

4-"2002"

Assembly and Operating Instructions

Inclined and Vertical Lift

LADDER LIFT LL-450-550

For material loads
Load capacity vertical 450 lbs
Load capacity inclined 550 lbs

Year of manufacture: 2000.....

Serial number: 17400 00620.....



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Vertical and Inclined Material Hoist LADDER LIFT LL-450-550

Part.-no	Description	Weight approx. lbs
2350	<p>LADDER LIFT LL-450-550</p> <p>For use as inclined and vertical hoist</p> <p>Load capacity for vertical use 450 lbs Load capacity for inclined use 550 lbs Lifting speed 80' / minute</p> <p>The base unit consists of:</p> <ul style="list-style-type: none"> - Base section 3'3" - Trolley with drive unit 1.75 HP, 230V, 1PH, 60 hz and overspeed safety device - Plug-in control pendant with 16' cable - Self-retracting cable reel with trailing cable for 100' lifting height - Transport axle 	205
	Extension of base unit	
2355	Ladder section 6'6" with rack, cable guide and quick lock	50
2356	Ladder section 3'3":with rack, cable guide and quick lock	25
	Equipment for base unit for vertical use	
2360	Load platform (internal dimensions 54"x29"x43")	235
2361	Mounting for scaffold sections	
2362	Rail tie (2 sets for base section and 1 set for each 13' ladder section)	
2363	Wall tie	
1177	Landing level safety gate (galvanized) with mechanically locked sliding door (for all tubular scaffolds)	120
	Equipment for base unit for inclined use	
	Load-carrying devices	
2893	General purpose platform with hinged guard rail	73
2817	Bucket hanger can be attached to the general purpose platform	15
2894	Transport platform with hinged guard rail (platform inclination adjustable)	75
9866	Large transport platform with three-sided hinged guard rail (platform inclination adjustable)	112
2830	Sheet carrier with prop	88
2860	Tile holder with hinged guard rail, tile cart and two pallets for roof tiling	88
	Accessories	
2367	Angle track section 20°	41
2368	Angle track extension 10°	8
2823	Small building site main cabinet	18
2824	Cable drum with 110' cable	18
2804	Extension cable, 65 ft, for control pendant	11
2884	Roof tile batten trolley	24
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2829	Aluminum ladder prop (double)	48

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2 Rating

This operating manual applies to the following model:
GEDA LADDER LIFT LL-450-550

Distributed by:



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Manufacturer:



CE marking

The LADDER LIFT LL-450-550 bears the CE mark

Country of origin: Made in Germany

When ordering spare parts, please specify:

- Model
- Year of manufacture
- Serial no.
- Operating voltage
- Quantity required

The nameplate is located on the hoist trolley.

NOTE

Spare parts must meet the manufacturer's technical requirements!! Only genuine GEDA spare parts must be used.

3 Proper use and area of application



The LADDER LIFT LL-450-550 rack and pinion hoist is a building hoist, which is erected temporarily and is intended exclusively for the transportation of material during construction activities. Any other use, such as, for example, the transportation of people (except for assembly and maintenance purposes), is considered to be an abuse of the equipment and is strictly prohibited. The manufacturer/supplier accepts no liability for damages or injuries resulting from such use.

- The LADDER LIFT LL-450-550 may only be operated as a building material hoist after assembly of the base enclosure and the landing level safety gates!

Proper use of the hoist involves the following:

- Observance of the conditions for assembly, operating and maintenance (assembly and operating instructions).
- Annual inspections performed by an expert.

Improper use of the LADDER LIFT LL-450-550 may lead to the following

- Danger to life and limb of the user or third parties.
- Damage to the hoist and other property.

Requirements of the assembly personnel:

The LADDER LIFT LL-450-550 may only be assembled, operated and serviced by competent persons who, through training or practical knowledge, are in a position to handle the equipment properly and who have been instructed about the dangers involved. These competent persons must be appointed to the tasks of assembly, dismantling and maintenance by the employer.

Operating personnel

The hoist may only be operated by competent personnel who, through their training or practical knowledge, are in a position to handle the equipment properly. These persons must

- be at least 18 years of age;
- be selected to operate the hoist by the employer;
- have received appropriate instruction and be aware of the relevant hazards.

Residual hazards



Even if all safety measures have been carried out, there are permanent hazards. Permanent hazards are potential dangers that are easy to overlook, such as, for example:

- Injuries arising from uncoordinated operation.
- Danger of a fault in the control system.
- Danger when working with the electrical equipment.
- Danger due to damage to the load-carrying device.
- Danger due to improperly secured load falling.
- Danger due to high wind speeds.
- Hazards when entering and leaving the load platform.

4 Safety

4.1 Explanation of symbols and notes

4.1.1 Operational safety symbol



This symbol is found next to every safety instruction where there is a danger of serious injury to the operator. Pay attention to these instructions and be careful when handling the machine!!

4.1.2 Attention

ATTENTION This symbol is found wherever particular instructions, regulations or prohibitions relating to damage prevention are given, in order to prevent damage to the hoist.

4.1.3 Note

NOTE This symbol is found wherever instructions are given concerning the most effective use of the hoist, or where the correct operating procedure is indicated.

4.2 General safety

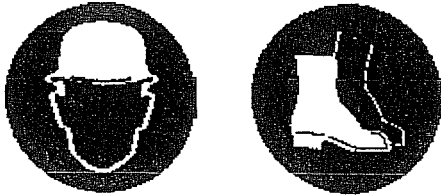
The LADDER LIFT LL-450-550, hereafter referred to as hoist, has been designed according to state-of-the-art technology and is safe for operation. However, the nature of the operating procedures is such that the hoist has areas and parts that cannot be protected without impairing the function and operating capability. Therefore, good personal safety practice is essential to protect the personnel and the hoist. The hoist can present dangers if it is used incorrectly by untrained personnel or if it is not used in accordance with regulations.

- Please read the assembly and operating instructions for the hoist, as well as the safety instructions, before transportation, assembly, commissioning, dismantling or maintenance, and observe these instructions carefully!

Read the assembly and operating instructions and make sure you understand them before working with the machine!

- Keep the operating instructions in an easily accessible place close to the hoist.
- In addition to the assembly and operating instructions, generally applicable conditions as well as laws concerning accident prevention and environmental protection in the local area where the inclined hoist is being employed also apply (e.g. the wearing of personal protective clothing such as hardhats, safety boots, safety glasses etc.)
- Observe all instruction and warning signs.

- Only operate the hoist wearing close-fitting clothing, safety boots and a hardhat. Do not wear jewelry, such as chains or rings. There is the risk of injury due to getting caught or pulled in.



- If injuries or accidents occur, seek medical attention immediately.

Consequences of non-compliance with the safety instructions

Non-compliance with safety instructions can result in danger to people, the environment and to the hoist.

Requirements for operating personnel

See Chap. 10.1, Operation

4.3 Operational safety

- The hoist must be assembled and dismantled in accordance with these assembly instructions under the direction of a competent person appointed by the employer.
- Erect the hoist so that it stands firmly and secure in the ground with ground spikes.
- Comply with the load capacity of the hoist: it is determined by the length of the hoist, the angle of inclination of the ladder and whether or not the ladder prop is being used. (Refer to the scale of inclination as well as the table of loads on the ladder prop).
- Only use the hoist in technically perfect condition, with awareness of safety and dangers, in compliance with the operating instructions.
- Faults which may compromise operational safety should be removed immediately.
- In the event of any changes in the hoist or its operating behavior that compromise safety, stop the hoist immediately and report the fault to the management or the management representative.
- Do not undertake any changes, additions or modifications to the hoist. This also applies for the installation and adjustment of safety devices, such as, for example, limit switches.
- Do not change, remove, avoid or bypass the protection systems.
- Replace damaged or removed instruction and warning signs as well as any safety markings.
- If operation is interrupted, switch off the hoist at the main switch and use the padlock to protect against restarting.
- Do not operate the hoist if people could be endangered by the load-carrying device or by the load. Close off the area immediately surrounding the hoist and put up warning signs.

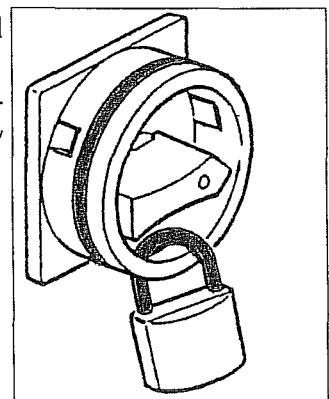


Fig. 01 Main switch

- In situations that are dangerous to the operating personnel or to the hoist, the hoist can be stopped by pressing the EMERGENCY STOP button of the control pendant(1).

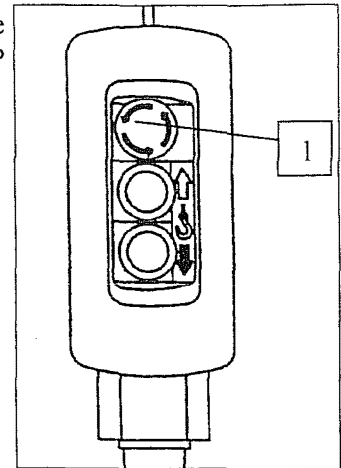


Fig. 02 EMERGENCY STOP button

- In the event of wind speeds exceeding 45 MPH, stop and lower the hoist. (This wind speed typically breaks branches off trees and makes walking very difficult).

4.3.1 Inspection

Regular inspections:

- Have the hoist inspected by an expert in accordance with the conditions of use, as required, but at least once a year.
- Record the results of the annual expert inspection in the appendix.

The following groups of people are examples of those considered competent to carry out the annual inspection:

- Properly trained operating engineers,
- Properly trained machinists,
- Specially trained technical personnel,
- CHAMPION ELEVATORS trained service technicians.

Experts are people who, due to their specialized training and experience, have sufficient knowledge in the field of this equipment and are so familiar with the relevant governmental health and safety standards, accident prevention regulations, guidelines and generally acknowledged technical standards, that they are able to assess the safe operating condition of building hoists.

4.3.2 Safety instructions for assembly, operation and transport

- Before beginning work, familiarize yourself with the working environment at the place of installation, e.g. obstacles in the working and transportation areas, the bearing capacity of the ground and the necessary protection of the building site from the public area.
- Only load and transport the hoist when it has been carefully dismantled, packed and secured.
- Always protect the hoist against unauthorized use (disconnect power)!
- Always center the load on the platform, and observe the maximum load capacity.
- Check for visible damages and faults at least once each day or once each shift. Report any detected changes or faults to the management or a management representative immediately. If necessary, stop the hoist at once and take precautionary action.

- Loads must be placed securely on the load platform, and materials that tend to slip, that are higher than the load platform, or that could fall over, must be secured (also restrain loads from winds that may suddenly spring up).
- Do not stand or work beneath the load platform!
- Do not put any objects beneath the load platform.

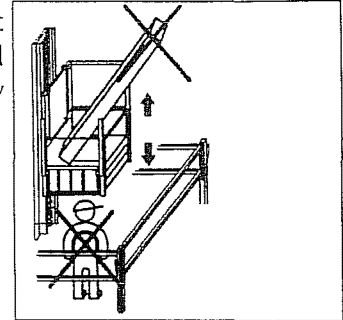


Fig. 03 Safety hint

4.3.3 Safety instructions for maintenance

- Disconnect main power supply plug before carrying out any maintenance work.
- Only allow authorized experts to carry out maintenance and repair work. The particular dangers involved in working on electrical systems, for example, must also be noted during such tasks.
- Secure the load-carrying device and the load.
- Upon completion of maintenance tasks, correctly replace all protective devices that have been removed.
- Unauthorized modifications or changes to the hoist impair safety and are not permitted.
- Spare parts must meet the manufacturer's technical requirements.
- Use only genuine GEDA spare parts.

4.4 The idea behind job safety instructions

Job safety instructions are rules provided by the employer for safe operation. These are binding instructions, which the employer issues within the scope of the management role. The employees are required by the accident prevention regulations to follow these instructions. The employer is required to create, provide and enforce good job safety instructions. The employer must meet certain requirements concerning accident prevention and give instruction to employees on the potential dangers involved in their line of work, as well as the measures required to prevent accidents or injuries. The employer can fulfill these requirements by providing operating instructions and enforcing the use of these instructions.

The operating instructions provided herein should therefore be used in conjunction with a properly developed safety plan as well as all governmental regulations for accident prevention and environmental protection.

Employees must be instructed in:

- The dangers arising from working with the load-carrying devices and the required safety procedures.
- Basic first aid.
- Type and scope of regular inspections for safe working conditions.
- Maintenance.
- Removal of operational faults.
- Environmental protection.
- Safe handling of the electrical equipment.

- The company using the hoist must ensure cleanliness and tidiness, by means of instructions and inspections, at the site where the hoist is erected.
- The areas of responsibility for assembly, dismantling, operation and maintenance must be clearly set out by the user company and observed by all employees, so that no areas of competence concerning safety are unclear.
- The operator must only operate the hoist when no hazards or damages are present. The operator is required to immediately report to his superior any changes to the hoist that concern safety.
- Observe all instruction and warning signs.
- The operator must also ensure that no unauthorized persons use the hoist or enter the area near the hoist during operation.

