

Operating Manual

GEDA[®]
PH 650

Car PH 2032, PH 2737, PH 3240
Single / Twin



EU Declaration of Conformity



The manufacturer

GEDA-Dechentreiter GmbH & Co. KG

Mertinger Str. 60

D-86663 Asbach-Bäumenheim

hereby declares that the machine

Designation: Construction hoists for personnel and loads
(for temporary, in non-public areas and only for use by
authorised persons)

Type: **GEDA® PH 650**

Year of manufacture: Refer to rating plate

Unit number: PH

is in compliance with all pertinent provisions of the following directives at the time of being
put on the market.

Directives:

2006/42/EC Machinery Directive
2014/35/EU Low Voltage Directive
2014/30/EU EMC Directive
2000/14/EC Noise Emission Directive

Applied

conformity evaluation procedure:

Appendix VIII
Appendix IV
Appendix II
Appendix V

Applied (harmonised) standards:

EN ISO 12100:2010 EN 12159:2001
EN 60204-1/32

EU type testing procedure:

Type testing certification		NL 08-400-1001-068-08 Rev. 4
European notified body	0400	LIFTINSTITUUT
		Buikslotermeerplein 381
		1020 MA Amsterdam

This EU conformity declaration becomes null and void if any changes are made to the
aforementioned machine that have not been authorised by the manufacturer.
Authorised representative for technical documentation is the signatory.
Address, see manufacturer.

Asbach-Bäumenheim 2015-04-14


Johann Sailer
(Managing Director
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1 Guide

You will see a series of illustrations and symbols whilst reading this manual which are intended to help you navigate through and understand this manual. The different meanings are explained below.




Text display	Meaning
Bold type	Emphasises particularly important words/passages
• List 1	Denotes lists
○ List 2	Denotes lists
(brackets)	Item numbers
➤ Instruction	Handling instructions for the personnel always in chronological sequence

1.1 Images

The images used relate to a specific hoist type. They may only constitute a schematic representation with other hoist types. The fundamental function and operation is not affected by this.

1.2 Warnings

Activities associated with specific hazards (to life and limb or potential damage to the hoist) are indicated by warning notices. The instructions given in the warning notices must be observed.

Warning level	Consequence	Probability
 DANGER	Death / serious injury	is imminent
 WARNING	serious injury	possible
 CAUTION	minor injury	possible
CAUTION	tangible damage	possible



Attention note

This is found at points where special information or rules and prohibitions regarding damage prevention are given in order to prevent damage to the hoist.



Note

This is found at points where information is given about using the hoist economically or instructions are given regarding correct working procedures.

1.3 Abbreviations

The following abbreviations may be used in the manual.

max.	maximum	Nm	Newton metre
min.	minimum	km/h	kilometres per hour
mins.	minutes	mph	miles per hour
etc.	et cetera	inc.	including
poss.	possible/possibly	if nec.	if necessary
e.g	for example	i.e.	id est (that is)
ml	millilitre	reg.	regarding
mm	millimetre	RH	relative humidity
°C	degrees Celsius	approx.	approximately
°F	degrees Fahrenheit	Ø	diameter
ft.	foot	®	registered trademark
ft/m	feet per minute	©	copyright
m/min	metres per minute	TM	trademark
in.	inch	%	per cent
etc.	et cetera	‰	per thousand
lb.	pounds	dB (A)	sound pressure level
lbf.-ft	Pound per foot	LWA	sound power level
kg	kilogram	>	greater than
l	litre	<	less than
gal.	gallons	±	plus or minus
kip	kilopound		

1.4 Imprint

GEDA Dechentreiter GmbH & Co. KG

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2 Identification data

Hoist

Hoist model	PH 650
Device number	Refer to nameplate
Cars	PH 2032 / PH 2737 / PH 3240
Year of manufacture	Refer to nameplate

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3 Technical Data

3.1 Operating and environmental conditions

The hoist must only be operated when the following operating and environmental conditions are satisfied:

Temperature range



Project-specific changes are possible.

Standard:

minimum: -4°F (- 20 °C)
maximum: 86°F(+30 °C)

with special equipment (e.g. switch cabinet fan, air condition):

above 86°F (+30°C)

Wind speed

Operation / maintenance / repair:

USA:	maximum 35 mph (56 km/h)
Other countries:	maximum 45 mph (72 km/h)

Assembly:

maximum 28 mph(45 km/h)

Observe the height-dependent change in wind speed. It may be necessary to cease/prohibit operation of the hoist under extreme weather conditions (e.g. thunder storm or sand and snow storms), even if the operating and environmental conditions fall within the bounds of those stated. The operating company must provide appropriate precautions in this regard.

Atmosphere at the place of use

The atmospheric composition on-site must be suitable for people to remain for longer periods in the area. In particular, reduction in the oxygen concentration as a result of displacement or consumption must be prevented. The legal limit values for pollutant concentrations/aerosols and dust in the workplace must not be exceeded.

3.2 Speeds

Lifting speed

Operation	40 m/min. 131 ft/min.	60 m/min*) 196 ft/min	65 m/min. 213 ft/min.	90 m/min. 295 ft/min.
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*) USA

Triggering speed of safety gear:

Drive	40 m/min. 131 ft/min.	60/65 m/min. 196/213 ft/min.	90 m/min. 295 ft/min.
Releasing speed:	Approx. 48 m/min. Approx. 157 ft/min.	Approx. 78 m/min. Approx. 256 ft/min.	Approx. 108 m/min. Approx. 354 ft/min.

Gravitational acceleration
in the car with **EMERGENCY OFF** < 1 g

3.3 Drive

Technical information about the drive: refer to nameplate of the drive

3.4 Lifting capacities

Ladder in the car max. 330 lb (max. 150 kg)

3.4.1 GEDA PH 650 with car PH 2032

Operation 4400 lb (2000 kg) /
max. 25 persons

3.4.2 GEDA PH 650 with car PH 2737

Operation 6000 lb (2700 kg) /
max. 28 persons

3.4.3 GEDA PH 650 with car PH 3240

Operation 7055 lb (3200 kg) /
max. 30 persons

4 Safety information

This safety information must be read and observed by all persons who are entrusted with work on the hoist or who supervise or instruct such people. Non-compliance with the safety information releases GEDA from any liability.

4.1 Intended use

The hoists described in this manual are for use exclusively as:

- temporary building hoists for transporting material and persons in non-public areas and for a limited number of users.

Non-intended use, non-compliance with the manual, staffing by insufficiently qualified personnel, and the use of non-approved spare parts releases the manufacturer from any liability.

4.2 Hoist limitations

The hoists must only be used in compliance with:

- the technical data/features
- the max. permissible load-bearing capacity
- the defined operating and environmental conditions.

4.3 Conversions / Modifications

Unauthorised conversions / modifications can have an unforeseeable influence on the safety of the hoist. For this reason, unauthorised modifications/alterations are prohibited. Any unauthorised modifications that are carried out shall release the manufacturer from any liability. This also includes welding, grinding and burning operations on the hoist, as well as the control programs.

4.4 Linking to other machines

Control-related or functional linking to other machines is prohibited and releases GEDA from any liability.

4.5 Prohibition of certain activities

The following activities may only be carried out by GEDA employees on account of potential sources of errors which cannot be detected (by the operating company):

- repairs to the safety gear
- modification of the control programs
- Changes to/decommissioning of the overload monitoring.

4.6 Hoist operation

Operation is only permitted in accordance with:

- the information on proper use
- the information on the hoist limitations
- the information on operating and environmental conditions
- all laws/regulations that must be complied with by the operating company
- all other information in this manual.

It is prohibited to start up or operate the hoists without having read the manual beforehand. The manual must be kept safe for continued and future use with the hoist.

GEDA shall not be liable for any damage arising from non-compliance with the instructions contained in this manual.

4.7 Foreseeable misuse

Any use of the hoist that deviates from the conditions specified above and from the stated purpose is strictly prohibited.

In particular this applies to use:

- as a hoist in a publicly accessible area
- without correctly installed landing-level safety doors.
- without enclosure.
- in a potentially explosive area
- at a greater distance from the building than permitted
- of multiple cars on one mast side (gear rack).

