 Anchoring against a wall

- Fit rail bracket into the ladder section.
- Bolt the wall bracket (2) loosely to the rail bracket with the scaffold couplers and attach to the wall with bolts and plugs or anchor with through bolts.
- Align the ladder track vertically and tighten the scaffold couplers on the rail bracket.

NOTE

The distance between the ladder track and the wall must be approximately 0.52 m.
For anchoring forces, see section 4.2.1

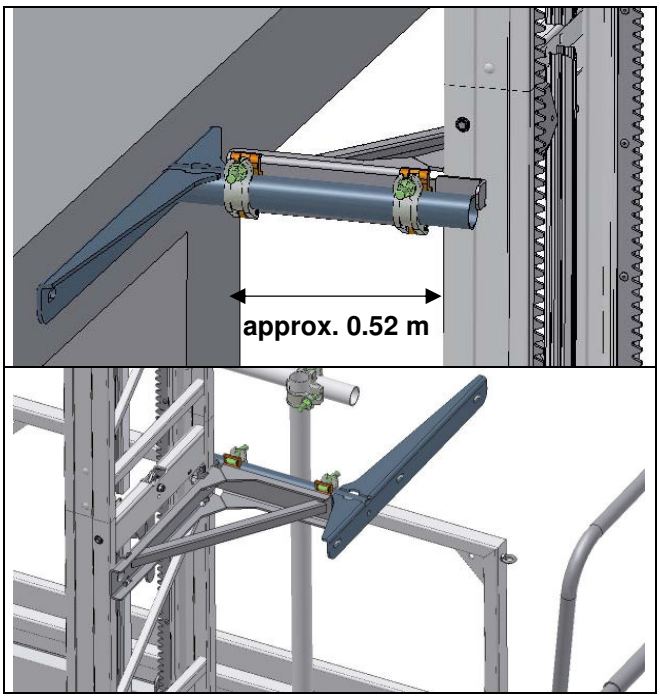


Fig. 24 Anchoring to a wall

8.3 Fitting the swivelling frame

The swivelling frame can be fitted hinged to the left or the right on the mountings (1) on the carriage.
The swivelling frame can be adapted to the carriage side required by rotating the swivel lever mounting (Fig. 26, Pos. 2).

Fig. 25 Carriage without swivelling frame

8.3.1 Fitting the swivelling frame on the right-hand side of the carriage

- Prepare the swivelling frame for the right-hand side of the carriage
- Fit the swivel lever mounting (2) on the swivel frame (4) in accordance with the drawing using the three M10 x 16 bolts and spring washers (3).

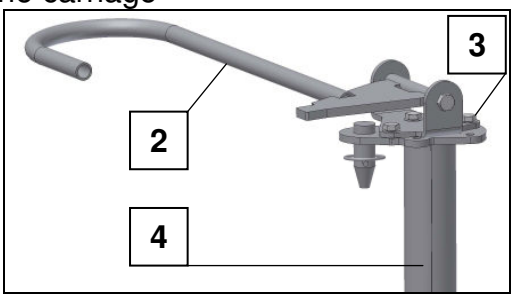


Fig. 26 Swivelling frame on the right

- Hook the swivelling frame on the mountings on the right-hand side of the carriage and secure with a fast pin (5).
- Route the plug for the swivel limit switch to the coupling (6) on the carriage and plug in.
- Fasten the connector on the clamps.

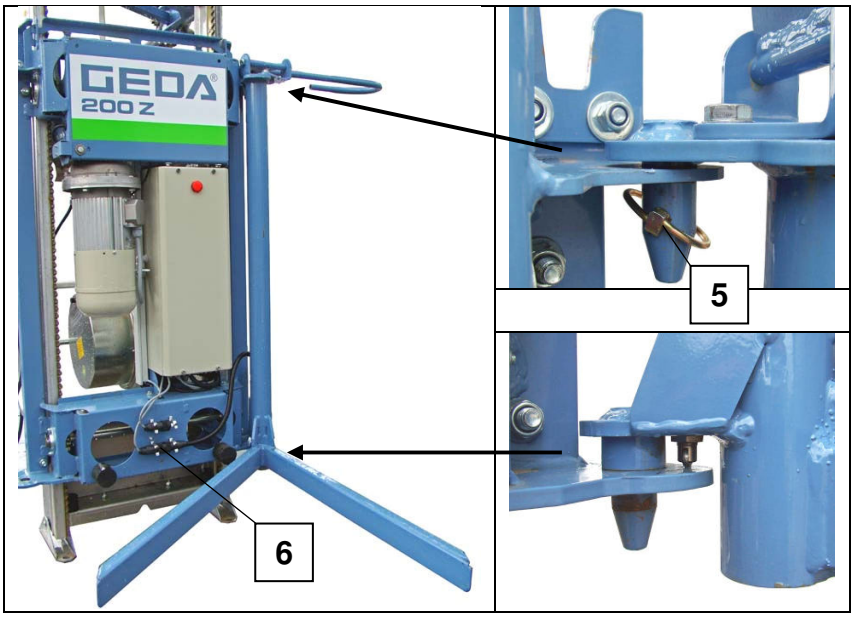


Fig. 27 Mounting the swivelling frame on the right

8.3.2 Fitting the swivelling frame on the left-hand side of the carriage

- Prepare the swivelling frame for the left-hand side of the carriage

- Fit the swivel lever mounting (2) on the swivel frame (4) in accordance with the drawing using the three M10 x 16 bolts and spring washers (3).