5 Technical data

- Weight of the base unit: 205 lbs
- Length of the base unit (extension option): 3'6"
- Lifting speed: 80 ft/min.
- Trigger speed of the overspeed safety device: approx. 100 ft/min.
- Drive torque: 772 lbs
- Length of a ladder section: 3'3"/ 6'6"
- Weight of a ladder section (6'6"): 50 LBS
- Noise emission values (the measuring uncertainty constant is 4 dB (A)) $L_{PA} < 85$ dB (A)

Vertical assembly

- Load capacity: 450 LBS
- Max. erection height: 100'
- Max. projecting ladder length during assembly: 11'
- Max. projecting ladder length in operation: 6'6"
- Anchoring distance: 13'
- Anchoring forces: see 8.4
- Dynamic pressure:
during assembly $q = 100$ N/m² (= 30 mph)
operational $q = 250$ N/m² (= 45 mph)

Inclined assembly

- Load capacity: 550 lbs
- Max. erection height (up to eaves): 62'

6 Description

The GEDA LADDER LIFT LL-450-550 can be operated both vertically and inclined.

- As a vertical hoist, it can be erected to a height of 100'.
- As an inclined hoist, it can be erected up to a mast length of 62' to the roof eaves. When supported on the roof, the hoist can be extended up to max. 100'.
- Lifting speed, maximum 80 ft/min.
- Assembly is carried out directly on the building site and without tools.
- The lightweight, quick-connecting aluminum rails are fitted into each other and bolted at the top rung with the ladder lock.
- The hoist switches off automatically when the trolley arrives at the top or bottom, or if the access ramp is opened, the assembly guard is lowered or the safety device has triggered.
- The hoist is operated with the plug-in control pendant.
- Various load-carrying devices (see page 2)

6.1 Components and operating elements

- 1 Main switch
- 2 Socket 5 x 16A for control pendant
- 3 Trolley
- 4 Plug-in control pendant
- 5 Main power supply with plug

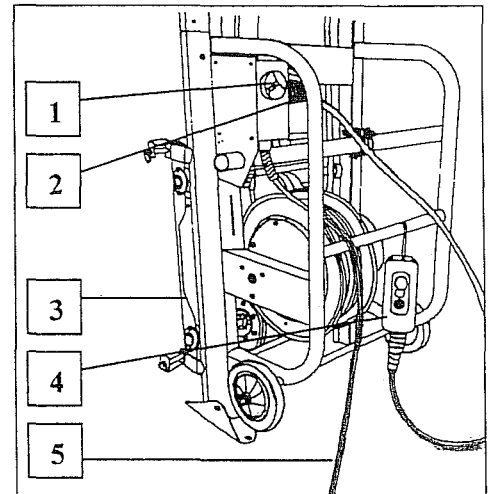


Fig. 04 Components

- 1 EMERGENCY STOP button
- 2 UP button
- 3 DOWN button
- 4 Control section
- 5 Plug, 5-pin.
- 6 Suspension clamp

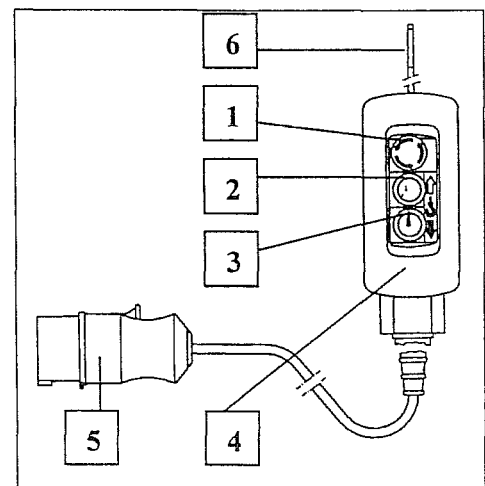


Fig. 05 Plug-in control pendant

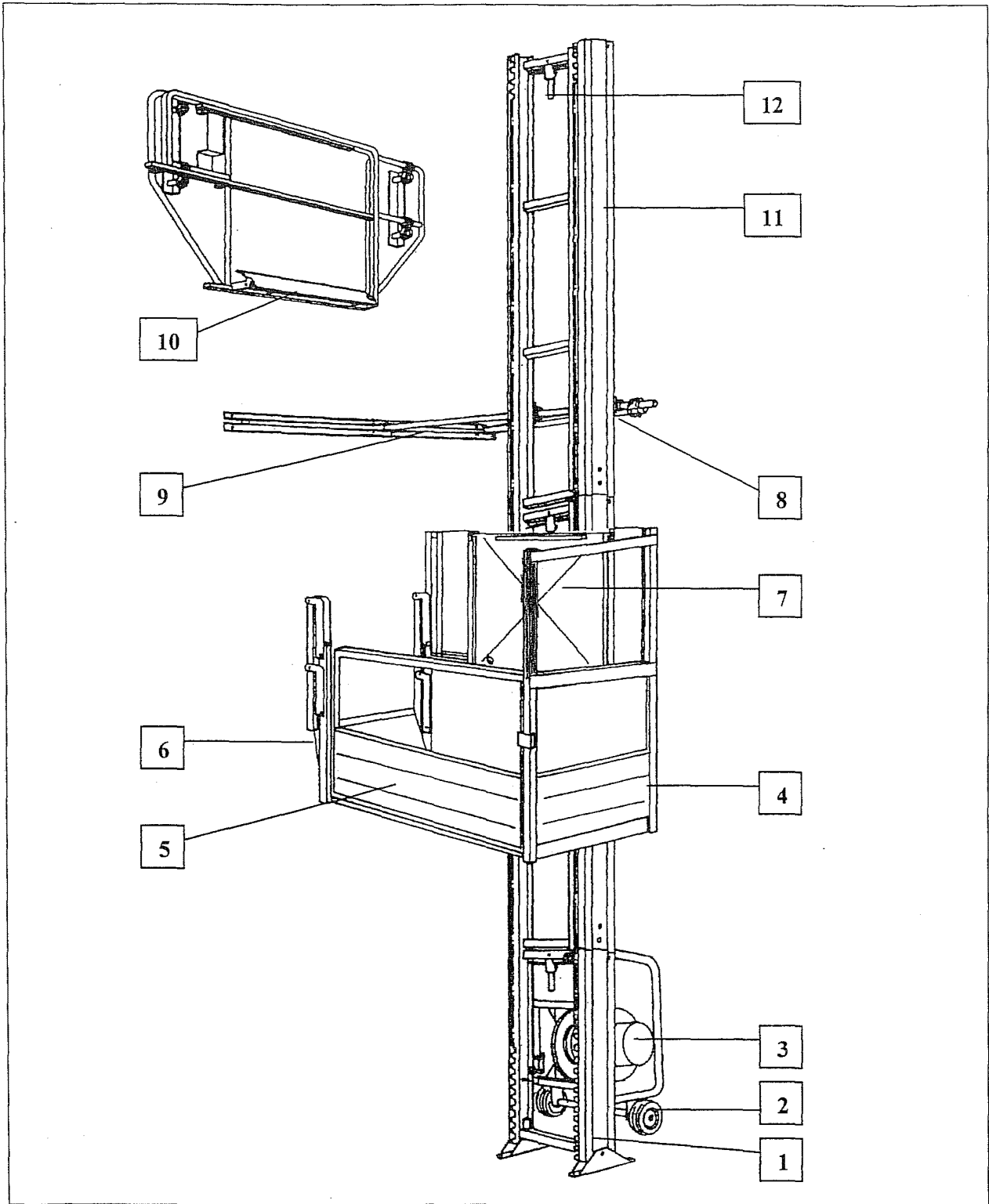


Fig. 06 LADDER LIFT LL-450-550, vertical

- | | | |
|---------------------|------------------|------------------------------|
| 1 Base section | 5 Gate | 9 Wall tie |
| 2 Transport axle | 6 Access ramp | 10 Landing level safety gate |
| 3 Spring cable reel | 7 Assembly guard | 11 Ladder section |
| 4 Load platform | 8 Rail tie | 12 Ladder lock |

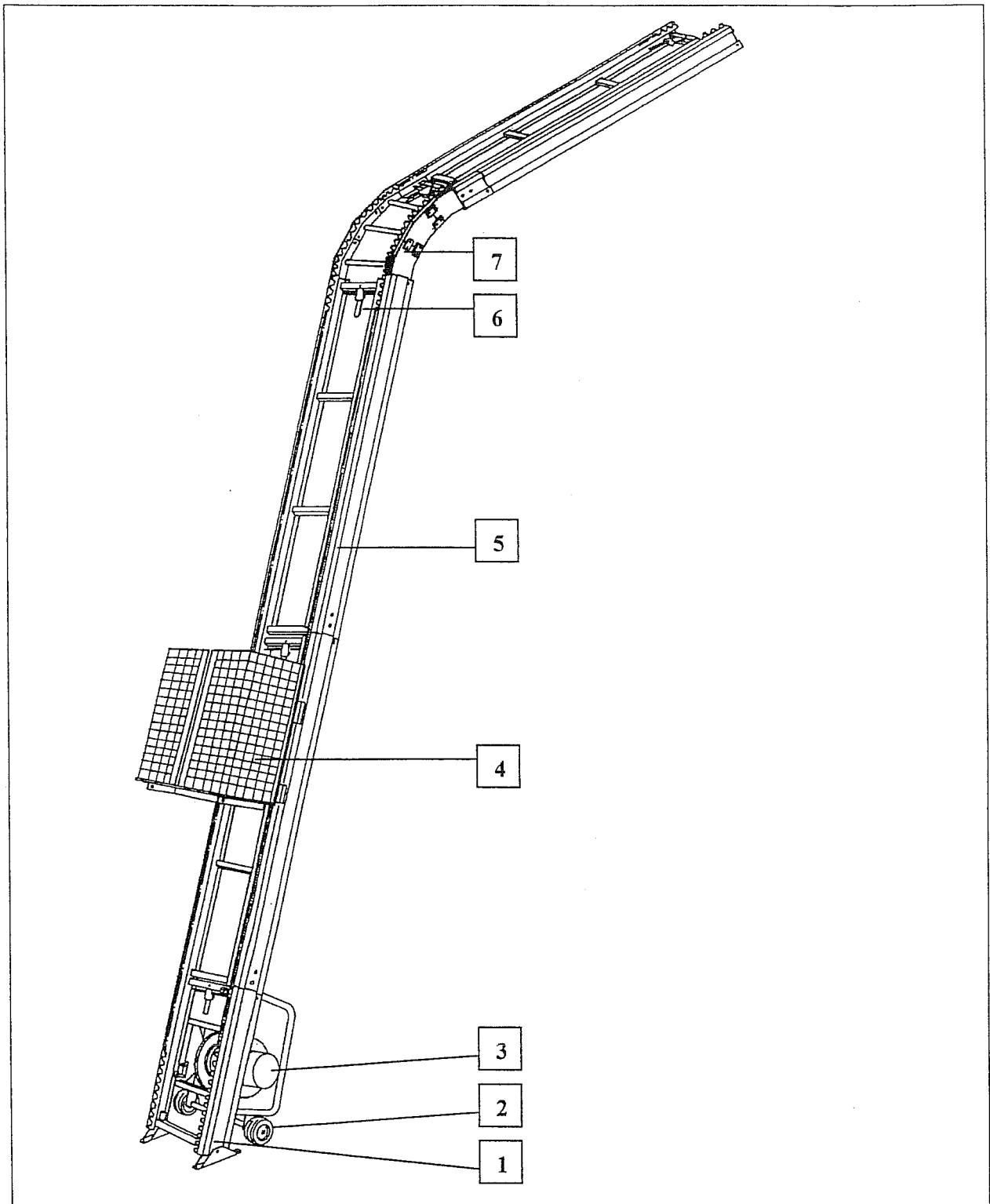


Fig. 07 LADDER LIFT LL-450-550, inclined

- | | |
|------------------------|-----------------------|
| 1 Base section | 5 Ladder section |
| 2 Transport axle | 6 Ladder lock |
| 3 Spring cable reel | 7 Angle track section |
| 4 Load-carrying device | |

7 Requirements for the place of erection

Ground conditions

- Horizontal, load-bearing ground.
- If this is not available, use load-distributing support.

Electrical connection (on site)

- A building site power supply is required on site with a safety switch with 230 V 60 Hz and 16 A slow-blow fuse.
- For the main power supply line, use max. 150' insulated flexible cable, rated "SO" or better, and lead it directly to the building site power supply to avoid voltage drop and consequent loss of power of the motor.

NOTE

If the power supply is insufficient, disconnect other current consuming devices from power supply.

- Connect the control pendant to the plug on the base section and the main plug to the on-site power supply. - The hoist is ready for operation again.

8 Transport

- Check whether the equipment has suffered damages during transportation and that it complies fully with your order.
- Should damages occur during transport, the hauler and the dealer should be notified at once!
- The hoist can be dismantled into component form for convenient transport around the building site.
 - Heaviest component = 205 lbs
 - Longest section = 7'3"

9 Assembly



The hoist must be assembled in accordance with the assembly and operating manual, under the direction of a competent person appointed by the employer! This competent person must be familiar with the assembly and operating instructions, possess adequate experience and be aware of the dangers involved in handling the hoist.

9.1 General safety instructions

- Prior to each assembly, check that all parts of the hoist, such as, for example, ladder sections with racks, electric cables and control are in perfect condition. If any of the components have been damaged, do not operate the hoist! – Replace damaged parts immediately.