4.8 Hoist hazards

The hoists have been designed and manufactured according to the current state of the art. They have been subjected to a safety inspection and acceptance procedure before delivery.

Nevertheless, personal hazards or material damage may result if operated incorrectly, used improperly, used without due care and attention, insufficiently serviced or if components fail.

4.9 Hazard sources/existing residual hazards

As with all complex machinery, GEDA hoists also represent a source of potential hazards. These are:

Moving, rotating, pointed and sharp-edged parts

- Drives
- Chains/ropes/cables

Energies

- Electricity
- Hot surfaces
- Potential energy (raised components / tipping/falling loads / falling tools)

Operating materials

- Oils
- Greases

Emergency

- Defect during installation/operation of the hoist with persons inside the car.

4.10 Other relevant documents

In addition to this manual, the following documents must be observed by the corresponding target group:

- the instructions for the landing level safety doors, as necessary.
- Relevant customer service information, if applicable
- The manuals from suppliers of purchased parts
- Installation drawings/diagrams.

These documents must be supplemented by the operating company with the national regulations of the country of use applicable in each case. If the hoist is sold or passed on, the documentation must be passed on as well.

4.11 Export licence

Parts of the hoist/electrical control unit may require export licences depending on the current status of foreign trade law. The customer shall take responsibility for acquiring the relevant export licence and shall only proceed in accordance with this licence.

4.12 Warranty

This manual does not contain any warranty agreements. These can be found in the General Terms and Conditions of Business. Proper use is a precondition for the warranty.

4.13 GEDA training sessions

GEDA offers detailed training sessions in order to enable the highest degree of safety and economic efficiency when operating the elevator. Please contact the GEDA Service-Center for information on training.
(<http://www.geda.de/service>)

4.14 Disposal of the hoist

Correctly disassemble the hoist at the end of the service life and dispose of it in an environmentally friendly way in accordance with national provisions.

During disposal of the hoist components, observe:

- Drain and dispose of oil/grease in an eco-friendly way.
- Recycle metal parts.
- Recycle plastic parts.

Recommendation:

Contact the manufacturer or commission a specialist company to handle disposal requirements in accordance with regulations.

5 Duties of the operating company

5.1 Duty to provide training/qualifications

The operating company clearly defines the responsibilities of the personnel for operation/assembly/maintenance. The operating company is obliged to train all persons authorised to use the hoist in the correct handling of the hoist before using it for the first time, according to the respective area of activity and responsibility of the authorised individual and using practical exercises.

Training will cover at least the following:

- The scope and limitations of the area of activity and responsibility of the respective group of people.
- Safety-conscious conduct.
- avoiding hazards
- Conduct in an emergency.
- Application of the emergency/evacuation plan.
- Correct hoist operation.
- The meaning of the warning signs, notices and pictograms.
- Use and inspection of the personal protective equipment.
- How to handle operating materials and cleaning agents.

Finally, the operating company must check that each person is capable of operating the hoist correctly and without assistance.

These instructions must be documented and repeated at regular intervals.

New personnel may only operate the hoist under the supervision and instruction of experienced personnel.

Maintenance and repair tasks must only be carried out by personnel qualified for this work. The deployment of non-qualified personnel is prohibited and releases GEDA from any liability.

5.2 Accessibility to necessary information

The operating company must make the manual required for the relevant task available to all persons who are commissioned with operation, servicing and maintenance.

The operating company must ensure that the individuals in question have read and understood the requisite manuals.

The same applies for all relevant safety data sheets, operational instructions, accident prevention guidelines, and instructions from suppliers of purchased parts and operating materials.

Depending on how the company is organised, the manuals may have to be provided to other individuals/departments.

5.3 Checking correct and proper condition and use

At regular intervals, the operating company must take appropriate measures to check that the hoist is being used according to the intended use, that the hoist has not been modified or tampered with and that all parts are fully functional.

5.4 Identifying hazards at the place of use

The operating company must identify all hazards at the place of use of the hoist and must take the necessary health and safety measures.

5.5 Machines/systems requiring registration

The operating company must register machines/systems which require registration with the responsible national authorities in accordance with the contents and deadlines of the regulations/obligations.

5.6 Recurring inspections

The operating company must have the recurring inspections, which are stipulated and regulated by national law, carried out and the results documented in an appropriate way.

5.7 Do not transport suspended loads above the hoist

The operating company must use appropriate organisational measures to ensure that no suspended loads are transported above the hoist.

5.8 Preparing an emergency/evacuation plan

The operating company must prepare an emergency/evacuation plan and train all relevant persons in this plan and provide appropriate instructions.

5.9 Training assembly engineers from other companies

Before undertaking any work, assembly installers from other companies must be informed by the operating company about obligatory safety regulations, valid accident prevention guidelines as well as the hoist's functions and safety equipment. The corresponding instructions/manuals must be made available.

5.10 Following the instructions of GEDA assembly engineers

If the hoist is installed by GEDA assembly engineers, their instructions must be followed.

5.11 Provision of personal protective equipment

The operating company must provide personal protective equipment appropriate to the respective place of use and purpose.

Protective equipment must be checked at regular intervals to ensure function and completeness.

In addition to this information, all national and employer liability insurance regulations relating to protective equipment must be observed.

6 For use by authorised persons

6.1 Operator

A person who, on account of his/her training and experience, is capable of carrying out the functions and activities associated with normal operation. This also includes avoiding potential risks and hazards that may occur during operation of the hoist.



All persons must comply with the instructions of the operator.

6.2 Hoist supervisor

A person who, on account of his/her training and experience, is capable of starting up the hoist and carrying out the functions and activities associated with normal operation. This also includes avoiding potential risks and hazards that may occur during operation of/start-up of the hoist.



All persons must comply with the instructions of the hoist operator.

6.3 Specialists for servicing / maintenance / assembly

A person who, on account of his/her qualified professional education, training and experience, is able to recognise risks and potential hazards during servicing/maintenance/installation work on the hoist and is able to rectify these by introducing appropriate measures.

6.4 Protection of particular groups of people

Young people, pregnant women, disabled people

The respective legal occupational restrictions apply.

Persons with pacemakers and metal implants

Magnetic fields which occur in the vicinity of live conductors and motors can present a hazard for the individuals mentioned above. Should it be necessary to enter these areas, a doctor should be consulted beforehand as adverse health effects cannot in principle be ruled out.

7 Obligatory safety instructions

7.1 Basic conduct when working with the hoist

- The hoist must be used with an awareness of hazards, in a technically fault-free condition and according to the instructions in this manual.
- Acquaint yourself with the way the hoist works, the operating controls and the safety equipment.
- The stipulated operating steps and the sequence of steps must be adhered to.
- If there is any lack of clarity regarding proper condition or correct operation, these points must be clarified. Operation is prohibited until the matter is clarified.
- The operator is responsible for third parties in the working area of the hoist.
- Unauthorised persons must be kept away from the hoist; if necessary set up warning notices.
- All safety regulations relevant to the respective job/activity must be adhered to.
- Responsibilities for different activities must be clearly identified and adhered to. Uncertainties are a significant risk to the safety.
- Safety and emergency equipment may neither be removed, altered nor made ineffective and must be inspected at regular intervals to ensure function and completeness.
- Rectify any faults which fall within your area of responsibility.
- If faults occur outside your area of responsibility, inform your superior immediately.
- In the event of wind velocities > 45 mph (72 km/h), bring the car down to the ground and cease operation.
- Smoking, eating, drinking and naked flames are prohibited.
- Wear personal protective equipment.
- If there is soiling, take appropriate measures (e.g. drying and cleaning) for all floors, steps, pedestals, platforms and climbing aids to prevent falling and slipping.
- It is prohibited to attach banners etc. to the hoist that change the wind load.
- Observe the load-bearing capacity of pedestals, ladders and steps.
- Look out for steps and objects on the ground when entering/exiting the car.
- Fall protection must be worn when working at a height > 6'-6 ¾" (2.0 m).
- The hoist must not be used as steps or a climbing aid. Only use tested and stable steps/climbing aids. Keep steps/climbing aids free of dirt and soiling.
- At the end of work or if work is interrupted, the hoist must be turned off at the main switch and secured against unauthorised switch-on (e.g. with a padlock).