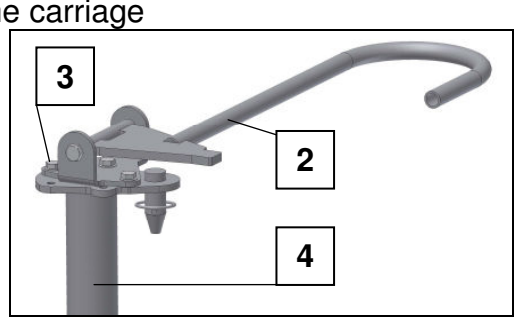


Fig. 28 Swivelling frame on the left

- Hook the swivelling frame on the mountings on the left-hand side of the carriage and secure with a fast pin (5).
- Route the plug for the swivel limit switch to the coupling (6) on the carriage and plug in.
- Fasten the connector on the clamps.

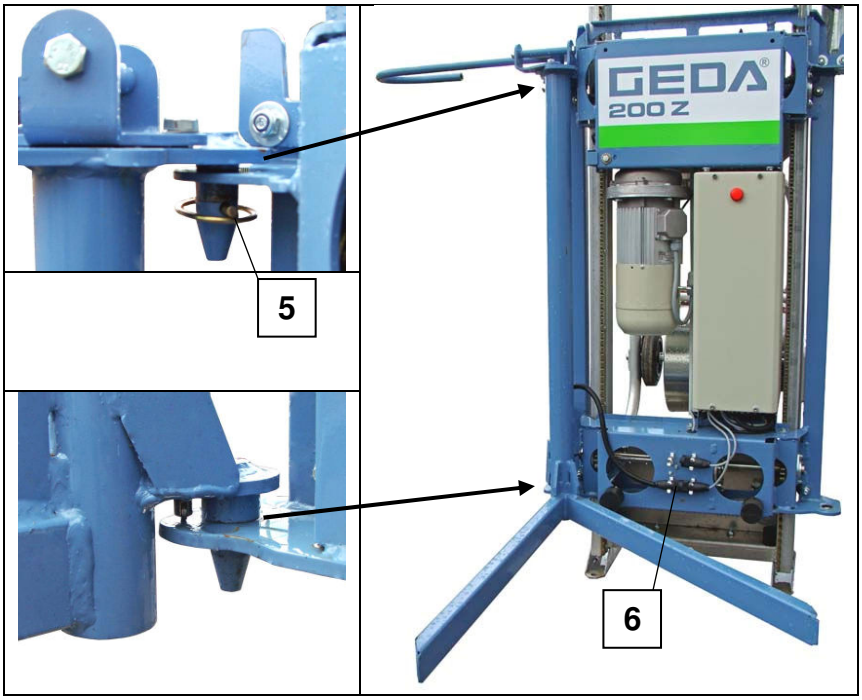


Fig. 29 Mounting the swivelling frame on the left

8.4 Assembling the platform

- Insert the platform (1) on the square tubes (2) of the swivelling frame and push towards the carriage until it is heard to latch onto the locking lever (3) on the underside of the platform.

NOTE
Illustration with swivelling frame (2) mounted on the right. If the swivelling frame (2) is mounted on the left-hand side of the carriage, the platform just needs to be mounted rotated through 180°.

NOTE
To dismantle the platform (1) pull out the locking lever (3) and pull the platform (1) out of the square tubes.