- Familiarize yourself with the working environment at the place of erection, e.g. obstacles in the working and transportation areas, the bearing capacity of the ground and the protection of the building site with fences to render the area safe for public access.
- Close off the hazard area of the hoist and mark off the area with a warning sign.
- No one must stand beneath the hoist or near the base during operation.
- Comply with all federal, state and local accident prevention regulations of the health and safety authorities, and all valid laws and guidelines.
- Always wear protective clothing (e.g. hardhat, safety boots).

9.1.1 Special safety instructions for inclined use

- Block off the danger area of the hoist.
- Do not exceed the maximum hoist assembly length of 62' between ground level and eaves height! – When supported on the roof, the hoist can be extended to a ladder length of up to 100'.
- Comply with the load capacity of the hoist: it is determined by the length of the hoist, the angle of inclination of the ladder and whether or not the ladder prop is being used. Refer to the scale of inclination as well as the table of loads on the ladder prop.
- Transport of persons is strictly forbidden.

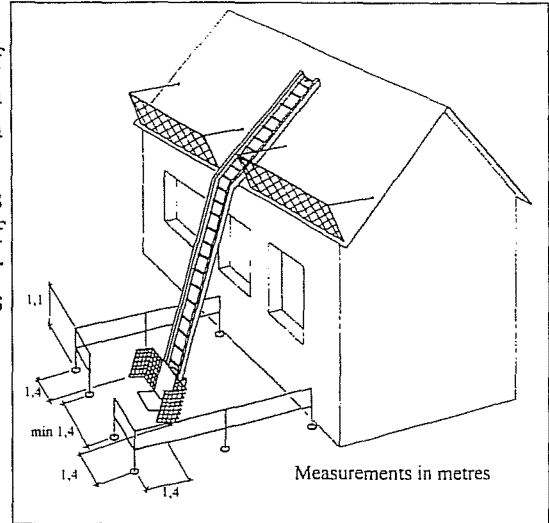


Fig. 08 Base enclosure for inclined use

9.1.2 Special safety instructions for vertical use

- For vertical hoists, the enclosure (1) must be at least 1'6" distant from moving parts.
- An enclosure does not need to be provided only if the hoist is being used as a scaffold erection hoist.
- The transportation of people is forbidden, except for assembly and maintenance tasks.
- Vertical erection is only permissible up to a maximum wind speed of 30 mph.

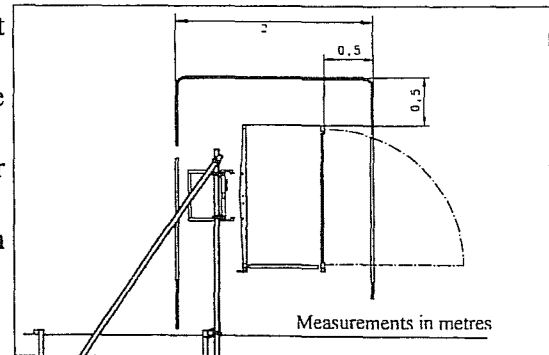


Fig. 9 Base enclosure for vertical use

- At loading points above 6' in height, safety gates or other fall prevention systems must be used.
- During assembly, the projecting ladder sections may be extended to a maximum of 11' beyond the last anchoring point! (Upper edge of trolley to rail tie)
- Make sure that the structure can take the anchoring forces. A competent expert must check the structure to ensure that it is suitable for such anchoring forces. This will also dictate the type of anchoring required.

9.2 Vertical assembly

The hoist can be assembled very simply from the load platform. However, the following points should be noted:

- The wind speed during assembly must not exceed 30 mph
- The load platform is also provided for assembly. The assembly guard in front of the ladder sections can be lowered (the control is then interrupted).
- Use the safety guard at the front (clamp above the ramp).

ATTENTION

The base unit must be aligned vertically from the start using a spirit level. This must also be checked when each rail tie is fitted (anchoring point).

- Erect and align base unit.
- Fix to building/scaffolding using hole in plate and fixing clamp.
- Position first anchoring at approx. 6'6" high (beneath the flooring deck in case of a scaffold).
- Starting from the ground, position the first 6'6" ladder section onto the base section;
- from the rack side, insert the ladder section at an angle into the base ladder section, position it vertically and then push together.

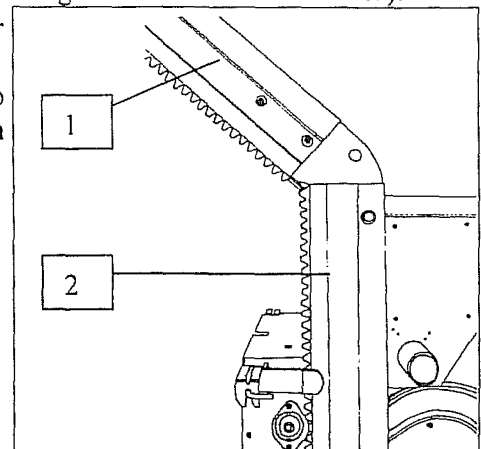


Fig. 10 Assembling the ladder sections

- Push the safety catch (2) up with your thumb and keep it pressed, then push the locking lever (1) counter-clockwise, until it is in a vertical position. Release the safety catch (2) and the locking lever (1). Both ladder sections are now locked.

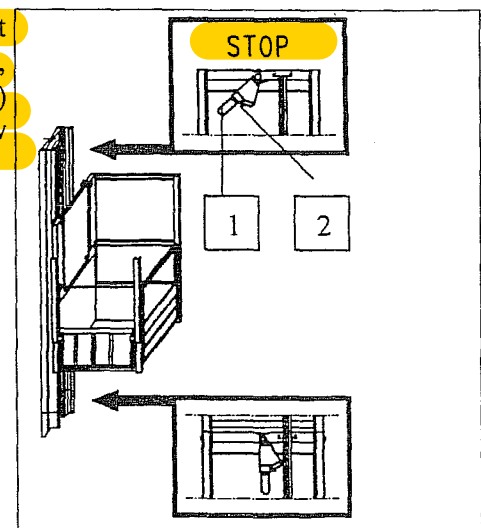


Fig. 11 Locking lever



The closing pins must protrude beyond the ladder spar on the narrow side of the ladder and be easily visible.

- Locate the base unit and ladder section vertically on the anchoring tubes and screw together (establish the distance to the wall or scaffold – see fig. 19 -, and align vertically).
- The base section must be secured against displacement with ground anchors (4). Drive in the ground anchors (4) at an angle from the rack and pinion side of the ladder.

ATTENTION

If the ground is too hard and securing with ground anchors is not possible, the first anchoring point must be positioned at the point provided on the base unit (1). A rail tie (2), a fixing tube (1) and a bracing tube (3) will be required for this fixing point.

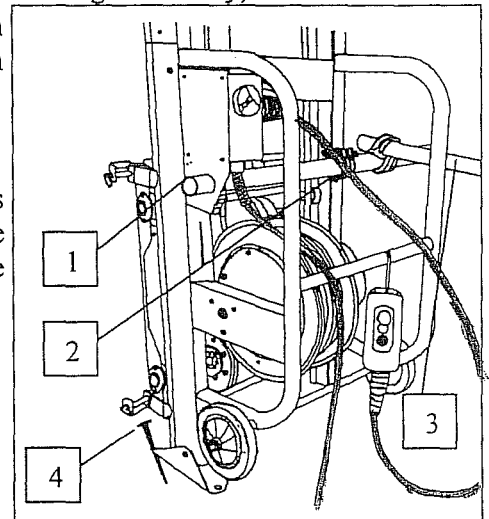


Fig. 12 Anchoring to the base unit

Mounting the load platform

- The trolley must now be moved upwards until the arrow marking (1) on the side of the trolley is level or higher than the top (2) of the 3'3" base section.

ATTENTION

If the trolley is too low, the down limit switch may be damaged when the platform is mounted!

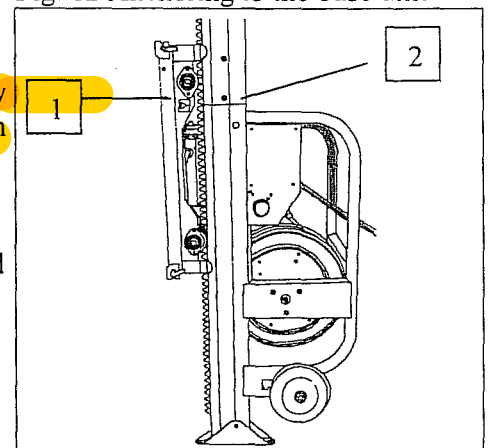


Fig. 13 Positioning the trolley for mounting the platform

- Open the four spring catches (1) on the trolley and lock in place.
- Tilt the load platform (2) up towards the trolley and fit into the top mountings (3) of the trolley, using the two welded hooks. Carefully lower the load platform and allow the lifting guard to engage at the bottom of the ladder section.
- Fasten all four spring catches to the trolley.

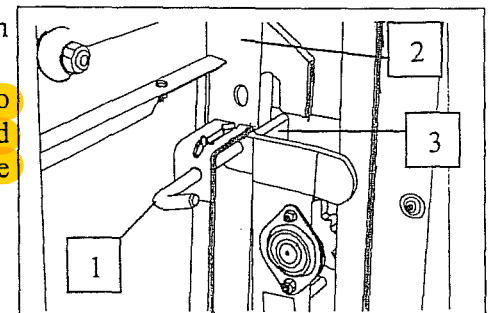


Fig. 14 Fitting the load platform

- The load platform is now mounted and can be used to continue assembly.

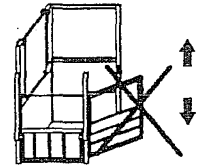


The hoist must only be operated when all four spring catches are fastened! In addition, before moving, a test must be performed to ensure that if either the ramp is open or the assembly guard lowered, the control is interrupted!!



Never operate the hoist with the swing-gate open.

Never lean out of the load platform when moving.



- Extend the control pendant with an extension cable.
- The installation technician ascends in the platform; operation occurs by means of the control pendant.
- Press the UP button on the control pendant and hold until the upper guide bracket of the trolley is approx. 6" away from the end of the ladder.

ATTENTION

The upper locking lever of the ladder must always be open. It serves as over-run protection for the ladder section.

- Lower the assembly guard (raise a little and then lower past the guides).
- Position the next 6'6" ladder section manually (as already described).
- Reach around the ladder section and lock from behind.
- Push the assembly guard upwards and secure.
- Continue up until approx. the center of the ladder section.
- **The next ladder tie must be attached at a max. height of 13' (or 6'6" above the last anchor).**
- Press the UP button until approx. 8" before the end of the track, in order to mount the next ladder section.
- **The other mast anchors are positioned at max. 13' intervals (see erection plan).**
- **The projecting ladder section may be extended a maximum of 11' beyond the last anchoring during assembly (measured from upper edge of trolley to uppermost anchoring positioned below it).**



During assembly, the upper edge of the trolley may only be raised to 11' beyond the last ladder tie, and in operation only 6'6".

- The hoist is assembled in this sequence up to a max. height of 100'.



All locking levers must be closed (be locked vertically downwards), except for the top one (last), which must remain open. It is used during operation as over-run protection (striker plate) for the end of the ladder!

During operation, the end of the ladder may only be extended to a maximum of 6'6" beyond the top anchoring point. There are two ways of ensuring this:

1. The top lock is open and is located at a height of max. 6'6" above the last anchor.
2. A limit switch bracket (art. No. 2364) is fitted into the ladder section with the two clamps and screwed tight. The operating plate can be moved horizontally and must always be pushed fully to the left, as seen from the load platform. To enable a ladder joint to be bridged continuously, the limit switch plate can be rotated by 180°.

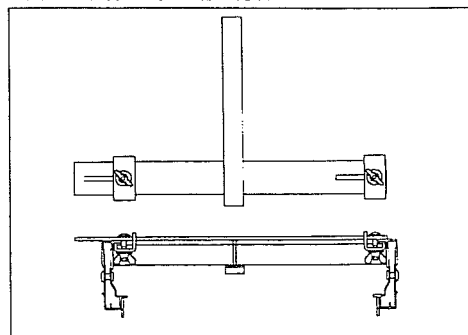


Fig. 15 Limit switch element

ATTENTION

After mounting the limit switch bracket, a test must be performed to ensure that the hoist stops at the limit switch.

9.2.1 Anchoring in front of a scaffold

When the hoist is erected in front of a scaffold, it must be anchored to the building.

- Dowel the fixing tube (2) to the wall or anchor with through-bolts and screw onto the ladder section using the rail ties.
- Determine the distance (A) of the bracing tube (1) with the formula $A=B$ (at 8' 2" scaffold field width) and $A \geq B \times 1.2$ (from 3 m scaffold section width), anchor to the wall and screw to the fixing tube (2) with a scaffold coupling behind the ladder track.

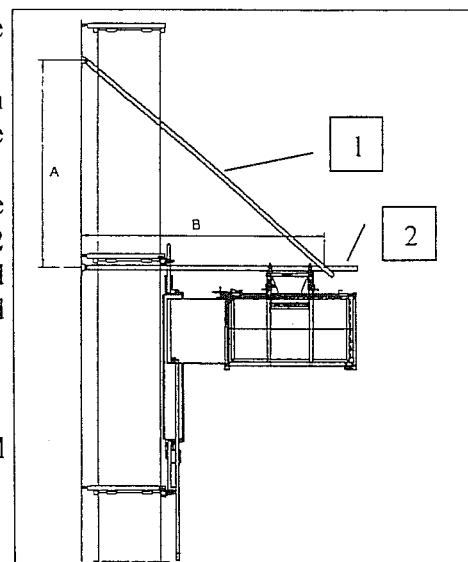


Fig. 16 Erecting in front of a scaffold

NOTE

Anchoring can also be directly to the scaffold, if the additional load can be accommodated (see anchoring forces and Fig. 21).