7.2 Transporting material

- The operator is responsible for correct loading and unloading and for correctly securing the load.
- Use appropriate lifting gear for loading and unloading. Only use lifting gear that is designed for the weight of the load.
- Never drive the lifting gear into the car.
- Secure load with fastenings so that any movement is impossible during transport.
- Distribute the load evenly and centrally in the car.
- Observe the maximum permissible load capacity.
- Never cover doors, control panels, emergency call system, first aid kits or warning notices with the load. They must remain accessible at all times.
- Fall protection to prevent persons from falling must be provided at loading heights above $\geq 6'-6\frac{3}{4}"$ (2.0 m).
- Material must not project into the travel path of the hoist.
- When transporting material, this must not lead to a concentration of abrasive/corrosive substances. If this cannot be safely excluded, then the corrosion protection and/or the functional reliability of the electrical components must be inspected at regular intervals and, if necessary, replaced.
- The generation/accumulation of (explosive) fine particulate matter must be prevented/removed immediately.
- When using the heating in the car, care must be taken to ensure that the material is kept a sufficient distance from the heating unit.
- Material which emits combustible gases (e.g. petrol, solvents etc.) must only be transported with the heating unit switched off.

7.3 Maintenance/ repair / servicing / tasks on electrical components

- All relevant individuals (e.g. operating personnel, superiors) must be informed before work commences about the work being carried out.
- Before carrying out servicing/repair work, the hoist must be turned off at the master switch and secured against unauthorised switch-on.
- Work on electric/live components must only be carried out by qualified electrical personnel.
- Affected electrical parts must be de-energised (disconnect the mains voltage upstream of the main switch).
- Do not touch sockets, cables or electrical components with wet or damp hands.
- All tasks on electrical components must only be carried out using insulated tools.
- The hoist must only be connected to a building site main cabinet in accordance with IEC 60439-4:2004.

- Fuses must never be bridged. Always replace fuses only with fuses of the same type.
- Ensure that the electrical system is correctly earthed.
- Dry or appropriately cover wet, slippery or sharp surfaces. There must be no more potential hazards.
- Use appropriate measures to ensure that moving/loosened parts are disabled during work and that no limbs can become trapped by unintentional movements.
- Use appropriate measures to ensure that dismantled parts do not fall down.
- Loss of balance as a result of handling heavy parts/tools. Only lift heavy parts / tools with a second person, or using suitable hoisting equipment.
- Only use new parts according to their intended use and within the specifications of their technical data.
- Test the parts to ensure that they are functioning correctly after the work. Make sure that no hazards will arise as a result of the hoist being started up.
- Welding, burning and grinding work on the hoist must only be carried out following consultation with and approval from GEDA.

7.4 Initial commissioning / daily commissioning

Ensure that:

- All safety equipment is present and fully functional.
- All connections are properly connected.
- The central feeder is installed.
- All parts are correctly installed.
- No tools or other parts are inside or on the hoist.
- There are no tools or other parts in the travel path of the hoist.
- All warning and instruction notices on the hoist are present and complete, clearly visible and undamaged.
- Illegible or missing warning and instruction notices must be replaced immediately.
- Before commissioning, carry out the checks given in the national regulations.

7.5 Cleaning

- Risk of fire and explosion as a result of using combustible cleaning materials.
- Only use suitable, non-combustible cleaning agents.
- Label damp areas with the appropriate warning signs.
- Wear personal protective equipment.
- Do not use any abrasive substances for cleaning.
- The rubber ram buffers must not come into contact with acid or alkaline solutions (cleaning agents). Observe the chemical resistance list from the manufacturer.
- Do not use steam-jet equipment/high-pressure cleaners. Electrical components could be damaged.
- Do not touch sockets, cables or electrical components with wet or damp hands.
- Cleaning tasks on live components must only be carried out by qualified electrical personnel.

7.6 Conduct in an emergency

- Operational instructions for conduct in an emergency and/or the evacuation plan must be observed.
- Never use parts of the hoist as a climbing aid.
- Never climb hands-free. Always hold on with at least one hand.
- Keep all climbing aids free of dirt and soiling.

Hazard area can be left

- Stay calm.
- Leave the hazard area immediately.
- As necessary, help injured / evacuate people.
- Prevent persons accessing the area / warn others.
- Introduce appropriate measures for stopping/containing the emergency.
- Inform your supervisor.

Danger area cannot be evacuated

- Stay calm.
- Help anyone who is injured.
- Request help.
- Wait for the rescue services.

7.7 Components from other manufacturers

When working on components from other manufacturers, the information in the corresponding manual from the other manufacturer must also be observed.

7.8 Transporting people

All persons must comply with the instructions of the hoist supervisor/operator.

It is prohibited for persons:

- to stand on the load.
- to operate the hoist.
- Climb onto the car roof.
- to open the car door.

7.9 Landing-level safety doors

- The operating company is solely responsible for installing and operating the landing-level safety doors.
- Before initial use, the operating company must ensure that the landing level safety doors are appropriate for the respective purpose and that there are no hazards from using the landing level safety doors.
- Unauthorised persons must be kept away during installation of the landing level safety doors. Unsecured building areas must be secured against access.
- The landing level safety doors used must guarantee safe transfer from the building to the car. The safety distances between landing level safety doors must correspond to DIN EN 12159 or the respective national regulations.



7.10 Extreme weather conditions

Condition(s)	Hazard / Action
Temperature less than 32 °F (0 °C)	<p>NOTE: Hoists with a cold package disable upwards motion at < -4 °F (-20 °C). It is then only possible to travel downwards.</p> <p>NOTE: If frost is expected, all limit switches and moving parts should be treated with a lubricant which is suitable for the temperature range expected in order to prevent them from freezing up in the actuated position. This is particularly important in the case of the lower limit switches to prevent them from freezing up overnight, for example, at the end of the working day.</p> <ul style="list-style-type: none"> • Frostbite/hypothermia as a result of inappropriate clothing until passengers are freed in the event of a defect in the hoist. <ul style="list-style-type: none"> ➤ Wear sufficiently warm clothing. If necessary, have blankets in the hoist.
less than - 22 °F (- 30 °C)	<ul style="list-style-type: none"> • Reduced effectiveness of the rubber buffer. Increased risk of injury when running into the buffer in the event of a defect in the hoist.
less than - 40 °F (- 40 °C)	<p>Special check at temperatures below -40 °F (- 40 °C)</p> <p>NOTE: If it is unclear if the temperature fell to less than -40 °F (40 °C), follow procedures as if this temperature had been reached when restarting the hoist. Before performing the special test, temperatures must be above -4 °F (-20 °C) for a minimum of 3 hours.</p> <ul style="list-style-type: none"> ➤ Clear ice and snow from the hoist. ➤ Switch on the master switch (green light comes on). ➤ Press all EMERGENCY STOP buttons and release again. ➤ Check all doors/entrances/footbridges/flaps. ➤ Check all limit switches are moving freely. <p>DANGER: Notify your superior immediately if any cracks or loose parts / loose screws are discernible. Clarify further procedure with your superior. In the test run, do not travel beyond the cracks or loose parts / loose screws. Return to ground station. Safety inspection of the hoist by a competent person. The safety inspection which checks for discernible cracks / loose parts / loose screws must also include inspection of the foundation and of the wall anchors. Operation is prohibited until safe conditions have successfully been restored.</p> <ul style="list-style-type: none"> ➤ Check the ground station / landing level for obvious damage such as loose or deformed parts or parts which have fallen off and cracks in components and weld seams. ➤ Test run with empty car as far as the up limit switch: check that screw connections on the mast / ladder parts / anchors are securely fastened and check for cracks in components and weld seams. ➤ Check the overload protection, if present (refer to the relevant section).
more than 104 °F (40 °C)	<ul style="list-style-type: none"> • Circulatory collapse of passengers in the event of a defect in the hoist until passengers are freed ➔. Take sufficient fluids along in the hoist.