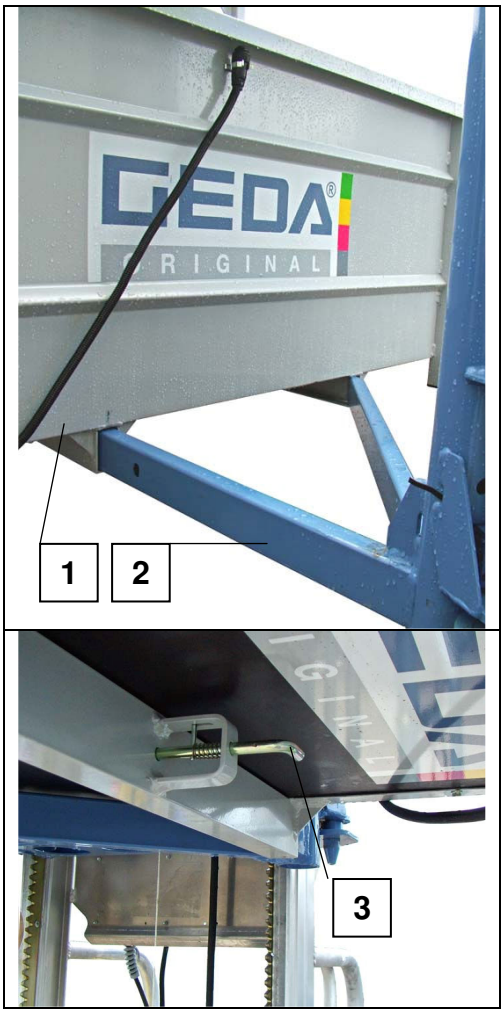


Fig. 30 Mounting the platform

- Swivel the platform.
- Fix the cable from the platform gate limit switch to the cable holder using the grommet (5) and plug the connector in at the coupling (4) on the carriage.
- Fasten the connectors on the clamps.

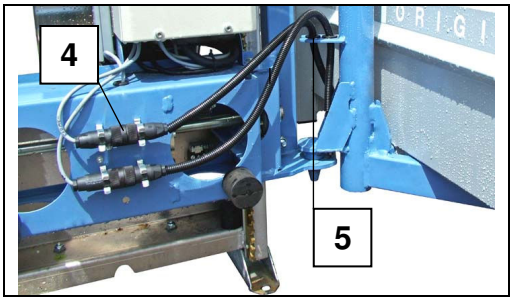


Fig. 31 Plug in gate limit switch

8.5 Extending the base unit

- Extend the manual control with the extension cable (part no.: 2804).
- Load the ladder section into the platform and close the gate.
- Hook in the front fall protection (1).

- Unhook the snap hook and cable (1) from the eye bolt (6) on the front railing post and disconnect the cable from the snap hook. Pass the loose cable end through the opening on the front railing post and hook the snap hook in again.
- The cable (1) must be hooked into the eye bolt (7) on the opposite platform railing.

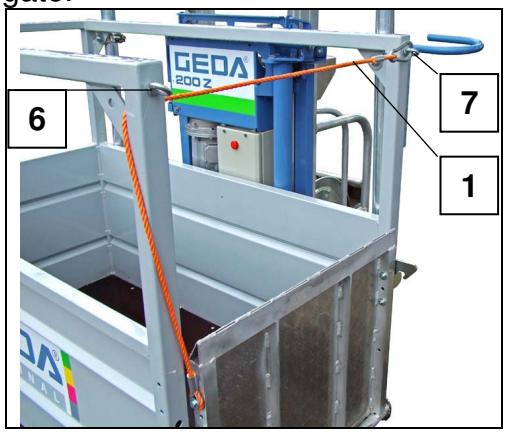


Fig. 32 Front fall protection

- The fitter ascends in the platform, operating it using the hand control.

- Press and hold the UP button on the hand control until the assembly protection bar of the carriage is approximately 20 cm from the end of the ladder.

Never lean out of the platform while travelling.

CAUTION

The topmost locking lever on the ladder must always be open. It acts as overrun protection for the ladder section.

- A 1 m ladder section must be mounted on the foot in order to be able to fix the anchorages in the centre of the ladder section in further erection.

- Insert the ladder section (2) at an angle from the platform into the base ladder section (3), set vertical and then push fully together.

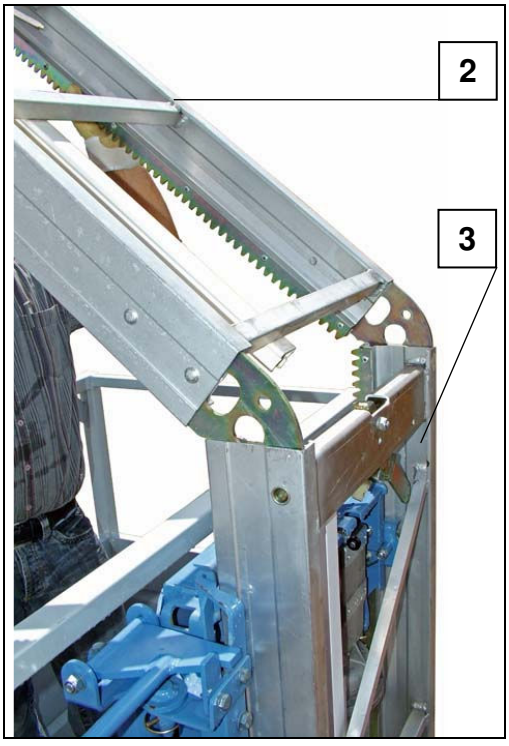


Fig. 33 Putting together the ladder sections

- Hold the securing lever (5) down briefly with your left thumb until the locking lever (4) has moved slightly in the direction of the arrow.
- Reach around the ladder section and push the locking lever (4) from the rear in the direction of the arrow by hand until it latches.
- Release the locking lever (4). The two ladder sections are now locked.