9.2.2 Anchoring in front of a wall

- One set of rail ties (5) and one wall tie (1) are required per anchoring.
- The wall tie (1) is doweled or anchored to the wall with through-bolts.
- Mount the fixing tube (2) and the bracing tube (3) to the wall tie (1) with rigid (90°) scaffold couplings and join behind the ladder track.
- If the free fixing tube length exceeds 3'8" an additional bracing tube (4) must be fitted (see also Fig. 20). It must be ensured that sufficient distance remains between the cage corner and the bracing tube (4).

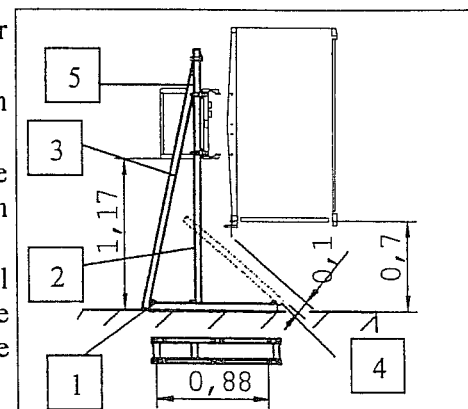


Fig. 17 Wall tie

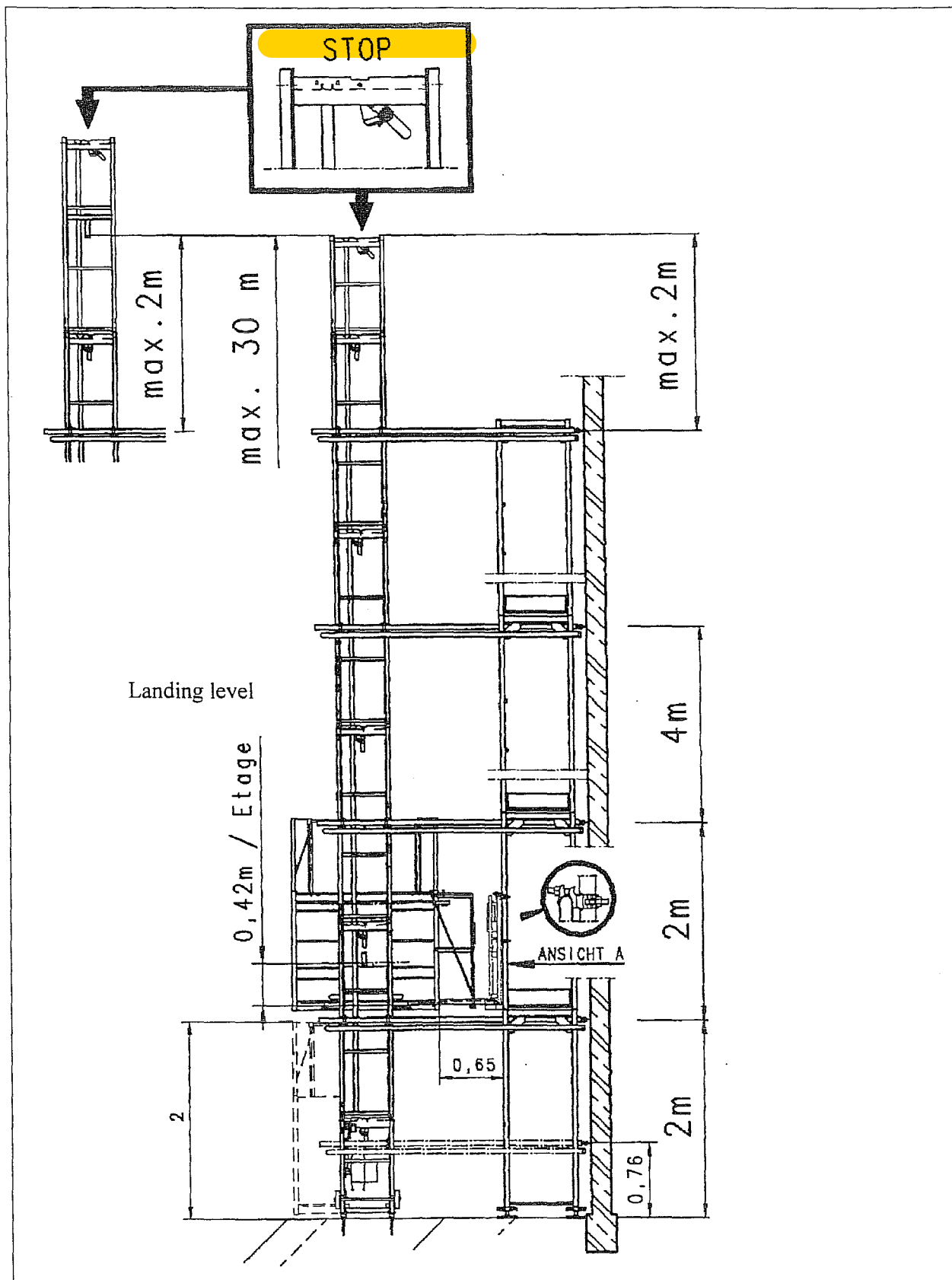


Fig. 18 Erection plan

9.2.3 Anchoring forces:

The anchoring forces apply for most wind regions. More extreme situations may require additional anchoring.

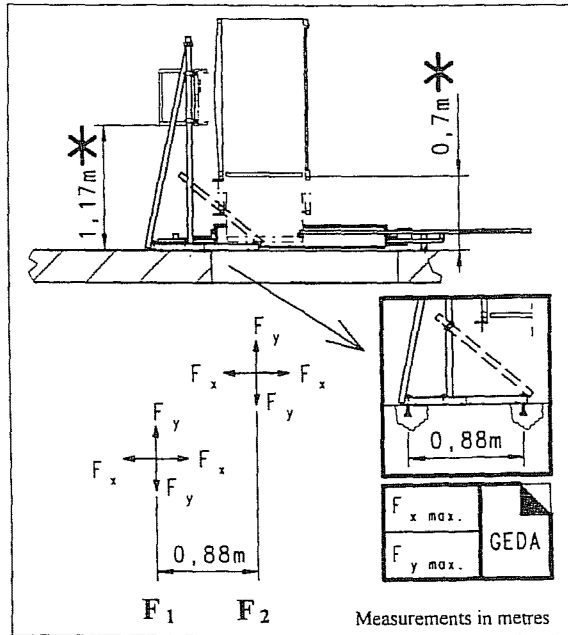


Fig. 19 Anchoring to the wall

NOTE

The dimensions marked with * are decreased by 6", if no landing level safety gate is used.

The anchoring forces can be taken from the table below. If the ladder track ends at the uppermost anchor, then the values of the two right hand columns (other anchors) also apply for the top anchor.

Anchoring to a wall using a wall tie

The values in the table apply for each anchoring point

Anchoring forces (lbs-force) at max. mast projection.							
Top anchor				Other anchors *			
F_{x1}	F_{y1}	F_{x2}	F_{y2}	F_{x1}	F_{y1}	F_{x2}	F_{y2}
- 612	665	- 612	790	425	- 450	425	450

* In the case of operation without self-supporting ladder end, also valid for the top anchor

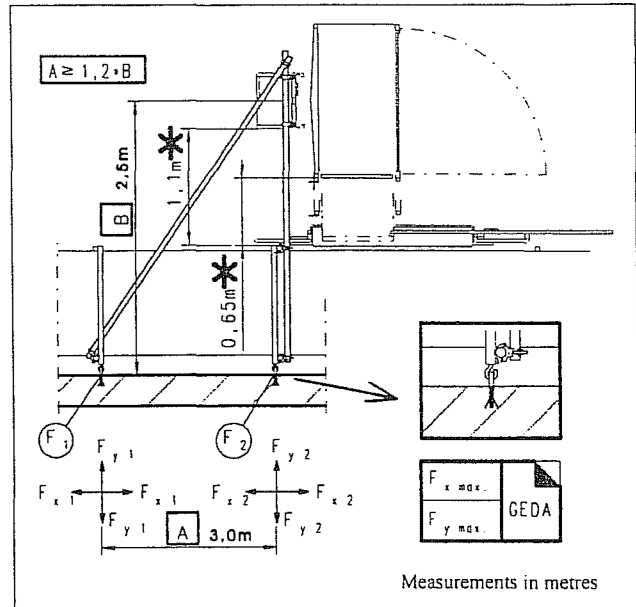
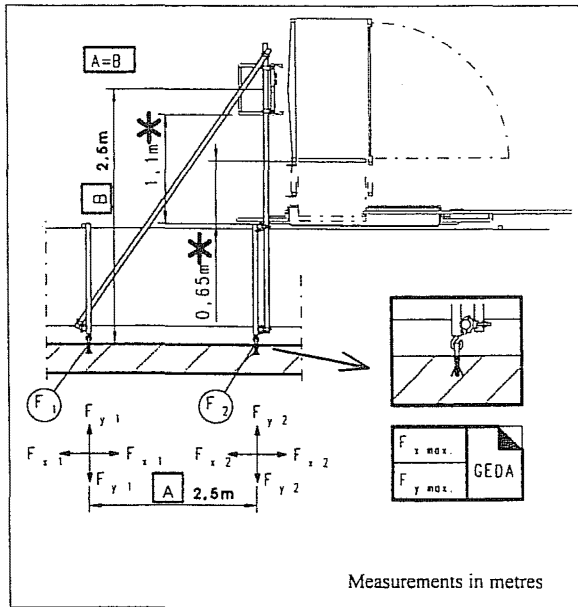


Fig. 20 Anchoring to the scaffold

NOTE

The dimensions marked with * are decreased by 6", if no landing level safety gate is mounted.

Anchoring to the scaffold with 8" wide sections

A = B

The values in the table apply for each anchoring point

Anchoring forces (lbs-force) at max. ladder projection.							
Top anchor				Other anchors *			
F_{x1}	F_{y1}	F_{x2}	F_{y2}	F_{x1}	F_{y1}	F_{x2}	F_{y2}
- 306	333	- 358	- 452	248	- 270	214	320

* In the case of operation without self-supporting ladder end, also valid for the top anchor

Anchoring to the scaffold with 10' wide sections

A ≥ 1.2 x B

The values in the table apply for each anchoring point

Anchoring forces (lbs-force) at max. ladder projection.							
Top anchor				Other anchors *			
F_{x1}	F_{y1}	F_{x2}	F_{y2}	F_{x1}	F_{y1}	F_{x2}	F_{y2}
- 306	279	- 358	- 401	248	- 225	214	320

* In the case of operation without self-supporting ladder end, also valid for the top anchor

9.2.4 Protection of loading and unloading points

(when used as a building hoist)

Safety devices must be fitted at **all** loading and unloading points where there is the danger of falling from more than 6' in height. Only GEDA landing level safety gates may be fitted. These safety devices are checked and, in conjunction with the hoist load ramp, provide safe transition.

9.3 Securing the landing level safety gate to the scaffold

The landing level safety gate is externally fixed to two vertical scaffold posts and screwed down with scaffold couplings. If the scaffold posts are further away additional tubes are required for fixing.

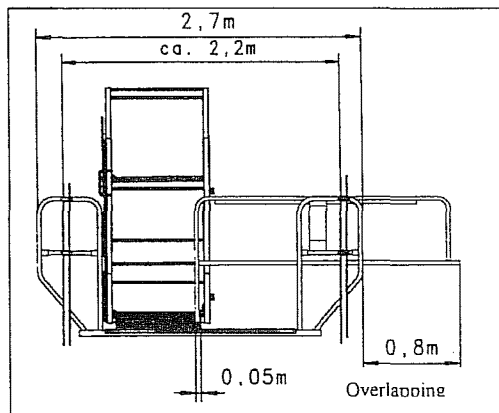


Fig. 21 Landing level safety gate



Before the landing level safety gates are fitted, you must ensure that the load capacity of the scaffold will not be exceeded. If necessary, additional vertical tubes must be inserted, in order to disperse the vertical load.

- The landing level safety gate is mounted to the scaffold with complete three-part side protection; these three sections (rail, intermediate spar and deck board) are only removed when assembly has been completed. All modifications to the scaffold must be discussed with the scaffold builder.
- Secure the landing level safety gate with the gate closed and locked, using two sufficiently strong lashing straps, horizontally to the gate frame of the load platform (sliding door facing the platform).
- Ascend with the hoist to the specified erection height.

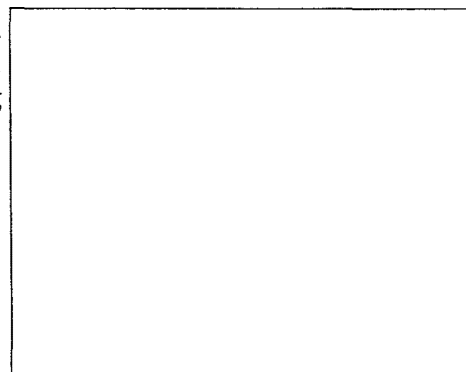


Fig. 22 Transporting the landing level safety gate



The landing level safety gate must not protrude beyond the platform on the ladder side! There is an increased risk of collision with the anchor tubes! Particular care is required during travel to prevent the gate from interlocking with the scaffold, with gates that have already been fitted or with other projecting parts!