Condition(s)	Hazard / Action
Ice/snow	<ul style="list-style-type: none"> • Injury to passengers/people at the ground station/landing levels as a result of snow breakage or icicles. • Falling on snow or ice. <ul style="list-style-type: none"> ➤ Remove ice/snow from car, from the roof of the car, from all access points, from mast anchors / gear racks / cables/cable box. Do not use saline substances for this purpose. ➤ Ensure that no roof avalanches / icicles can fall from the building onto/into the car or the access points. Remove hazards before start-up. Wear a helmet. ➤ Ensure that all doors, hatches etc. are functional. ➤ At the end of the working day, move the car 8" (20 cm) upwards in order to prevent the limit switches from freezing up. ➤ In the case of large amounts/depths of snow: prevent car from travelling as far as the layer of snow. Hoist could be damaged.
Storms/lightening/hail	<ul style="list-style-type: none"> • Injury to people as a result of lightening or hail • Damage to the hoist as a result of strong gusts of wind/bolts of lightening. <ul style="list-style-type: none"> ➤ Do not transport people. ➤ Bring car down to ground level.
Flooding	<ul style="list-style-type: none"> • Damage to the hoist as a result of running into a flooded pit. Loss of stability of the foundation due to flooding. <ul style="list-style-type: none"> ➤ Switch off the power. ➤ Pump the pit dry. ➤ Check foundation/buffer. ➤ Check enclosure.
Sandstorm	<ul style="list-style-type: none"> • Difficulty breathing / risk of suffocation in the event of long-term exposure, e.g. in the event of a defect in the hoist. Carry a dust mask. • Damage to the hoist as a result of the switch box filter-pads becoming blocked. <ul style="list-style-type: none"> ➤ Clean the filter pads.
Fog	<ul style="list-style-type: none"> • Injury to people as a result of parts projecting into the travel path. Transportation of parts through the travel path of the hoist using a crane. <ul style="list-style-type: none"> ➤ Use organisational measures to ensure that no parts project into the travel path / that parts are not transported through the travel path of the hoist.

8 Obligatory warning instructions



8.1 Electric shock

	 DANGER
	<p>Electric shock Parts remain live even after operating the EMERGENCY STOP or after switching off the hoist at the main switch. Applies to all work on electrical parts. Interrupt the mains supply downstream of the main switch.</p>




8.2 Crushing by car

	 DANGER
	<p>Danger to life Car creates a crush hazard. Never remain inside the enclosure during operation. When working inside the enclosure switch off the main switch and secure against switching on.</p>



8.3 Fall from the ladder

	 DANGER
	<p>Danger to life Fall from the ladder. Only one person allowed on the ladder at a time. Always hold on with at least one hand. Always face the ladder to ascend and descend. Keep the ladder free of dirt and soiling.</p>









8.4 Fall from the roof of the car

 	 DANGER
	<p>Danger to life Fall from the roof of the car. Access only in an EMERGENCY or for servicing/maintenance work.</p>



8.5 Do not use the hoist in the event of fire

	 DANGER
	<p>Danger to life Do not use the hoist in the case of fire.</p>



8.6 Wear safety clothing

  	<div style="background-color: red; color: white; padding: 5px;"> DANGER</div> <p>Danger to life Risk of fire and explosion as a result of using combustible cleaning materials.</p> <p>Only use suitable, non-combustible cleaning agents.</p> <p>Do not use steam-jet equipment/high-pressure cleaners. Electrical components could be damaged.</p> <p>Do not touch sockets, cables or electrical components with wet or damp hands.</p> <p>Cleaning tasks on live components must only be carried out by qualified electrical personnel.</p> <p>Wear personal protective equipment.</p>
	   



8.7 Reaching into the travel path during operation

	<div style="background-color: red; color: white; padding: 5px;"> DANGER</div> <p>Danger to life Crushing or amputation of limbs. Never reach into the travel path of the hoist during operation.</p>
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8.8 Falling tools and parts

	<div style="background-color: red; color: white; padding: 5px;"> DANGER</div> <p>Danger to life Falling tools/parts. When carrying out tasks on the roof of the car and during assembly, secure tools and parts against falling.</p>
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8.9 Secure hoist against being switched on

	<div style="background-color: red; color: white; padding: 5px;"> DANGER</div> <p>Danger to life Due to the hoist being switched on during maintenance/servicing tasks or if there is a defect. Secure the main switch with a padlock against switching on.</p>
---	---



8.10 Fall and trip hazard

	 WARNING
	Fall and trip hazard Look out for steps and objects on the ground when entering/exiting the car.



8.11 Impact injuries

	 CAUTION
	Impact injuries Always wear a safety helmet when working on the roof of the car or when working where there is an impact hazard.


8.12 Suspended loads

	 WARNING
	Danger to life Raised load. Do not stand under suspended loads. Do not stand on a suspended load. Only lift loads at the suspension points. Only use suitable hoisting gear

8.13 Prevent access for unauthorised persons

	 WARNING
	Danger to life Access only for authorised individuals. No access for unauthorised individuals.

8.14 General warnings

	WARNING
	The return control is intended only for the hoist supervisor and/or for authorised individuals. Unauthorised individuals must not use the return control.

9 Brief description of the hoist



WARNING

This brief description only presents a general overview of the hoist. It does not form the basis for correct and proper operation of the hoist by beginners. Operation of the hoist and training of personnel is always carried out with reference to the detailed descriptions in the appropriate section of this manual.

Enclosure (1)

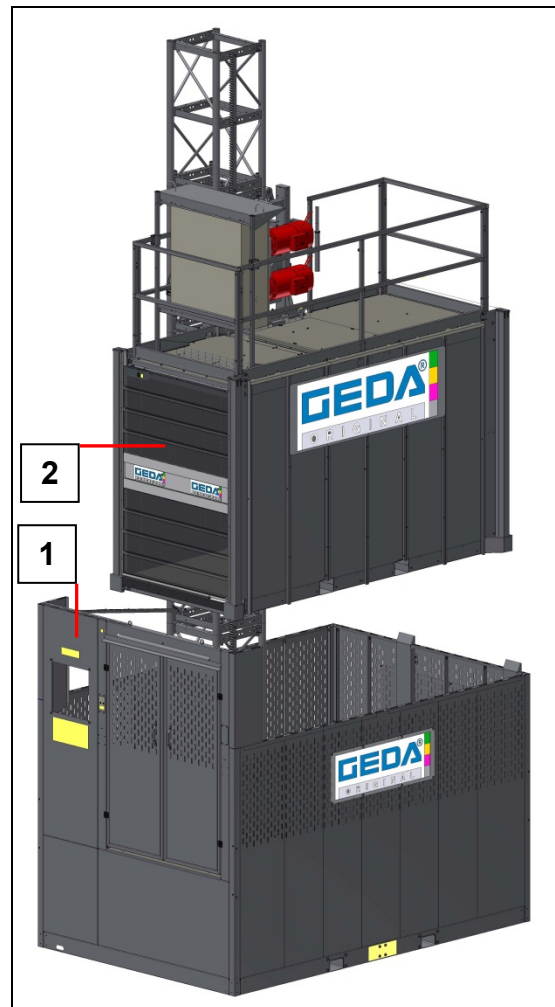
The bottom stop position is provided with an enclosure. The enclosure prevents access to the bottom hazard area. The car can only be accessed through the landing level safety gate and door to the car.

Landing-level safety doors

Landing doors protect people from falling at the stop position when the car is not at that stop position.

Car doors (2)

The car doors protect the persons in the car from falling out of the car during transportation.



SINGLE / TWIN design

By using a GEDA mast system with two gear racks and a corresponding base enclosure, the hoists can be operated both as Single (one car on the mast) as well as a Twin (two cars on the mast).

10 Operation

10.1 Daily inspections before operating

To ensure safety when handling the hoist, the custodian / person determined by the operating company must carry out a daily check of certain areas of the hoist / parts.

Any defects identified must be immediately reported to the supervisor and rectified. Defects may only be rectified by trained personnel responsible for maintenance and servicing.

Make sure that no one is on the roof of the car or inside the enclosure.

Always carry out visual inspections before function checks. Operation is prohibited until the defects are rectified. The following points must be inspected daily.

10.1.1 Visual inspections

Complete hoist

- Damaged load-bearing elements/deformation
- Travel path of the hoist clear
- Loose parts or parts fallen off.
- Damage to the car
- Oil/grease leaks
- Discolourations and soiling, corrosion, cracks
- Green control light comes on.