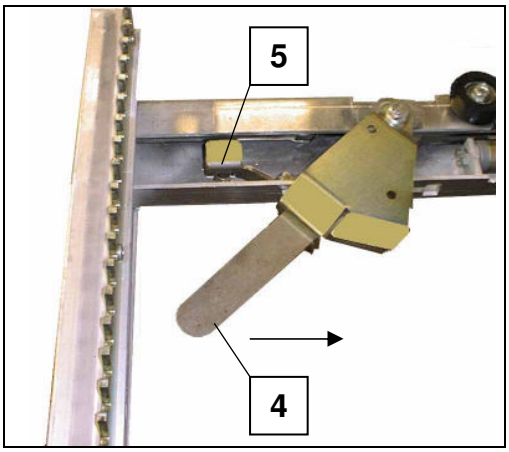


Fig. 34 Locking lever

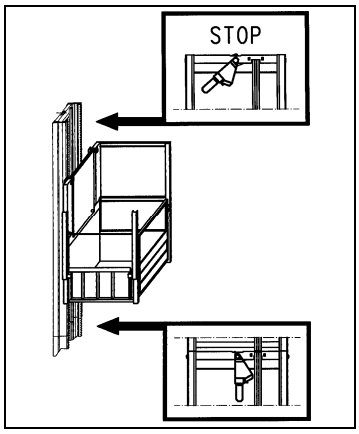
Check:
The locking bolts must project beyond the ladder beam on the narrow side of the ladder and be easily visible.

- Fit the 2 m ladder section by hand (as already described).
- Reach around the ladder section and lock from behind.
- Travel on to around the centre of the ladder section.
- The next ladder anchor must be set at a maximum height of 4 m (or 2.2 m after the last anchorage point).
- Press the UP button until about 20 cm before the end of the rail to fit the next ladder section.
- Further rail anchors are set at maximum intervals of 4 m (see set up diagram).

The projecting ladder track may be travelled for a maximum of 4 metres beyond the last rail bracket during installation, and only 3 m during operation (upper edge of the carriage to the topmost rail bracket beneath this).

- The hoist may be erected to a maximum height of 35 m in this way.

All locking levers must be closed (pointing vertically downwards), except for the top one (last). This must remain open. It acts as overrun protection for the ladder end during operation.



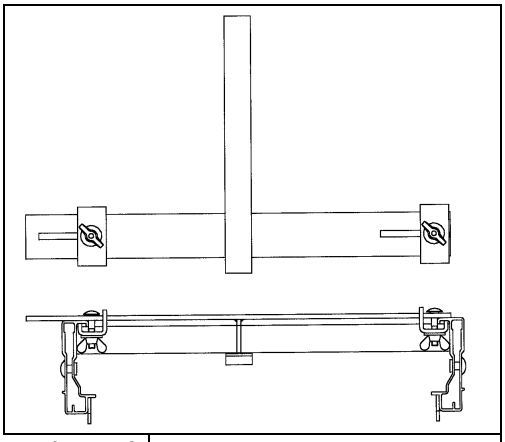
In operation, the ladder end may only be travelled to a maximum of 3 m above the topmost anchorage point. There are two possibilities for ensuring this:

First option

- The topmost latch is opened and is no more than 3 m above the last anchor.

Second option

- A limit switch approach bar (part no. 2364) is hooked into the ladder section with the two clips and bolted into position. The approach plate can be moved horizontally and must always be pushed to the far left, looking from the platform. The limit switch plate may be rotated through 180° to bridge a ladder rung without gaps.



- If the platform is to halt at the landing door, the lower edge of the approach plate should be set 1.15 m higher than the threshold of the unloading point.

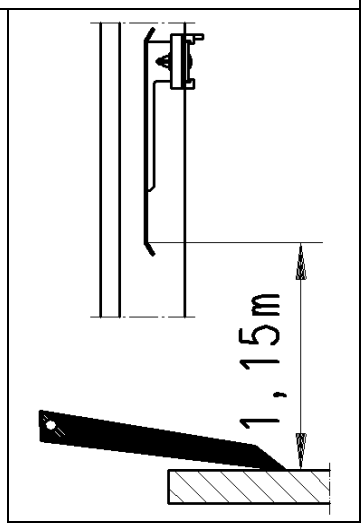


Fig. 35 Limit switch approach bar

NOTE

The limit switch approach bar can also mounted below the carriage to set the lower stop point for unloading lorries, for instance.

CAUTION

Once the limit switch plate has been fitted, a test shall be performed to ensure that the hoist does halt on the approach plate. It is not possible to overtravel a correctly adjusted approach bar.

NOTE
Once the hoist is erected, the snap hook and cable (1) must again be hooked into the eye bolt (6) on the front handrail post as a gate limiter.