- The second installation engineer is on the scaffold and must first fit 2 scaffold couplings (approx. 3'7" m above the scaffold board on the outside of the scaffold frame, unfold the 1" clamps downwards).
- The installation engineer on the scaffold pulls one side of the landing level safety gate towards him and fastens it into one of the already fitted, open scaffold clamps. At the same time the engineer on the load platform loosens a lashing strap as far as necessary.
- The second side of the landing level safety gate is offered up in exactly the same way.

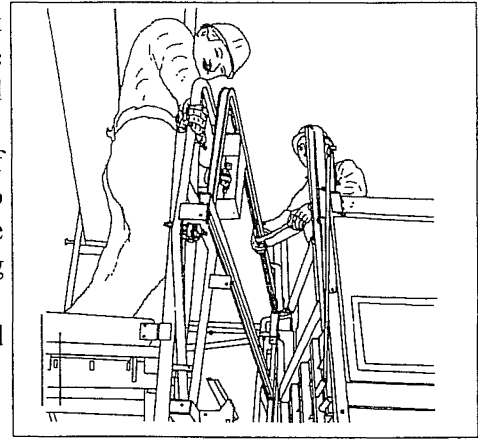


Fig. 23 Mounting the landing level safety gate

- Do not remove the lashing straps until the gate is secured.
- Align the threshold of the landing level safety gate with the level of the scaffold board. The gate must be moved horizontally until the vertical gap – viewed from the scaffold - between the left vertical spur of the gate and the spur of the side guard rail of the opened exit/entrance ramp is no more than 2".
- Position the remaining scaffold couplings, so that the landing level safety gate is bolted at 4 points (see Fig. 23).
- Remove scaffold rails in the area of the landing level safety gate.
- Re-mount the deck board along the length of the fixed section of the landing level safety gate.
- The opening width of the landing level gate must be set at the stop (1) on the lower runner rail. It must only be possible to open the gate far enough so that the side-piece of the left gate remains located above the loading flap

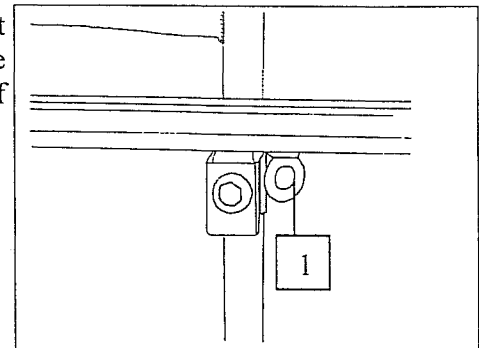


Fig. 24 Opening width of landing level gate



Open the platform loading flap and check that the loading flap has sufficient overlap to the threshold of the landing level gate (min. 2.5").

9.4 Inclined assembly

- Position the base unit (1) on the hoop guard (ladder section pointing upwards).
- Insert the ladder section (2) (with the rack at the top) at an angle into the rails of the base unit, tilt horizontally and push together.

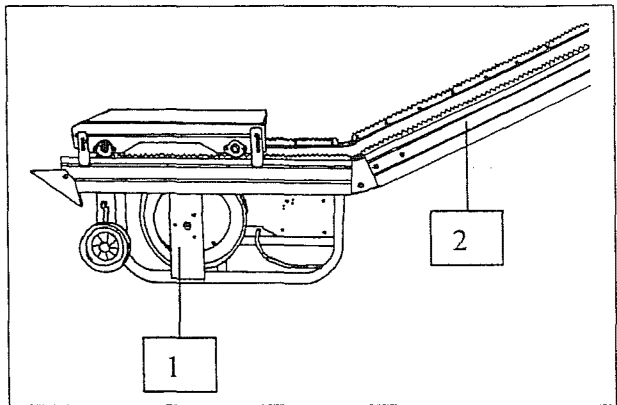


Fig. 25 Assembling ladder sections for inclined assembly

- Press the safety catch forward with your thumb and keep pressed down, then push the locking lever anti-clockwise (from above), until it is located parallel to the rail track (see Fig 13).
- Release the safety catch and the locking lever. The two ladder sections are now locked.



The locking pins must protrude at the narrow edge of the ladder above the ladder spur and be easily visible.

- The hoist is assembled in this logical manner up to a max. height of 62'.
- Position the ladder track. – If necessary, place a rope around the last rung and pull up.
- Secure upper area of ladder, e.g. top section, against slipping (lash securely to scaffolding or building).
- Secure the base section and prop (at the base feet holes provided) to the ground with ground anchors.

ATTENTION

Erection of the ladder hoist should take place on hard and even ground. If this is not possible, use load-distributing bases.



All locking levers must be closed (be positioned vertically downwards), except for the top one (last), which must remain open. This is used during operation as the upper over-run protection.

9.4.1 Assembly with angle track section

- The ladder is assembled as described.
- The angle track section (1) is mounted and locked in at the top end.
- It is mounted and locked like a ladder section.
- The angle track section (1) is angled at 20° and can be extended in 10° steps with angle track extensions (2).

- 1 = Angle track section 20°
- 2 = Angle track extension 10°
- 3 = Butt plate

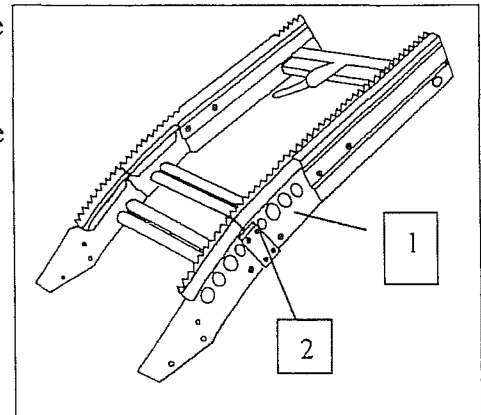


Fig. 26 Angle track section

Mounting the angle track extension

- Loosen the existing screw connection on the angle track section (1) and separate the angle track section.
- Connect the extension angle track sections (2) to the angle track section, as shown in Fig. 28.
- Insert two screws into the M8 threads of the butt plate (3). Mount the butt plate to the angle track section with two screws, as shown. Observe maximum torque (25 Nm).
- Use the same procedure on the opposite side.

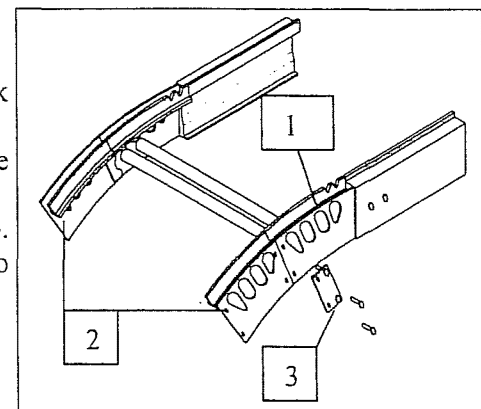


Fig. 27 Angle track extension

- Pull up ladder - if necessary, use a rope around the angle track section and pull it up.

ATTENTION

Maximum hoist length up to eaves = 62'. When supported on the roof, the hoist can be extended to a maximum of 100'. The angle track section must rest on at the eaves point.

- Position the required ladder sections on the angle track section and lock.

9.4.2 Using the ladder props

The GEDA-LADDER LIFT LL-450-550, when used as an inclined hoist, can be operated with or without ladder props. The respective load bearing capacity can be taken from the sticker on the base unit or from the following figure.

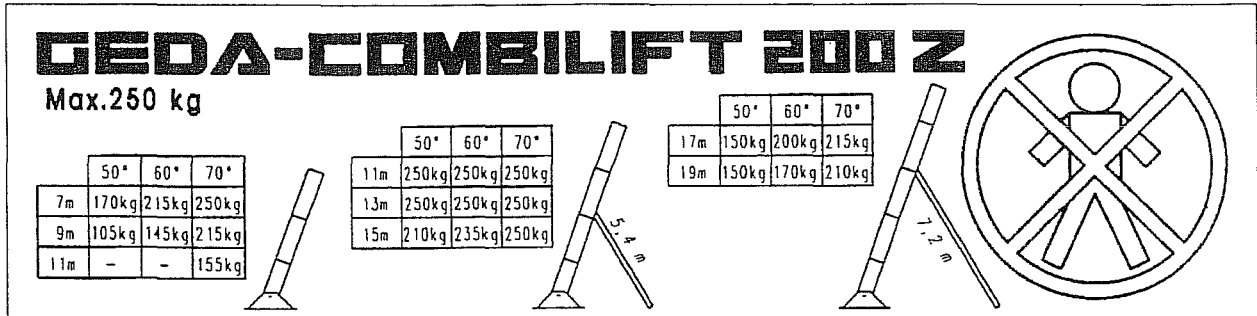


Fig. 28 Load table

- Establish the angle of inclination of the ladder track on the scale on the base section and read off the load bearing capacity in the load table. – Use 17' or 7.6'6" ladder props as required.
- This information is found within the base unit next to the main power box.

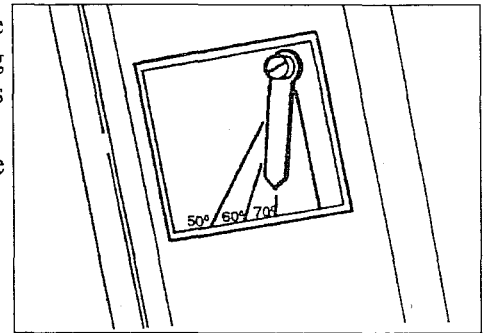


Fig. 29 Scale for the angle of inclination

- Assemble the ladder props while they are resting on the floor and secure (spring pin connector).

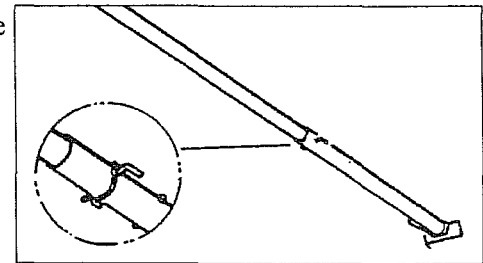


Fig. 30 Ladder prop

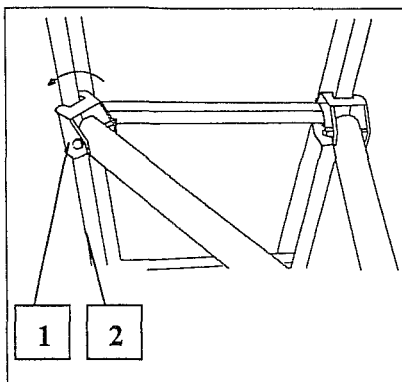


Fig. 31 Fitting the ladder props

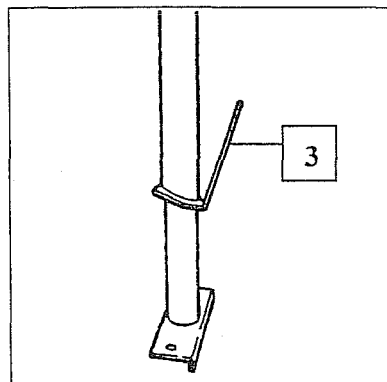


Fig. 32 Clamping lever

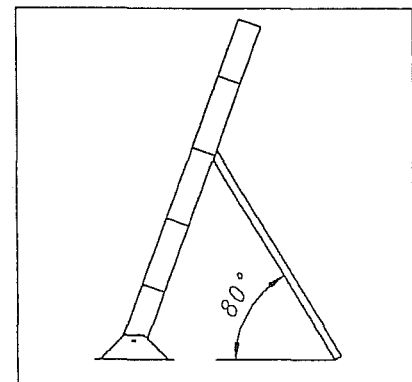


Fig. 33 Setting angle for the ladder props

- Position the ladder props (2 pieces side by side) in the center of the ladder, or, in the case of longer ladders, as high up as possible on a ladder rung, or directly beneath a ladder connection. – Locking is achieved by positioning the head piece (1) of the ladder prop on a rung and pushing it out to the ladder rail (2). The ladder prop is now turned towards the ladder rail (2), until the head piece engages. If the ladder props are mounted correctly, the props will be located approx. 8° out from the vertical line of the ladder track.
- Pull out the extendable tube by loosening the locking lever (3) and then adjust to desired length.



The ladder should not be allowed to be put under too much stress by the ladder prop. The natural deflexion of the ladder may only be reduced by up to roughly half by the ladder props. Ensure that the ladder prop is correctly inclined.

- Secure base track section and prop base section with ground spikes. Note the angle entered.

ATTENTION

The base unit and ladder props must be located on firm ground and secured.

- Clip on the desired load-carrying device to the carriage (see chapter 9.5, Mounting the load-carrying device).
- Carry out a test without a load.

9.4.3 Roof tie

The adjustable roof tie makes roof tiling possible underneath the ladder.

- Fit the adjustable roof tie adjacent to a convenient rung on the section of track resting on the roof. Secure in position with the spring locks.
- Set the height with both the external securing brackets.