Warning and instruction notices

- All present and legible

Safety equipment

- All present
- Functional
- No tampering

Switch boxes

- Burnt/scorched areas
- Discolourations
- Moisture







10.1.2 Function tests

Test run with an empty car

- Unusual odours, noises or vibrations
- Oil/grease leaks
- Run car to its maximum height
- Stop the car at the upper EMERGENCY LIMIT approach bar.
- Travel further upwards not possible
- Run car down to ground station
- Stop the car at the ground station
- Travel further downwards not possible
- Test run by hoist supervisor/person authorised to carry out tests and inspections
- No one else is allowed to be in the car
- Car and enclosure doors functional.

10.2 Daily cleaning

Execution, necessary safety clothing, cleaning agents and equipment according to the applicable instructions from the operating company.

	<div style="background-color: red; color: white; padding: 5px; text-align: center;">  DANGER </div> <p>Danger to life Risk of fire and explosion as a result of using combustible cleaning materials.</p> <p>Only use suitable, non-combustible cleaning agents.</p> <p>Do not use steam-jet equipment/high-pressure cleaners. Electrical components could be damaged.</p> <p>Do not touch sockets, cables or electrical components with wet or damp hands.</p> <p>Cleaning tasks on live components must only be carried out by qualified electrical personnel.</p> <p>Wear personal protective equipment.</p> <div style="display: flex; justify-content: space-around; align-items: center;">     </div>
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10.2.1 External / internal cleaning of the hoist

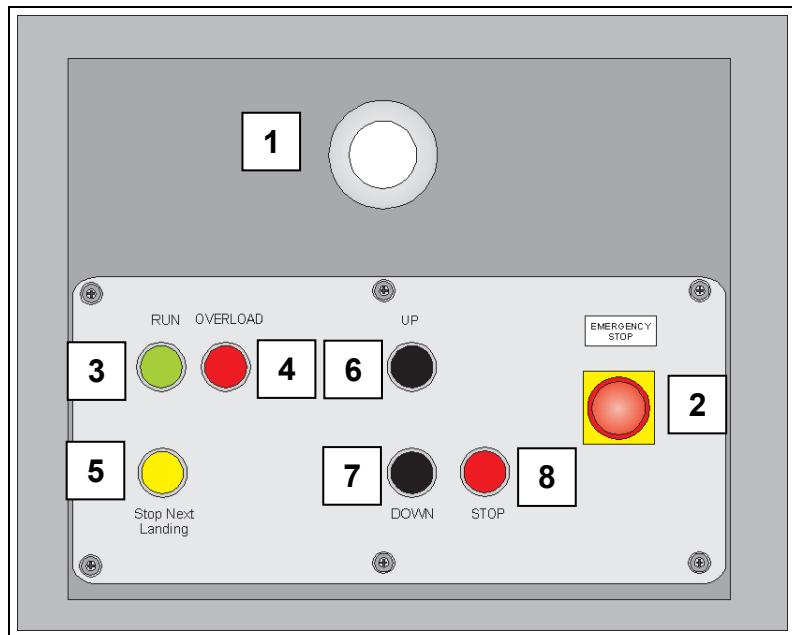
- Clean all surfaces thoroughly.
- Clean switch boxes and control panels separately.
- Signpost wet areas and secure against access.

10.2.2 Cleaning the area around the hoist

- Execution, cleaning agents and equipment according to the applicable instructions from the operating company.

10.3 Normal mode

10.3.1 Control in the car – Stop Next Landing



- 1 = Car emergency lighting
- 2 = **EMERGENCY STOP**
- 3 = Control light, ready for service
- 4 = Overload warning light
- 5 = **Stop Next Landing (SNL)** Stop at next landing level
- 6 = **UP** button
- 7 = **DOWN** button
- 8 = **STOP** button - stop at the current position

10.3.1.1 Operation

Ascend

- Press the UP button.

Descend

- Press the DOWN button.

Stop Next Landing

Stop at the next landing above

- Press the UP button.
- Press button "**Stop Next Landing**" (5).

Button "**Stop Next Landing**" illuminates. The car only moves slowly and stops at the next landing above.

Stop at the next landing below

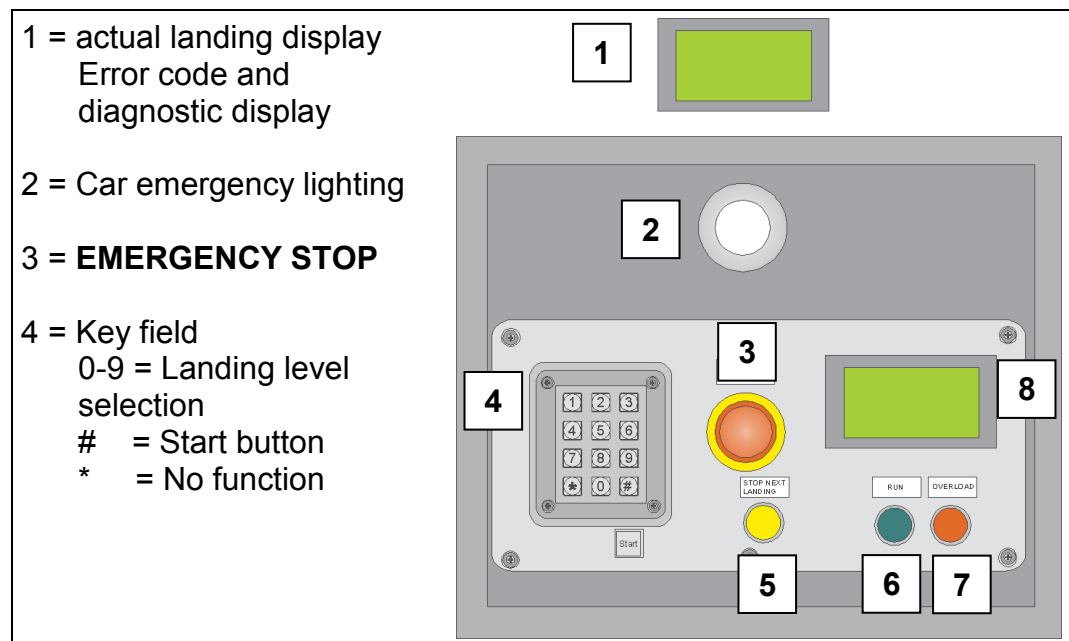
- Press the DOWN button.
- Press button "**Stop Next Landing**" (5).

Button "**Stop Next Landing**" illuminates. The car only moves slowly and stops at the next landing below.

Stop at the actual position

Press the **STOP** button. The car stops at the current position

10.3.2 Control in the car - landing preselection



5 = **Stop Next Landing (SNL)** Stop at next landing level
(only when landing approach bar is installed)

Illuminated when operated.

Press and hold **EMERGENCY DOWN** button.

after approx. 30 seconds, the car moves to the ground station.

6 = **Ready for operation control light**

OFF = not ready for service (refer to error code on the diagnostic display)

ON = Ready for operation

7 = **Overload warning light**

ON = Overload

Flashing once per second = Lubrication empty

Flashing twice per second = refer to error code on the diagnostic display

8 = **Landing display of the travel destination**

10.3.2.1 Operation

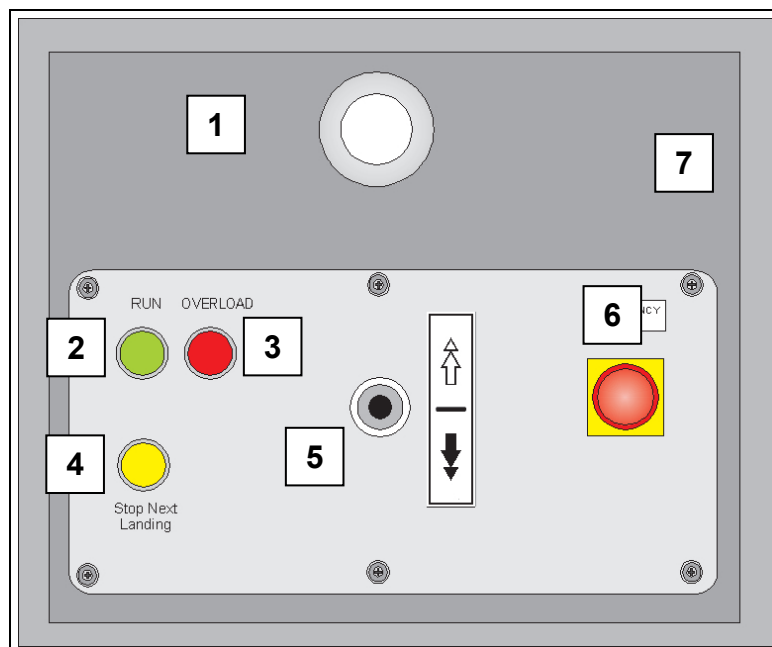
Approach landing

- Enter landing number required in the keypad (4).
The landing selected is indicated on the landing display (8).
- "#" Press the Start button.
The car moves to the selected landing.