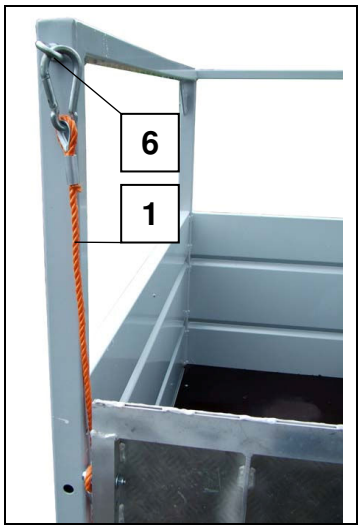


Fig. 36 Gate limiter

8.6 Safety of the loading and unloading points

(when used as a site hoist)

Fall protection that will prevent a person falling must be fitted at **all** loading and unloading points where there is a risk of falling from a height of more than 2 m. Only GEDA landing equipment may be fitted. These lanyard rails are tested and together with the loading ramp on the lifting platform they ensure safe passage.

NOTE
Assembly of the "Simple" loading point protection rails is described in operating instructions (No. BL085) delivered separately for this loading point protection.

8.7 Checking after assembly and before each start of operation

- Check that
  - the ladder track is vertical.
  - the gear racks are adequately greased.
  - all the rail brackets required have been carefully mounted on the ladder track and the associated fastening tubes carefully mounted on the brickwork or scaffolding.
  - the specified maintenance work and inspection procedures have been carried out
  - there is no oil leaking at the geared motor
  - the supply cable has an adequate cross section
  - the hazard zone at the lower loading point, is cordoned except for the access to the hoist.
  - Information plates are present and legible (see Technical Data)
- Carry out a test run with **loaded** platform and check whether the brake functions correctly.
- Check that the ground control (manual control) is working properly.
- Trailing cables, mains supply line and control lines must not show any damage.
- Test the function of the fall brake by a brake test. (see section 12.6)

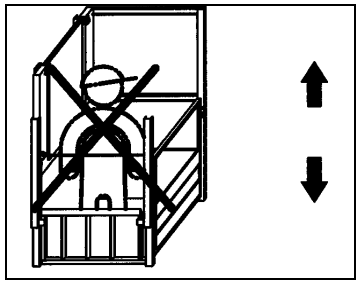
9 Operation

9.1 Safety notes

The lift may only be operated by qualified personnel appointed by the contractor. This qualified person must be familiar with the assembly and operating instructions, have sufficient experience, and must be instructed in the hazards involved in working with the hoist.

Operating personnel (see section 3)

Site hoists are hoist installations erected temporarily intended exclusively for conveying goods during construction work.



- Conveying persons is forbidden.

- Cordon off the danger zone of the machine.
- Ensure that the danger zone at the lower loading point is protected by a barrier except at the point of access to the lifting equipment.

- The hoist must be operated from outside the danger zone.
- The operator must always be able to monitor the platform.
- Particular care is required at ground level.
- Secure the machine thoroughly against unauthorised access! - When work is finished or during breaks, keep the manual control safe and/or turn off main switch and secure with padlock.
- If the loaded platform stops during operation due to a malfunction, the operating personnel must recover the load. - Never leave a loaded platform unattended!
- Operation of the lift must be stopped if:
  - Wind speeds exceed 72 km/h (= wind force 7-8; stormy winds).
  - Temperatures fall below –20°C.
  - There is damage or there are other faults.
  - A recurring inspection has been missed (see section 2.3.1).
- Likewise observe the safety instructions in section 2.

CAUTION

The brake release lever shall never be used to lower the platform during operation. It is intended for use by authorized persons only in an emergency (see section 11.1.1).

9.1.1 Rules for personnel working at ground level

- No persons may stand under the machine. Ensure that the danger zone is suitably cordoned off at the customer's site.
- Store material at a safe distance of at least 50 cm from moving parts of the platform.
- No objects may be stored in the cordoned off area or under the platform.

9.1.2 Rules for loading and unloading the platform

- Fall protection shall be provided at loading points from a fall height of 2.0 m to prevent persons from falling. (Assembly landing level safety gate.)
- The landing doors may only be opened once the loading ramp has folded down fully.
- The platform must always be loaded in such a way that the access for loading and unloading is kept clear.
- The load must be evenly distributed over the platform.
- Do not transport bulky goods that project over the side of the platform.
- Position the load securely; material that tends to slip or is higher than the platform or could fall must be secured. Think about sudden winds.

9.2 Safety inspection

Before starting work

Carry out a test run with an **unladen** hoist and check whether the entire length of travel is clear.

The actuator must be stopped immediately if

- the EMERGENCY STOP button is pressed
- the DOWN limit switch is started
- the up or down limit switch bar is approached
- the carriage has reached the end of the ladder (with the lock at the end of the ladder open)
- the direction button for UP or DOWN is released.

The hoist may not start to travel, if

- the platform is overloaded (red indicator lamp has lit up)
- the fall brake has triggered
- the loading and unloading gate is open
- the platform has been swivelled into the loading and unloading position.