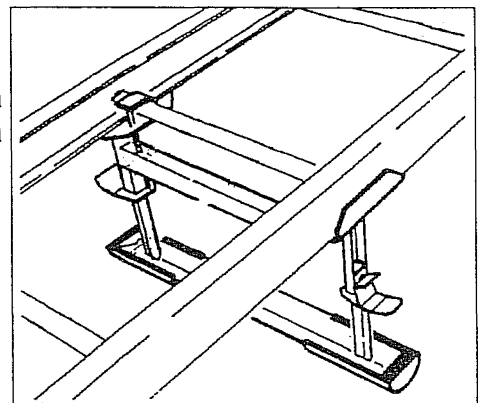


Fig. 34 Roof tie

9.5 Mounting the load-carrying device for inclined use

- All load-carrying devices are mounted to the trolley with the four spring catches.

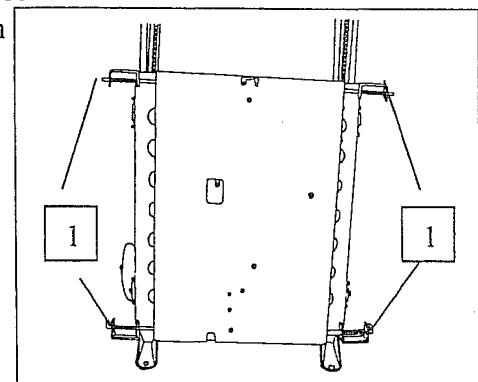


Fig. 35 Mounting to the trolley



Stepping onto the load-carrying device or using it to transport persons is strictly forbidden.

9.5.1 General purpose platform

NOTE

For packaging reasons, the hinged side safety panels are not fitted.

The general purpose platform has an outside width of 80 cm.

- Fit side safety panels (1).
- Fit the general purpose platform (3) into the closed lower spring catches and secure at the two upper open spring catches on the trolley.
- Secure the load with a rope at the four boreholes (2) provided on the carrier.

ATTENTION

With wider parts, the protective guard can be pulled in the direction of the arrow and swung outwards. – This is used only for securing, not as a loadable surface.

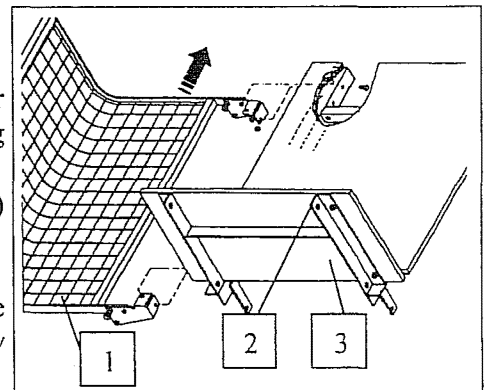


Fig. 36 General purpose platform

9.5.2 Bucket hanger (for general purpose platform)

The bucket hanger can be used only in connection with the general purpose platform. Transport of a maximum of three buckets is possible, over and beyond the angle track section as well.

- Position the bucket hanger (1) onto the general purpose platform (2) from above.

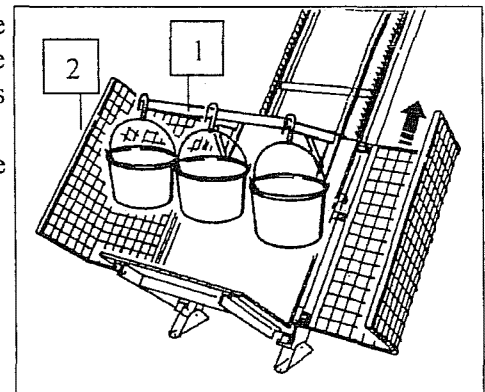


Fig. 37 Bucket hanger

9.5.3 Transport platform

With this platform you can transport loads positioned horizontally. (Platform inclination adjustable).

NOTE

For packing reasons the hinged safety panels are not fitted.

- Fit side safety panels (2) to both sides of platform.
- Secure the platform (1) with the two upper clips and the two lower telescopic tubes.
- To position the platform horizontally, adjust the telescopic tubes and secure with the lockpins and spring clips.

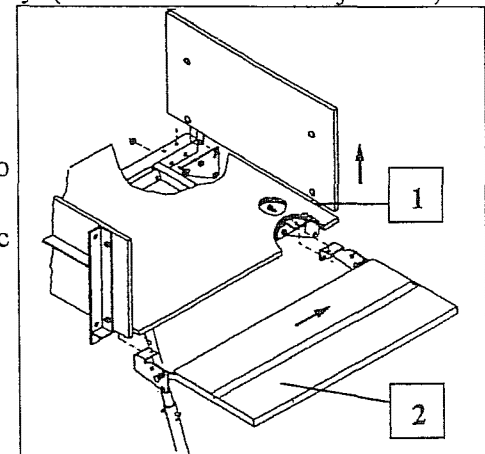


Fig. 38 Assembling the transport platform

- With wider parts, the side guard (2) can be pulled in the direction of the arrow and opened out horizontally.
- Carry out a test without a load

ATTENTION

On principle, the load should always be secured. – Consider the effect of sudden winds. Loads which protrude over the load-carrying device should be additionally secured!

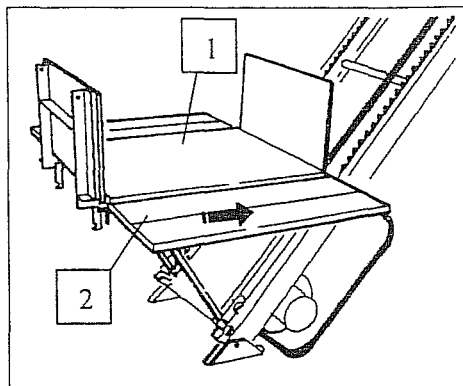


Fig. 39 Transport platform

9.5.4 Large Transport platform

- Secure the transport platform (1) to the trolley with the two upper clips and the two lower telescopic tubes (3).
- To position the platform (1) horizontally, adjust the telescopic tubes (3) and secure with the lockpins and spring clips.
- Fit the side walls (2) vertically and secure the upper spring locks (4).
- Where bulky parts are involved, the side walls are turned and fitted horizontally.
- Carry out a test without a load.

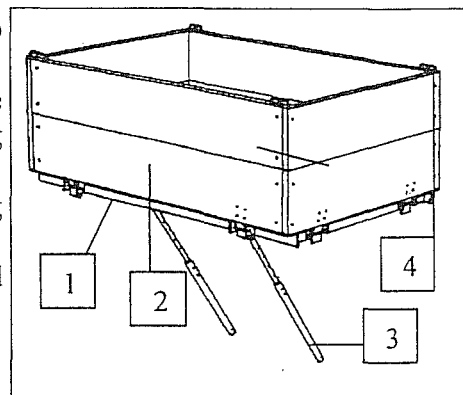


Fig. 40 Large transport platform

ATTENTION

On principle, the load should always be secured. – Consider the effect of sudden winds. Loads which protrude over the load-carrying device should be additionally secured!

9.5.5 Sheet carrier

Sheet carrier for transporting bulky parts (width of sheets 0.5 to 1.6 m).

- With the trolley raised a little, secure the sheet carrier (1) to the four spring catches on the trolley. The outside width of the sheet carrier can be adjusted from 0.5 m up to 1.10 m. – Be sure to widen the sheet carrier (1) equally on both sides!
- Secure the sheets with the securing clamps (2) before transport.

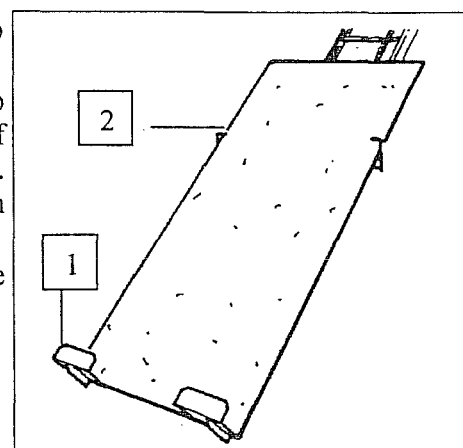


Fig. 41 Sheet carrier



When the sheet carrier is mounted, the hoist does not switch off the downward travel at the bottom. Release the DOWN button in plenty of time before the sheet carrier reaches the ground.

ATTENTION

A prop (3) is necessary for supporting the rail in cases where the sheet carrier is to be unloaded in a room.

- Insert the prop (3) after the angle track section in two rungs of the ladder and secure it with two turnable lock bolts.
- Adjust the telescopic support legs and secure.

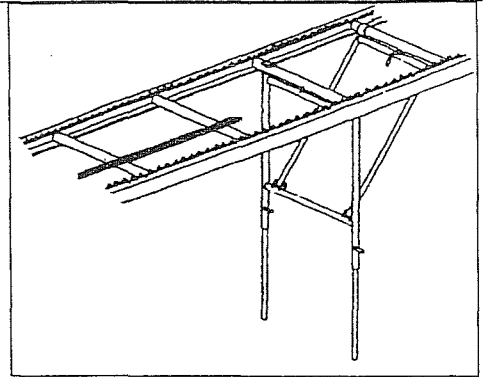


Fig. 42 Prop

9.5.6 Tile holder with cart

Tile holder with hinged guardrail, tile cart and two pallets for roof tiling.

- Secure the tile holder (1) at the two bottom pins of the trolley. – When tilted up, it will automatically latch into the two upper (closed) spring catches.

Loading

- Pull lever (2) and position carrier (1) vertically.
- Raise guard (3) (springs hold it open).
- Transfer loaded pallet with tile cart to the tile holder (1).
- Lower the guard (4) with the lever (3).
- Tilt the tile holder towards the trolley until it locks audibly.

Unloading

- For unloading, raise the guard (3), which is held open automatically.

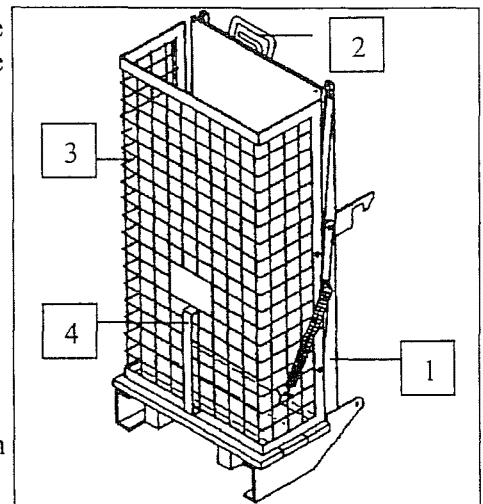


Fig. 43 Tile holder

10 Operation

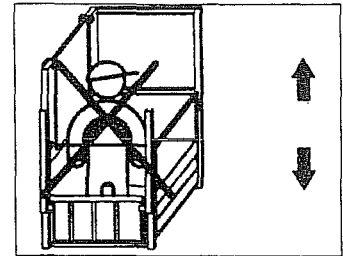


The operating personnel must supervise the load platform or the load-carrying device during travel.

10.1 Safety instructions for operation

This material hoist is designed to be used as a temporarily erected hoist system that is intended exclusively for transporting materials during construction activities.

Transport of persons is strictly forbidden!



- Operating personnel
 - Persons may be employed to independently operate the hoist, who:
 - are over 18 years of age,
 - are familiar with the operation of the hoist and
 - are appointed by the firm concerned.
- The hoist must be operated from outside the danger area.
- The operating personnel must always have a good view of the load platform.
- The load must be evenly distributed on the load platform.
- Do not wait or work below the load.
- Check for visible damages and faults at least once each day or once each shift. Report any detected changes or faults to the management or a management representative immediately. If necessary, stop the hoist and take precautionary action.
- On principle, the hoist must always be protected against unauthorized use! - Do not leave the operation section lying around after a job or during pauses; instead, remove it and lock it away.
- If the loaded platform is stopped due to a fault during operation, the operating personnel are obliged to salvage the load. – Never leave a loaded load-carrying device unsupervised!
- Wear protective clothing (e.g. hardhat, safety boots).
- Comply with all accident prevention regulations and safety rules.

10.1.1 Special safety instructions for vertical use

- Safety devices must be fitted at loading points above 6 ft. high, in order to prevent people from falling. (Fit landing level safety gates.)
- Do not transport bulky goods protruding laterally over the load platform.
- Do not travel with the gate on the load platform open.
- The transportation of people is forbidden, except for assembly and maintenance tasks.

10.1.2 Special safety instructions for inclined use

- Do not step onto the load-carrying device!

10.2 Unauthorized mode of operation

- Exceeding the load bearing capacity (also see load table for inclined use).
- Exceeding a maximum ladder length of 62' (for inclined use).
- One-sided loading of the load-carrying device.
- Working with damaged hoist parts or with an inclined hoist affected by faults.
- Working after the annual inspection has not been carried out on time.
- Load platform or load-carrying device must not be at the top when work has been completed.
- Working with wind speeds of over 45 mph.

10.3 Safety check

Before commencing work

Perform a test run with an **empty** load platform and check that the entire path of the load platform is free.

The drive must stop immediately, if

- the EMERGENCY STOP button is pressed
- the DOWN limit switch is activated
- the trolley has reached the end of the ladder

The hoist must not start if

- the safety device has triggered
- the assembly guard is lowered or the loading flap is open when in vertical use

10.4 Operating the hoist

- Turn the main switch to ON.
- Load up
 - press UP button (2).
- Load down
 - press DOWN button (3).
- Switching off or stopping:
 - Release the UP button (2) or DOWN button (3) respectively.
 - In case of emergency, press the EMERGENCY-STOP button (1).