Stop next landing

- Press button "Stop Next Landing" (5).
Car stops at the next landing level. Travel is then continued to the target landing using the keypad.

10.3.3 Control in the car – Joystick with 5 switching positions



- 1 = Car emergency lighting
- 2 = Control light, ready for service
- 3 = Overload warning light
- 4 = **Stop Next Landing (SNL)** Stop at next landing level
(only when landing approach bar is installed)
Illuminated when operated.
Press and hold **EMERGENCY DOWN** button.
after approx. 30 seconds, the car moves to the ground station.
- 5 = Joystick for upwards and downwards travel
- 6 = **EMERGENCY STOP**

10.3.3.1 Operation

The joystick (5) has five positions, two for **UP**, two for **DOWN** and a centre position (**OFF**).

The Joystick engages at each switch position.

Ascend

- Move Joystick upwards.

First switching position

Car moves slowly

Second switching position

Car moves fast

Descend

- Move Joystick downwards.

First switching position

Car moves slowly

Second switching position

Car moves fast

Stop car

- Move Joystick to centre position

In an emergency by activating the **EMERGENCY STOP** button (6).

Stop Next Landing

Stop at the next landing above

- Press button "**Stop Next Landing**" (4).

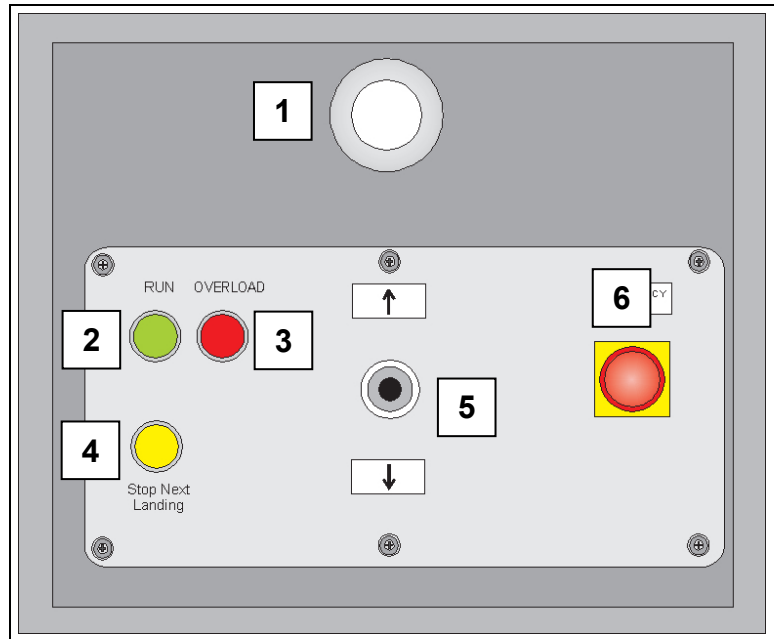
Button "**Stop Next Landing**" illuminates. The car only moves slowly and stops at the next landing above.

Stop at the next landing below

- Press button "**Stop Next Landing**" (4).

Button "**Stop Next Landing**" illuminates. The car only moves slowly and stops at the next landing below.

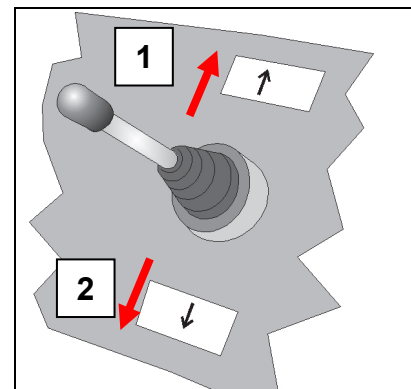
10.3.4 Control in the car – Joystick with 3 switching positions (Australia)



- 1 = Car emergency lighting
- 2 = Control light, ready for service
- 3 = Overload warning light
- 4 = **Stop Next Landing (SNL)** Stop at next landing level
(only when landing approach bar is installed)
Illuminated when operated.
Press and hold **EMERGENCY DOWN** button.
after approx. 30 seconds, the car moves to the ground station.
- 5 = Joystick
- 6 = **EMERGENCY STOP**

10.3.4.1 Operation

- 1 = Travel upwards**
Press the joystick (1) upwards and hold.
- 2- = Travel downwards**
Press the joystick (2) downwards and hold.

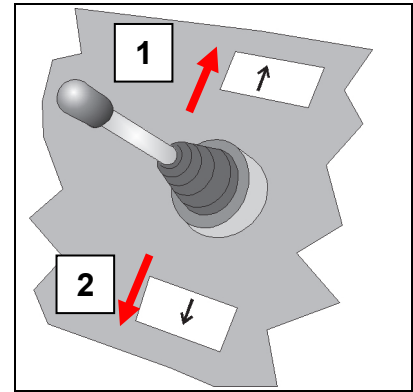


Stop Next Landing

Stop at the next landing above

- Press the joystick (1) upwards and hold.
- Press the button "Stop Next Landing".

The button "Stop Next Landing" illuminates. Car stops at the next landing above.



Stop at the next landing below

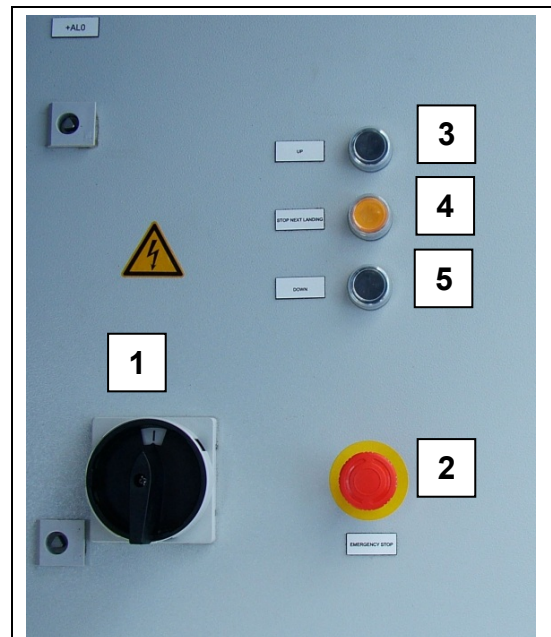
- Press the joystick downwards (2) and hold.
- Press the button "Stop Next Landing".

The button "Stop Next Landing" illuminates. Car stops at the next landing below.