9.3 Operating the construction hoist

NOTE
The GEDA- 200 Z construction hoist operates at **a speed** of no more than 20 m/min.
The construction hoist can only be controlled in hold-to-run command mode.

- The loading gate must be closed and latched. The assembly protection bar must be clear.
- Turn the main switch (on the base unit switch box) to the ON position.

- Unlock EMERGENCY STOP button (1) on manual control.

- Load up
  - Press UP button (2).

- Load down
  - Press DOWN button (3).

- Switch off or stop:
  - Release UP button (2) or DOWN button (3).
    In an emergency by operating the EMERGENCY STOP button (1).

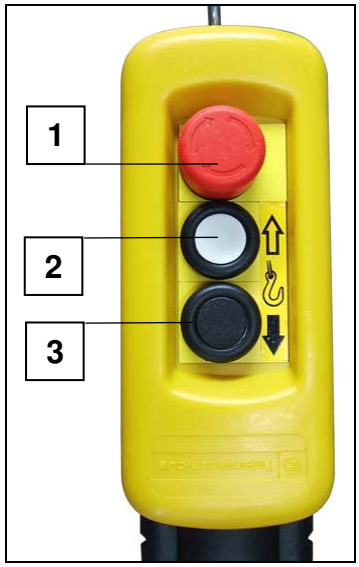


Fig. 37 Operating/control

Approaching a landing

- Press and hold UP button (2).
  - Hoist travels to the limit switch plate (if set) or to the topmost (opened) ladder lock. Releasing the UP button (2) stops the platform at any desired position.
- Swivel the platform (1) through 90° to unload onto a deck.
  - Swing the swivel lever (2) upwards and swing the platform (1) in until the swivel lever latches again.
- Open the safety hook (3) on the platform and lower the loading gate.

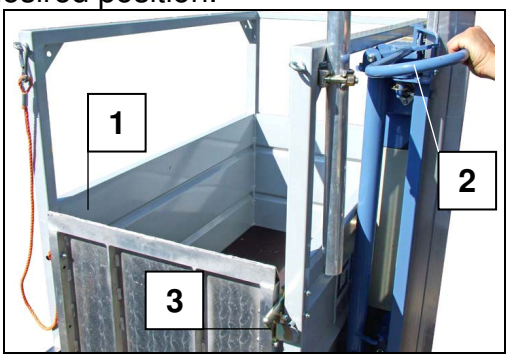


Fig. 38 Swivel the platform

- To open the fall protection, press the lever (4) in the direction of the arrow and push bar (5) up to the stop tube.

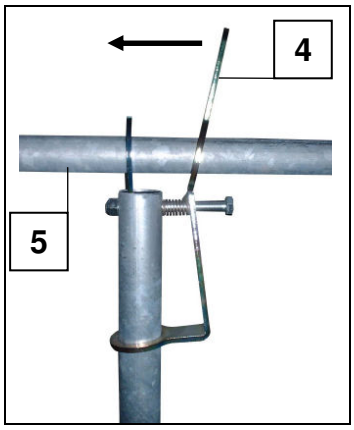


Fig. 39 To open the fall protection

- Load or unload the platform.
- Push the bar on the fall protection closed again.
- Close the loading gate.
- Pull the swivel lever for the swivelling frame upwards and swing the platform back until the swivel lever latches again.
- Press and hold the DOWN button (3).
  - Platform travels downwards to the ground level and stops there at the down limit switch.

9.4 Interruption/end of work

- Lower lifting equipment to lower position with the DOWN button and unload.
- Unplug manual control and keep safe.
- Remove mains plug.
- Secure main switch with a padlock against unauthorized switching on.

9.5 Shutting down in an emergency

- In situations that present a risk for the operating personnel or the hoist, shutdown the hoist by pressing the EMERGENCY STOP button.
- There is an EMERGENCY STOP button on the manual control.

NOTE

EMERGENCY STOP slam buttons are equipped with a latching mechanism and remain applied until they are unlocked again manually (turn red button to the right and pull it back).

10 Dismantling (disassembly)

The construction hoist must be disassembled according to the assembly and operation instructions under the guidance of a qualified person appointed by the contractor. This qualified person must be familiar with the assembly and operating instructions, have sufficient experience, and must be instructed in the hazards involved in working with the construction hoist.

The same regulations and safety notes as described in section 8 apply for dismantling.
Also, make sure that disassembly is carried out generally in reverse order to assembly:

- First dismantle the landing equipment (fit three-part protection first).
- Then check whether all ladder latches are closed.
- The platform must be stopped in such a way that ladder end of the ladder section to be removed is located above the upper edge of the carriage.
- Only release the rail brackets if there are no further ladder sections above the anchor.
- Always unload the platform in the interim (the hoist cannot be moved if overloaded).

11 Malfunctions-Cause-Remedy

Faults may only be remedied by qualified persons. Before each troubleshooting session, lower the platform to the bottom and unload if possible.

Shut off the main switch and pull out the mains plug before working on the hoist's electrical system. Discontinue operation immediately if faults occur that endanger operational safety.