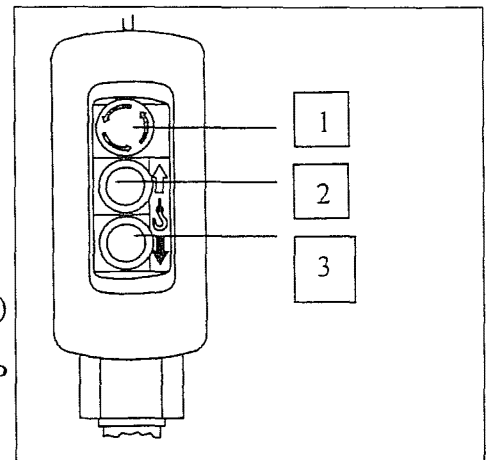


Fig. 44 Control pendant

NOTE

The LADDER LIFT LL-450-550 hoist has a maximum lifting speed of 80'/min.

10.5 Loading and unloading in vertical use

- Loading and unloading the load platform at landing level height
 - To unload, position the load platform in front of the landing level safety gate.
 - Open the catch (2) on the load platform (1) and lower the loading flap.

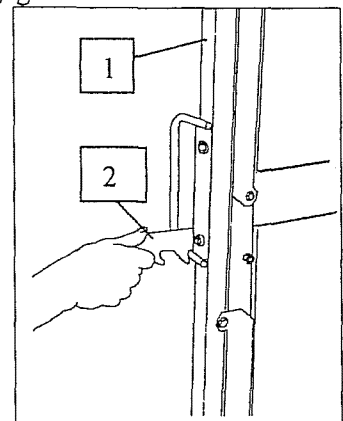


Fig. 45 Loading flap lock

- Lift the lock and open the landing level safety gate.
- Unload the load platform.
- Close the landing level safety gate.
- Close the loading flap on the empty load platform.
- Press the DOWN button. – The empty platform will descend.

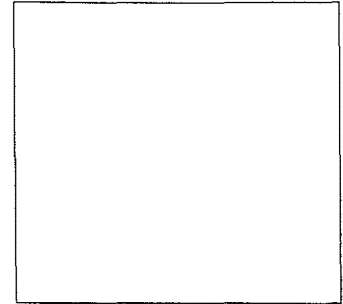


Fig. 46 Landing level gate with catch

10.6 Suspending/finishing work

- Lower the load-carrying device to the bottom position with the DOWN button and unload.
- Turn the main switch to OFF and secure.
- Remove the mains plug.

10.7 Emergency shut-down

- In situations where there is danger to the operating personnel or the hoist, the hoist can be shut down by pressing the EMERGENCY STOP button.
- The EMERGENCY STOP button is located on the hand control.

11 Dismantling



The hoist must be assembled and dismantled in accordance with the assembly and operating manual, under the direction of a competent person appointed by the employer! This competent person must be familiar with the assembly and operating instructions, possess adequate experience and be aware of the dangers involved in handling the hoist.

- Block off the danger area and put up warning signs.
- The hoist should be dismantled in reverse order to its assembly.

Dismantling the vertical hoist

- Only loosen the anchors when there are no more ladder sections above the anchor.
- Always unload the load platform in between.

- Dismantle the load platform
 - Move the trolley into position (arrow on trolley points to the ladder end of the base unit).
 - Remove the four spring catches and secure. Push the lifting guards (1) on both sides in the direction of the ladder section and swivel the load platform (2) in the opposite direction, until it is no longer in contact with the ladder section.
 - Lock the two lower spring catches again, so that the load platform cannot spring back. Unhinge the load platform and remove.

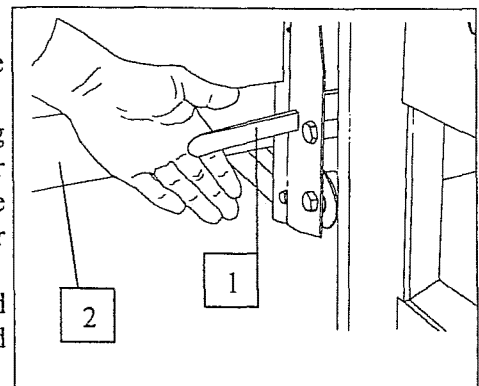


Fig. 47 Lifting guard

12 Causes and elimination of faults



Faults may only be removed by professionals!

Before fault finding, always lower the load platform (load-carrying device) and unload or secure the load if possible!

If faults occur that jeopardise operational safety, stop operation immediately!

Should faults appear, check the following:

- Is the main supply line connected?
- Is the main switch turned on?
- Fuses in building site main cabinet? (16 A, slow-blow)
- Correct extension cord?
 - Does the electric supply cable have a cross section of at least 3 x 2.5 mm²
- Is the EMERGENCY STOP button released?
- Is the load-carrying device overloaded?
- Are the activation elements of the up and down limit switches functioning?
- Has the overspeed safety device activated?
- Check the fine-wire fuse in the switch box on the trolley (63 mA slow-blow, 250 mA slow-blow).

With vertical hoists, also check the following:

- Is the loading flap closed?
- Is the assembly guard fitted at the top?

If the motor is not working with full power:

- Voltage drop of more than 10% of the rated voltage .
- Select supply line with higher conductor cross-section.
- Reduce load.
- In the event of the motor overheating, the built-in thermoswitch will cut off the drive motor and the control. - Work can be continued after a short cooling down period.

ATTENTION

- Repeated overheating (overloading) should be avoided. – Otherwise the service life of the motor/brake will be reduced.

Power failure or defective motor

In this case, the platform must be lowered to the ground by releasing the motor brake.

- Release the motor brake from the ground using the traction cable, by carefully pulling (to the left) on the manual brake release lever (1). – The platform will glide downwards.

ATTENTION

If the brake is released too sharply, the load platform will gather excess speed and the overspeed safety device will activate! If this occurs, please see Chapter 12.2. Perform this procedure using intervals in the case of considerable heights. – The brake must not overheat!

- During descent into the base section, please ensure that the load platform does not hit the ground.
- Let go of the manual brake release lever (1) in good time.

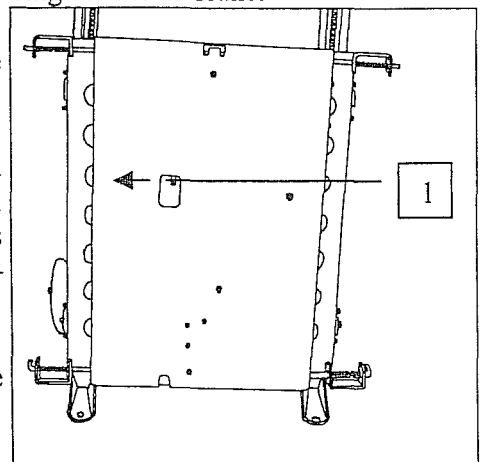


Fig. 48 Manual brake release lever

12.1 Potential faults during operation

12.1.1 Load platform traveled too low

The load-carrying device may overrun the lower limit switch, if

- the load is too high or
- the air gap of the brake is too large.
- If this defect occurs frequently, although the load platform is not overloaded, have the brake checked and adjusted by a skilled technician in accordance with the manufacturer's operating manual.

12.1.2 Load platform traveled too high

The load platform (load-carrying device) will travel too high, if the upper (last) ladder lock is closed or the upper limit switch has failed.

- Lower the load platform approx. 8", by carefully releasing the brake (from the ground, using the traction cable on the manual brake release lever).
- Check the upper ladder lock (must be open).
- If the last ladder lock was open (see Fig.12), stop the hoist operation and secure. – Have an inspection performed by a qualified technician immediately!

12.2 Safety device has triggered

The hoist is equipped with an overspeed safety device, which brakes the platform if it is going too fast. After the safety device has activated, the trolley will no longer move.

Resetting the overspeed safety device

- Loosen the two central locking screws (1) located opposite one another.
- Turn the driving plate (2) clockwise, until the control lever (3) engages in the groove of the driving plate (2).
- Now adjust the driving plate (2) in such a way that the control lever (3) strikes the approach angle (4).
- Tighten both screws (1).

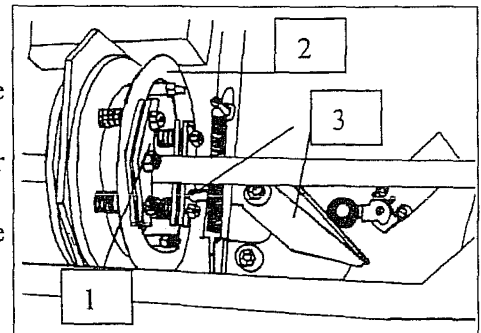


Fig. 49 Overspeed safety device

- Check the overspeed safety device for damage, establish the cause of activation and eliminate.

13 Maintenance



Maintenance work may only be carried out by trained professionals. Please dispose of lubricants and replacement parts with respect for the environment.

ATTENTION

Before cleaning and maintenance tasks are performed on the hoist, first lower the load-carrying device, switch off the main switch and make safe, or remove the main power plug.

13.1 Daily cleaning

- Clean the hoist of any dirt.
- Keep the working area around the hoist free and clean.

13.2 Daily inspection/maintenance

- Perform a test run with the empty load platform and check the following:
 - Is the entire travel path of the load platform free?
 - Are the operational limit switches at the top and bottom functioning?
 - Is the EMERGENCY STOP button functioning?

The hoist must not be able to move up or down when the EMERGENCY STOP button is pressed!

13.3 Weekly inspection/maintenance

- Perform a test run with the load-carrying device loaded and check whether the normal stopping distance of the motor brake is exceeded during descent (the trolley or load platform must not contact the buffers).
- Check the rack and driving pinions for wear and apply lubricant.
 - Recommended lubricant
GEDA special spray, article no. 2524
- Check the trailing cable, main power supply line and control lines for damage.
 - Rewind the trailing cable if necessary.

13.4 Monthly inspection/service

- Check that the ladder anchors on the ladder section and the building are firmly located; tighten if necessary.
- Rub the trailing cable with lubricant.
 - Recommended anti-seize agent:
Continental: Talcum powder
- Check the driving pinions and rack for wear; replace if necessary.
- Check the cable duct for wear: the gap must not be wider than 3/8".

13.5 Quarterly inspection/service

- Are the information signs present and easy to read?
- (load capacity, assembly instructions, load table, inclination scale, personnel transport warning).

13.6 Annual inspection

- According to requirement, but at least once a year or at nationally established intervals, have the entire hoist inspected by an expert.
- Record the inspection result in the appendix of these operating instructions, with the date and signature of the inspector, and keep until the next inspection.

13.7 Check the overspeed safety device by means of an activation test:

The safety device must also be checked during the above inspection.

- Ascend to approx. 10 ft. high (to lower edge of load-carrying device) with approx. 50% payload.
- Disconnect the operating capacitor (CB) (by an authorized technician).
- Place the traction cable loop around the manual brake release lever.
- Pull on the traction cable from below, outside the danger area. – The brake will be released, and the load platform will gather excess speed. The safety device must kick in and stop the load-carrying device. If this is not the case, release the traction cable and manual brake release lever immediately.

ATTENTION

When the overspeed safety device has triggered, ascent and descent of the load platform are mechanically and electrically blocked. – Reset the safety device, as described in Chap. 12.1.3.

13.8 Every 3000 hours of operation

- Change the lubricant on the gears of the winch gearbox motor. – Volume of lubricant = 3.50 oz.
- Recommended: DIVINOL, ARAL-Lub FD 00, BP-Energrease HTO, ESSO-Fibrax 370

14 Repairs



Repairs may only be performed by trained, competent technicians, as such work requires specialized knowledge and particular capabilities. This expertise cannot be drawn from this operating manual.

15 Disposal of the hoist

At the end of its service life the hoist should be professionally disassembled and disposed of according to the appropriate national regulations.

- Observe the following when disposing of the components of the hoist:
 - discharge oil/grease and dispose of in an environmentally sound manner
 - return metal parts for recycling
 - return plastic parts for recycling
 - give electrical components to a special refuse plant.

Recommended: Contact the manufacturer of the hoist or engage a professional firm to carry out the disposal in the proper way.

16 Guarantee

We provide a normal 6-month guarantee, beginning from the date of delivery to the customer. The guarantee is limited without exception to actual faults as opposed to those caused by natural wear or faults arising from improper use. We reserve the right to determine how and by whom the faults may be corrected. If damages are caused by poor packing for transportation when the goods are being returned to the manufacturer for an overhaul, the buyer must bear the resulting costs. If the equipment is seen to be faulty despite an overhaul, the buyer has the right to demand a reduction in the sale price or the delivery of faultless parts in return for the faulty parts.

No other guarantee claims can be accepted. Compensation for damages is only guaranteed, if the damage in question was caused by deliberate action or gross negligence.

17 What are your impressions of this operating manual?

GEDA tries its best to arrange operating instructions to be explicit and user-friendly in the interest of the user.

We would appreciate any help you have to offer.