10.3.5 Ground-station switch box

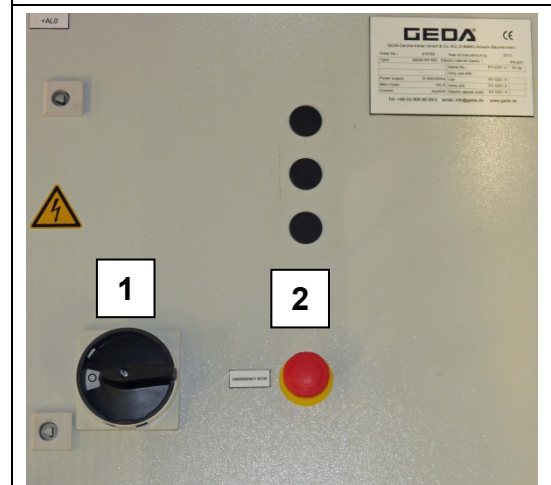
For joystick control in the car

- 1 = **Main switch**
Switches the hoist on or off at the beginning/end of work or if there are faults or for servicing.
- 2 = **EMERGENCY STOP**
- 3 = UP button
- 4 = **Stop Next Landing / EMERGENCY DOWN** button:
after approx. 30 seconds, the car moves to the ground station.
- 5 = DOWN button



For landing preselection or "Stop Next Landing" control in the car

- 1 = **Main switch**
Switches the hoist on or off at the beginning/end of work or if there are faults or for servicing.
- 2 = **EMERGENCY STOP**



10.3.6 Landing switch box

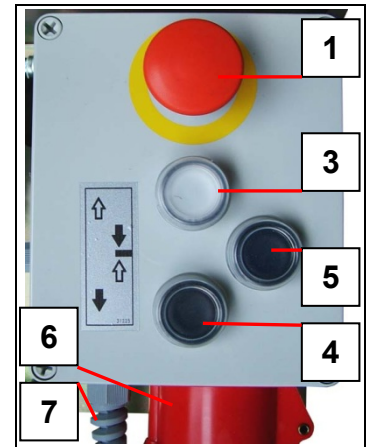
The car can be stopped at any time using the **EMERGENCY-STOP** button (1).

1 = **EMERGENCY STOP** button (does not engage)

3 = **UP** button

4 = **DOWN** button

5 = **Stop Next Landing (SNL)**
Stop at next landing level



The supply line (7) [7-pole plug, red] from the first landing level door switch box is plugged into the ground station at the switch box.

If there are several levels with level controls, the supply line (7) [7-pole plug, red] from the second level is plugged into the socket (6) on the control of the level below.



The dummy plug is always changed over from the switch cabinet of the ground station to the top landing call box.

10.3.7 Car doors

Vertical sliding door

- Carefully fully open or close the door in the centre of the plate.



Vertical sliding door with ramp



Must not be used:

- in USA (ANSI A10.4) and Australia (AS 1418.7).
- in other countries / states, in which the standards ANSI A10.4 and AS 1418.7 are applicable.
- For hoists with an operating speed of more than 42 m / min.

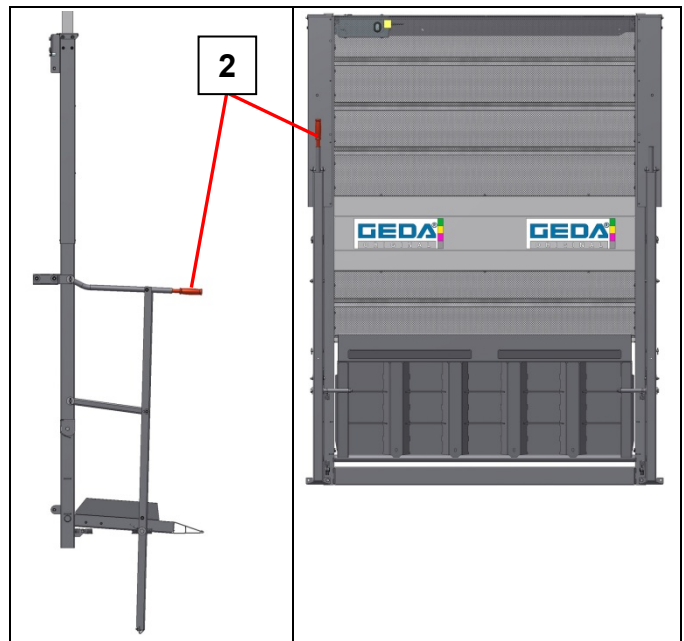
Opening from the inside:

- Carefully open or close the door in the centre of the plate.

Ramp automatically rises/lowers.

Opening from the outside:

- Open door using the handle (2).



The ramp must safety rest on the landing floor and transition plate of the landing level safety door.



The handle must be installed on the left or right depending on the location of the landing door.

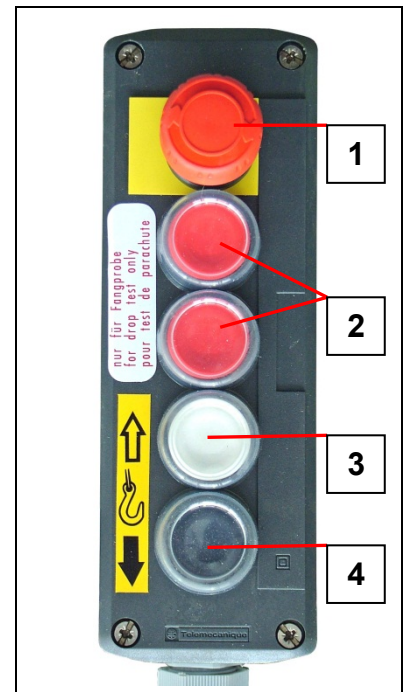
10.4 Special mode

In addition to the operating and control elements of normal operation, the following operating and control elements are used exclusively for particular operating conditions (faults, installation etc.) by personnel authorised to do so.

10.4.1 Drop-test control

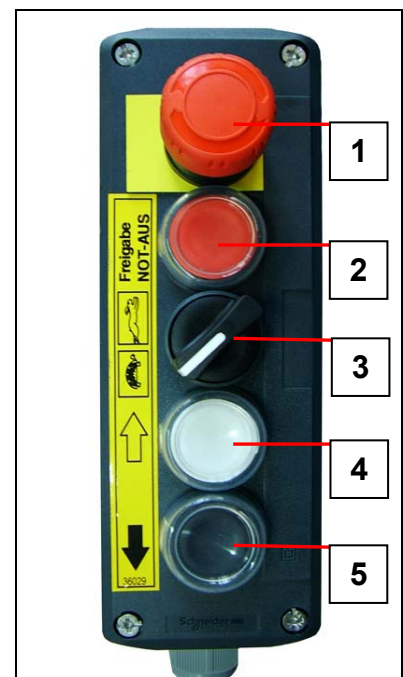
Used to test the safety gear with a drop test.
The drop-test control unit must be kept locked up by the operating company.

- 1 = **EMERGENCY STOP**
- 2 = **Brake release** buttons
- 3 = **UP** button
- 4 = **DOWN** button



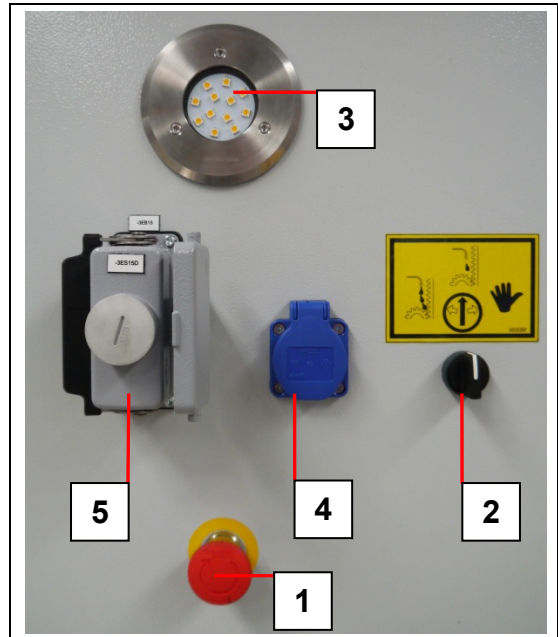
10.4.2 Assembly control

- 1 = **EMERGENCY STOP**
- 2 = Release of the **EMERGENCY STOP** button
(Before the command to move, press and hold until the ascent or descent has finished.)
- 3 = Speed selector switch
Normal / Slow
- 4 = **UP** button
- 5 = **DOWN** button



10.4.3 Control unit on the roof of the car

- 1 = **EMERGENCY STOP**
- 2 = Triggers a lubricating pulse
- LEFT = increased lubricating impulse
- MIDDLE = normal lubricating impulse
- RIGHT = manually activating lubricating impulse*)
- 3 = **EMERGENCY lighting**
- 4 = SCHUKO® socket
230 V / 6 A
- 5 = Connector
Dummy plug in normal mode /
assembly control / drop test control



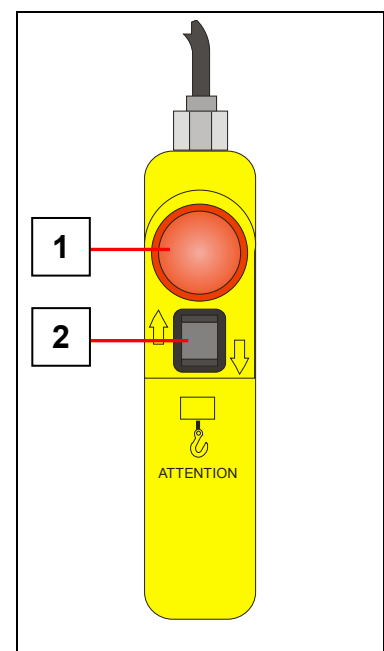
Example

- ☞ **Assembly mode / Assembly control is plugged and hold the button 10 seconds in this position**
-> 20 minutes permanent lubrication.
- ☞ **Assembly mode / Assembly control is plugged:**
-> The lubrication facility automatically lubricates with increased impulse while driving.