Check the following if there are faults:

- Mains supply plugged in?
- Main switch on base unit switched on?
- Fuses in building site main cabinet (16 A, slow-blow)?
- Correct extension cable (minimum 3 x 2.5 mm²)?
- Is the EMERGENCY STOP button at the control station unlocked?
- Is the loading gate closed and secured?
- Platform in the travelling position (not swivelled in)?
- Is the red indicator lamp lit (platform overloaded)?
- Run too low or too high (see section 11.1.2/ 11.1.3)
- Are the operating elements for the up and down limit switches functioning properly?
- Has the fall brake engaged (see section 11.2 for release)?
- Check the miniature fuses in the switch box on the base unit (primary 400 mA, secondary 1.0 A).

Motor is not giving full output:
- Fall in voltage of more than 10 % of the nominal voltage.
- Select supply cable with higher wire cross section.
- Reduce load.
- When overloaded, the integrated thermoswitch turns off the control current. Work can continue after a cooling period (possibly reduce load).

CAUTION
Refrain from overheating (overloading) repeatedly and/or operating at low voltage. - Doing so shortens the life of the motor.

11.1 Possible faults during operation

11.1.1 Electricity failure or motor defect
In this case, the platform must be lowered to the ground station by releasing the motor brake.

- Release the motor brake using a pull-rope from the ground (outside the danger zone) by pulling in measured amounts on the brake release lever (see Fig. 41). – the platform slides down.

CAUTION
If the brake is released too much then the platform goes into overspeed and the fall brake responds. If this has happened, see section 11.2. Have breaks for greater heights. – Brake must not get overheated.

- On reaching the foot section, make sure that the platform does not hit the ground.
- Release brake release lever (1) in good time.

11.1.2 Platform has descended too low
The platform can overrun the lower limit switch, if
- the DOWN limit switch is defective
- the brake's air gap is too great
- there is a fault in the electrical system
- the platform is overloaded.

CAUTION
If this effect occurs repeatedly although the hoist is not overloaded, have the brake checked and adjusted in accordance with the manufacturer's operating instructions by a qualified expert.

11.1.3 Platform has run too high

The platform (hoist) travels too high if the topmost (last) ladder latch is closed, or the upper limit switch has failed.

Action:

- Press down button.
- If it is not possible to lower the platform under control, it must be lowered approximately 20 cm by carefully releasing the brake (using a pull-cable on the brake release lever from the ground).
- Check the top ladder latch (must be open).
- If the last ladder latch was opened, take the hoist out of operation and secure. – Have it checked immediately by a qualified electrician.

11.2 Fall brake has been triggered

The hoist is equipped with a fall brake which stops the platform in the event of it overspeeding. After the fall brake has responded it is not possible to continue travel.

Resetting the fall brake

- Undo the two central opposing securing bolts (1).
- Turn the carrier disc (2) clockwise until the actuating lever (3) for the limit switch engages in the groove in the carrier disc (2).
- Tighten the two bolts (1).
- Check the fall brake for damage, establish the cause for its response and remedy it.

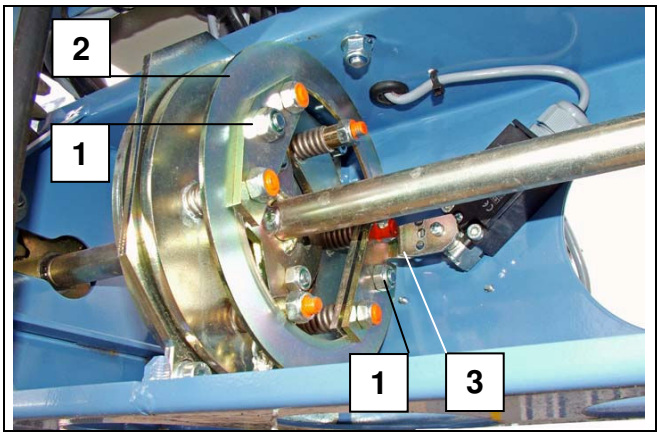


Fig. 40 Fall brake

12 Maintenance

Maintenance work may only be carried out by qualified personnel. Make sure that lubricants and spare parts are disposed of in an environmentally friendly way.

- Before cleaning and maintenance work, first lower the lifting equipment and remove the mains connector.

12.1 Daily cleaning

- Clean dirt off hoist.
- Keep spring-loaded cable drum clean of snow and ice in winter.
- Keep working area around the hoist clear and clean.

12.2 Daily checks

- Check visually to ensure that the full travel path of the platform is clear.
- Carry out a test run with an unladen platform and check if
  - the operating limit switches above and below are functioning,
  - the gate latching devices are functioning; it should not be possible to execute a lift movement with the loading gate open.
  - the EMERGENCY STOP button works; if it is pressed, it should not be possible for the hoist to travel up or down.