GEDA would be interested to hear your opinion on and experience with these operating instructions. Do you find them

- generally good? yes / no
- adequate, but with room for improvement? yes / no
- in need of drastic improvement? yes / no

Are the operating instructions

- arranged conveniently for a quick overview? yes / no
- comprehensible? yes / no
- too detailed? yes / no
- too difficult? yes / no

How would you assess this operating manual in comparison with others

- better? yes / no
- of a similar quality? yes / no
- worse? yes / no

As you have practical experience in working with the machine, we would like to hear of any concrete information and tips you may have to offer.

- Is there anything missing from these operating instructions?
- What improvements would you make from your point of view?

Please return your completed assessment and your personal observations.

Thank you very much for your time and help.

18 Appendix for entry of annual inspection

Findings of inspection

Date and signature of inspector

Findings of inspection

Date and signature of inspector

Findings of inspection

Date and signature of inspector

Findings of inspection

Date and signature of inspector

Findings of inspection

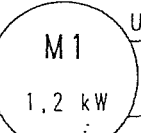
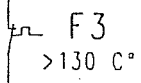
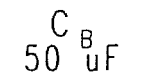
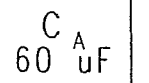
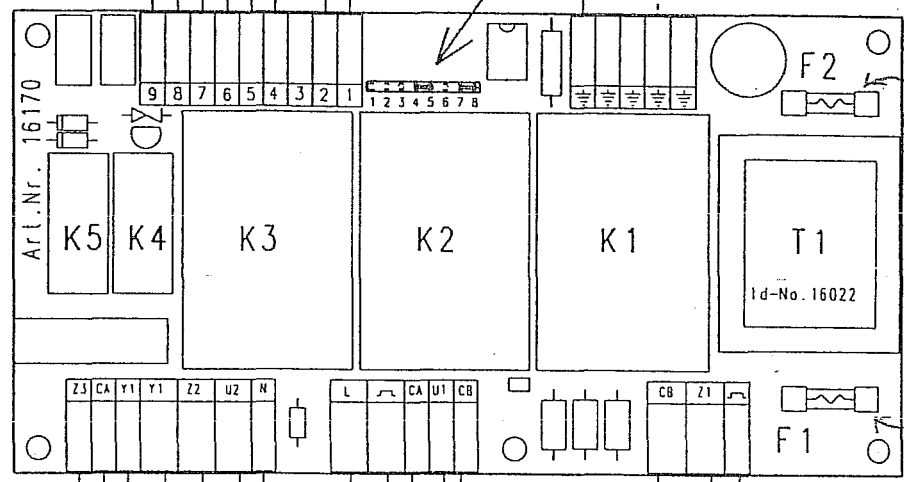
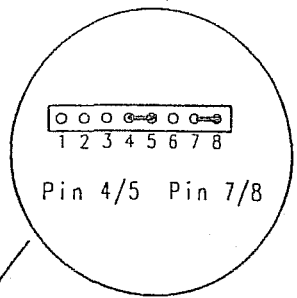
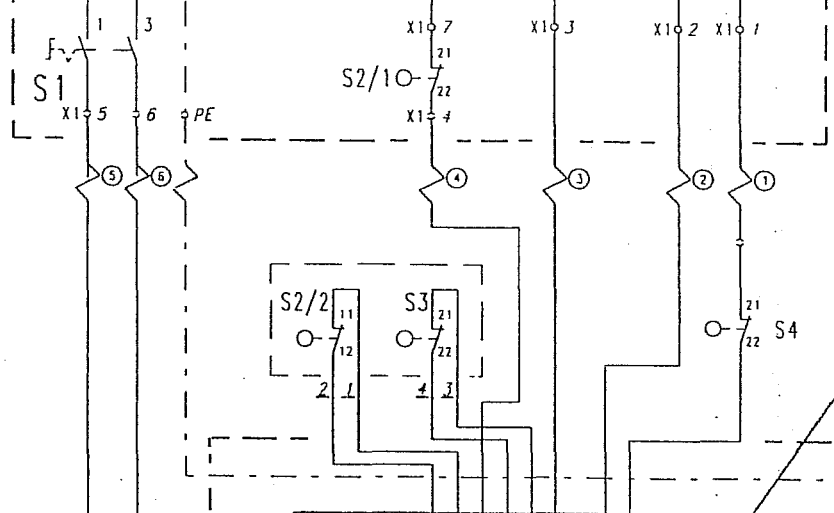
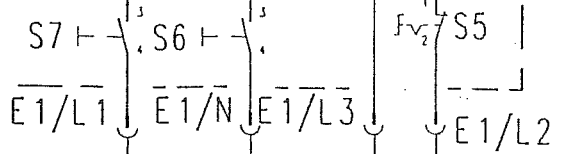
Date and signature of inspector

Findings of inspection

Date and signature of inspector

240V 50/60Hz AC
16 A max.

L1 N PE



*LABOR
MATERIA LIPI
CHAMPION
4 "2008"*

○ = Drahtnummern der Schlepleitung
= wire number of trailing cable

2 = Drahtnummern für Auf- und
Abendschalter
= wire number of Limit switch

ab Fabrikationsnummer :
valid from serial no. : 17400-00601
à partir de no de série :

bis Fabrikationsnummer :
up to serial no. : 17400-
jusqu'à no de série :

A		B		C		D		E		F	
Zustand		Änderung		Datum		Name		Urspr		Ers. f.	
A		025/200		11/02/2000		HS		GEDA-COMBILIFT 250Z USA		Stromlaufplan drawing no 140-010.041 schema de circuits (Art. -Nr 18448)	

Stk	Teile-Nr.	Bez.	Item	Gegenstand	Désignation
1	11381		Screwed cable gland 13,5	- Kabelverschraubung PG 13,5 PA	Passe-câble à vis PG 13,5
1	13548	S4	Limit switch for overspeed brake, platform-ramp and ladder-shield	Endschalter der Fangvorrichtung / Entladerampe / Aufbauschutz	Fin de course pour dispositif anti-chute, hayon et protection de montage
1	11381		Screwed cable gland 13,5	- Kabelverschraubung PG 13,5 PA	Passe-câble à vis PG 13,5
1	16731-16752	M1	Single phase stator 1,3 KW 240V60Hz 1120U/min	Stator für Einphasenmotor 1,3 KW 240V60Hz 1120U/min	Stator pour moteur monophasé 1,3 KW 240V60Hz 1120U/min
1	16732		Rotor with pinion	- Läufer mit Ritzel	Rotor avec pignon
1	16842	Y1	Motor brake complete	Bremse kpl.	Frein de moteur complet
1	16634		Brake disc	Reibbelag	Garniture de frein
1	16719		Manual brake release system	Handlüftung kpl.	Système releveur de frein
1	14928		Brake release bar (screw M6X55)	Handlüfthebel (Schraube M6 x 55)	Levier releveur de frein (vis M6x55)
1	03203		Hexagon nut M6	Mutter M6	Ecrou à six pans
1	03202		Spring washer 6mm	Federring 6mm	Rondelle élastique 6 mm

	technical information	Technische Information	Information technique	
K1	Relais down	Relais Ab	Relais de descente	
K2	Relais up	Relais Auf	Relais de montée	
K3	Relais emergency off	Relais Not-Aus	Relais arrêt d'urgence	
K4	Brake relais	Bremsrelais	Relais de frein	
K5	Starting relais	Anlaufrelais	Relais de démarrage	
T1	Transformer	Steuertransformator	Transformateur de commande	
F3	Thermal motor-protection sensor	Thermokontakt im Motor T>130°C	Détecteur thermique dans le moteur	
M1	Wire colour-code	Farbcode der Anschlussdrähte	Code de couleurs du câblage:	
U1	Red-white	Rot-weiss	Rouge – blanc	R = 3.2 Ω
U2	Black-white	Schwarz-weiss	Noir – blanc	
Z1	Green-white	Grün-weiss	Vert – blanc	R = 3.15 Ω
Z2	Brown-white	Braun-weiss	Brun – blanc	
Z3	Yellow-white	Gelb-weiss	Jaune – blanc	Z1-Z3 R =0.8 Ω Z2-Z3 R =2.7 Ω
F3	Blue-white (2 wires)	Blau-weiss (2 Drähte)	Bleu – blanc (2 fils)	
M1	Rotating direction M1 (view at fan)	Drehrichtung M1 (Blick auf Lüfter)	Sens de rotations M1 (regard au ventilateur)	
	Up - clockwise	Auf - Uhrzeigersinn	Montée – en sens horaire	
	Down – contra clockwise	Ab – gegen Uhrzeigersinn	Descente – en sens inverse horaire	
Y1	Brake coil resistance	Bremsspulenwiderstand	Résistance de la bobine du frein	R = 430 Ω
	Brake supply voltage	Bremsspannung	Tension du frein	U = 108 V DC
	Air gap adjustment	Luftspalt Einstellmaß	Ajustage de la fente d'air	0.2 mm
	Air gap maximum distance	Luftspalt Maximalmaß	Dimension max. de la fente d'air	0.6 mm
	Friction disc minimum thickness	Mindestbremsbelagstärke	Epaisseur min. du garniture de frein	8.0 mm
V1	Jumper setting on pcb	Codierbrücken / Leiterplatte	Ponts de codage / carte imprimée	Pin 4-5 / Pin 7-8

Gültig ab Fabrik-Nr. / valid from serial No. / à partir de No de série 17400-00601

(Bei Bestellung Fabrik- Nr. angeben! / Please indicate serial No on order / Veuillez indiquer le No. de série lors de la commande)

Stk	Teile-Nr.	Bez.	Item	Gegenstand	Désignation
1	16897		Electric housing with drilled cover mounted at foot section	Schaltkasten Fußteil Gehäuse mit Deckel gebohrt	Carter de la boîte électrique située au pied, avec couvercle percé
1	14814	S1	Main switch (power supply)	Hauptschalter	Interrupteur principal
1	10163		Power supply cable with plug 3mtr.	- 3m Zuleitung mit Stecker	Câble d'alimentation 3 m avec fiche
7	05374	X1/1-7	4 pole terminal	Klemme 4-fach grau	Borne de câble 4 pôles
2	10136	X1	3 pole terminal	Klemme 3-fach PE	Borne de câble 3 pôles
1	13548	S2/1	Limit switch for down mode	Endschalter AB	Fin de course de descente
1	11381		Screwed cable gland 13,5	- Kabelverschraubung PG 13,5 PA	Passe-câble à vis PG 13,5 PA
1	17937		Trailing cable 35 meters	Schleppleitung 35.Meter	Câble d'enrouleur 35 m
1	08538	E1	5 pole socket for hand control	Steckvorrichtung (Einbausteckdose 5polig mit Dichtung) für Steuerung	Fiche à 5 pôles pour commande manuelle
1	09904		Hand control box complete (with cable and plug)	5m Steuerung kpl. Mit Kabel und Stecker	Commande manuelle avec 5 m de câble et fiche
5m	05833		Cable for hand control box	- Leitung 5x1,5 lfd. Meter	Câble 5 x 1,5 m p. commande manuelle
1	07359		Rubber cable protector	- Knickschutztülle	Douille antioque
1	06937		Hand control box	- Hängetaster kpl.	Commande manuelle
1	14656		Sticker	- PVC-Schild „Symbol“	Étiquette adhésive
1	14755		Hook	- Aufhängebügel	Crochet de suspension
1	08542		5 pole plug for hand control	- Stecker 5 x 16A (zu E1)	Fiche à 5 pôles p. commande manuelle
1	07826	S5	Emergency stop contact	Not-Aus-Schalteinsatz	Élément de contact arrêt d'urgence
1	16270		Emergency stop button	- Pilztastr für Not-Aus	Bouton d'arrêt d'urgence
1	05686	S6	Up mode contact	Auf-Schalteinsatz	Élément de contact de montée
1			Up mode button (white)	- Auf-Drucktaste (weiß)	Bouton de montée (blanc)
1	05686	S7	Down mode contact	Ab-Schalteinsatz	Élément de contact de descente
1	7827		Down mode button (black)	- Ab-Drucktaste (schwarz)	Bouton de descente (noir)
1	18372		Electric housing with drilled cover mounted at trolley	Schaltkasten Antrieb Gehäuse mit Deckel gebohrt	Carter de la boîte électrique située au chariot avec couvercle percé
1	15778	Ca	Capacitor 60uF for starting mode	Anlaufkondensator 60µF	Capaciteur de démarrage 60µF
1	16073	Cb	Capacitor 50uF for running mode	Betriebskondensator 50 µF (USA)	Capaciteur de service 50 µF
1	16022	V1	Printed circuit board	Leiterplatte 1-stufig verriegelt	Carte imprimée
5	16166		Plastic spacer clip	- Distanzclip	Clip d'écartement en plastique
1	14686	F1	Fuse 5*20mm 0,063A primary lag-type	- Sicherung Steuerstrom primärseitig 63 mA träge	Fusible à faible intensité 63 mA côte primaire
1	13655	F2	Fuse 5*20mm 0,250A secondary lag-type	- Sicherung Steuerstrom sekundärseitig 250 mA träge	Fusible à faible intensité 250 mA côte secondaire
		F3	Thermal kontakt (opens from a winding temperatur of 130 °C onwards)	Thermokontakt (öffnet ab 130 °C Wicklungstemperatur)	Thermo-rupteur dans moteur M
1	18027	S2/2	Limit switch for down mode	Endschalter AB	Fin de course de descente
1	18027	S3	Limit switch for up mode	Endschalter Auf	Fin de course de montée