12.3 Weekly inspection/maintenance

- Test the braking distance:
  - Carry out a test run with the hoist loaded and check whether the motor brake overtravel in downwards travel is exceeded (carriage or platform must not come to rest on the buffers).
- Check gear racks and driving pinion for wear and spray with adhesive lubricant.
  Lubricant recommendation GEDA special spray part no. 2524
  grease cartridge part no. 13893 for grease gun

NOTE
The gear racks must be greased correspondingly more often in the case of frequent use or multi-shift operation.

- Check trailing cable, mains supply line and control lines for damage.
  - If necessary rewind the trailing lead.
- Check the overload indicator light in the platform control unit by manually pressing the overload limit switch.

12.4 Monthly inspection/maintenance

- Check that the ladder anchorages on the ladder section and building are secure, re-tighten if necessary.
- Lubricate trailing cable.
- Lubricant recommendation:
  Continental: Talcum
- Check wear on drive pinion and gear racks, replace if necessary.
- Check cable guide profile rope for wear: gap may not be greater than 10 mm wide.

12.5 Quarterly inspection/maintenance

Are the notices present and easily legible?
(load bearing capacity, notes on erection, prohibition on man-riding, etc.).

12.6 Checking fall brake in the context of recurring inspections

(see section 2.3.1)

The fall brake test may only be carried out by a qualified person appointed by the contractor who can evaluate the risks thanks to their training or knowledge and practical experience and can assess the safe condition of the fall brake.

- Turn main switch to ON position.
- Press UP button.
- Run the empty platform to a height of approximately 6 m.
- Attach the pull cord to the brake release lever with a loop and allow to fall freely to the floor.
- Pull on the cord from below, outside the danger area. – the brake releases and the platform acquires excess speed. The fall brake must grip after 2-3 m and stop the platform. If this does not happen, release the pull cord or brake release lever immediately.

Fig. 41 Brake test pull cord

CAUTION

After the fall brake has triggered, upward and downward travel of the platform is blocked mechanically and electrically. Release the fall brake as described in section 11.2.

12.7 Servicing every three years

The GEDA fall brake may only be repaired or adjusted by the manufacturer's service technicians or his trained and authorized representatives.

The fall brake has been type-tested and must be replaced every 3 years or checked by the manufacturer or an authorized representative of the manufacturer.

13 Maintenance

Maintenance work may only be carried out by trained and qualified persons because they need special expert knowledge and special abilities. Neither is communicated in this operating manual.

When ordering spare parts please state the following:

- Type
- Year of construction
- Serial No.
- Operating voltage
- Desired part number

The type plate is located on the base unit of the machine.

NOTE

Spare parts must meet the manufacturer's technical requirements. Only use original spare parts from GEDA.

Place an order with our customer service for servicing or maintenance work:

Sales and customer service addresses:

GEDA®
ORIGINAL

Mertinger Strasse 60
D-86663 Asbach-Bäumenheim
Phone +49 (0) 9 06 / 98 09-0
Fax +49 (0) 9 06 / 98 09-50
Email: info@geda.de
WWW: http://www.geda.de

14 Disposing of the machine

Dismantle the unit properly at the end of its service life and dispose of according to national provisions.

Observe the following when disposing of unit components:
- Discharge oil/grease and dispose of in an environmentally friendly way
- Recycle metal parts
- Recycle plastic parts
- Take electrical components to hazardous waste recycling.

Recommendation:
Get in touch with the manufacturer or commission a specialist company with disposal in accordance with the regulations.

15 Warranty

Please find the warranty conditions in the general business conditions (see invoice or delivery note). Not included in the warranty are damage or defects that occur as a result of non-prescribed electrical connection, improper handling, non-compliance with the assembly and operating instructions. Electrical cables and parts that are subject to normal wear and tear are also excluded. We reserve the right to determine how and through whom the defects are to be remedied.

Copy of the EC Conformity Declaration

EC Declaration of Conformity

In terms of the EC Machinery Directive 2006/42/EC,
Appendix II Section 1. A

Manufacturer and address:	**GEDA-Dechentreiter GmbH & Co.KG** Mertinger Str. 60 D-86663 Asbach-Bäumenheim Telephone + 49 (0)9 06 / 98 09-0 E-mail: info@geda.de
Product name:	Rack and pinion hoist
Type:	**GEDA® 200 Z**
Year of manufacture:	2010
Serial No.:	29220

We hereby declare that the subsequently named device is suitable for conveying materials on construction sites. The specific model entered into commerce by us conforms to the pertinent, fundamental health and safety requirements of the EC Machinery Directive 2006/42/EC.

This declaration becomes null and void if any modifications are made to the unit, which have not been approved by us.

The machine also meets the provisions of the following EC directives
EMC Directive (2004/108 EC)

Applied and harmonized standards:	EN ISO 12100-1 and EN ISO 12100-2; EN 60 204-1

16 Appendix for entering recurring inspections

Inspection findings

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Date and signature of the tester

Inspection findings

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Date and signature of the tester

Inspection findings

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