10.4.4 Assembly crane control unit

This control unit is permanently connected to the boom truck.

- 1 = **EMERGENCY STOP** (for assembly crane)
only switches off the assembly crane.
- 2 = Rocker switch for **UP** and **DOWN**



11 Safety and emergency equipment

Extensive safety and emergency equipment guarantee that people are efficiently separated from any hazards.

The hoist has the following safety and emergency equipment:

- Base enclosure
- Safety gear
- Car door lock
- Intercom system
- Locks to prevent unauthorised use
- EMERGENCY STOP
- EMERGENCY limit switches
- EMERGENCY lighting
- EMERGENCY lowering device

11.1 EMERGENCY STOP

Press EMERGENCY STOP only in an emergency.

The hoist has 5 EMERGENCY STOP buttons:

- Car control unit
- Car roof (maintenance control)
- Ground-station switch box
- Drop-test control
- Assembly control

Triggering an EMERGENCY STOP/hoist shut-down in events of emergency



- Manually press the **EMERGENCY STOP**.

End the EMERGENCY STOP situation

- Manually pull out the **EMERGENCY STOP**.



11.1.1 Defect after an EMERGENCY STOP situation

If an **EMERGENCY STOP** situation cannot be rectified, the hoist must be turned off at the mains switch and secured against unauthorised switch-on. Inform the supervisor.

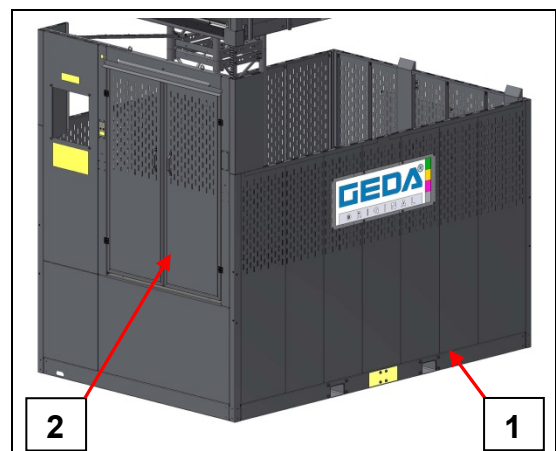
	 DANGER
	<p>Danger to life Due to the hoist being switched on during maintenance/servicing tasks or if there is a defect. Secure the main switch with a padlock against switching on.</p>

11.2 Enclosure

The enclosure secures the lowest stop position against unauthorised access. The door can only be opened if the car is stationary at this stop position. Shut down the hoist immediately if the door lock is defective.

	 DANGER
<p>Danger to life Car creates a crush hazard. Never remain inside the enclosure during operation. When working inside the enclosure switch off the main switch and secure against switching on. Never enter the enclosure of the second car while it is operation.</p>	

Enclosure (1) with door (2)



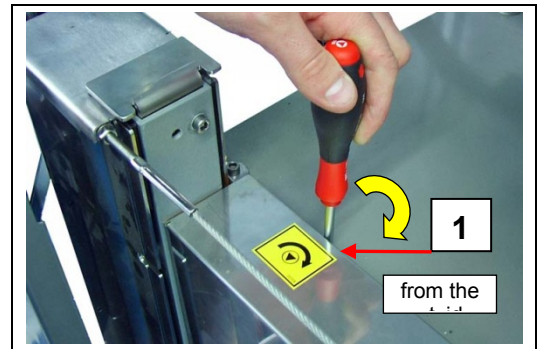
11.3 Safety gear

The safety gear (1) protects the car against dropping without braking, e.g. in the event of gear damage.



11.4 Locking sliding door of car

Secures the door of the car against opening during travel.
The door can only be opened at a stop position.



Emergency interlock release

- Push a triangular wrench (1) into the lock and turn clockwise until you can open the sliding door.
- The triangular wrench is located in the box for the documents and tools.

11.5 EMERGENCY limit switches

The EMERGENCY limit switch stops the car at the top or bottom end position. This prevents the car from moving past the top end position, for example.

11.6 Locks to prevent unauthorised use

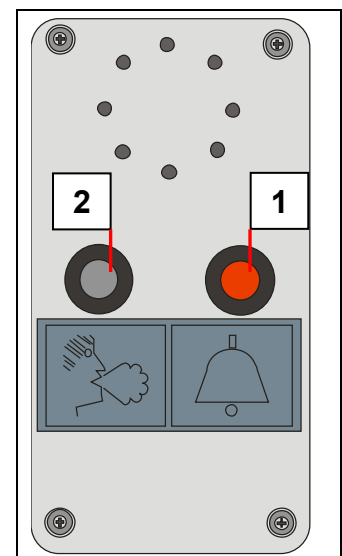
Areas with limited access (e.g. the roof hatch and switch boxes) are secured with locks.

11.7 Intercom system

The intercom system is located in the car and at the enclosure. It is used for communication during an emergency.

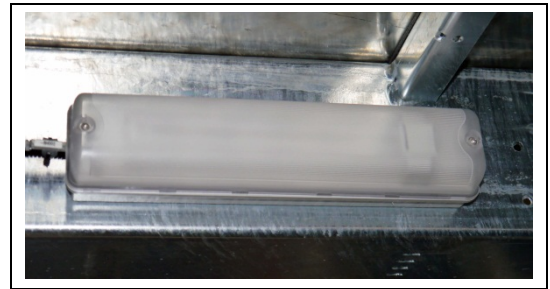
- Press the red button (1) to send a call signal.
- Press and hold the black button (2) to speak to the other person.

The black button must be released to hear the other person.



11.8 Lighting

Located in the car.

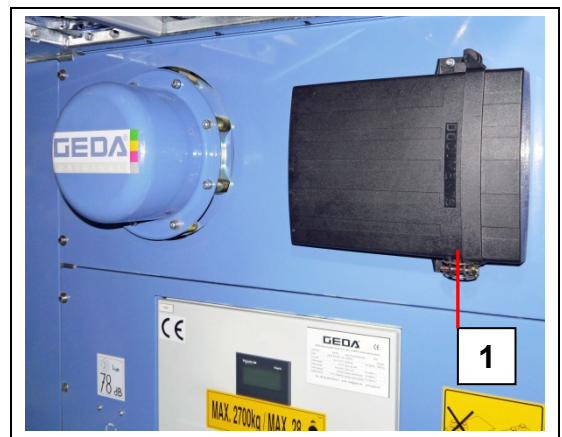


The emergency lighting inside the car and on the car roof turns on automatically when the mains voltage is interrupted.

11.9 Box for documents and tools

The box for the documents and tools contains:

- Triangular wrench to unlock the trapdoor in the roof.
- Equipment for adjusting the track rollers
 - 2 x open-end spanner AF 50/46
- Equipment for resetting the safety gear.
 - 1 x Ring spanner AF 55
 - 1 x Hexagonal offset screwdriver 6 mm
 - 1 x Hexagonal offset screwdriver 8 mm
 - 1 x Hexagonal offset screwdriver 10 mm
- Centring aid for trailing-cable guide









The document and tool box should contain.

- The instruction manual for the hoist
- Spare parts lists
- Circuit diagrams
- Operating instructions of the operating company
- Rescue plan of the operating company

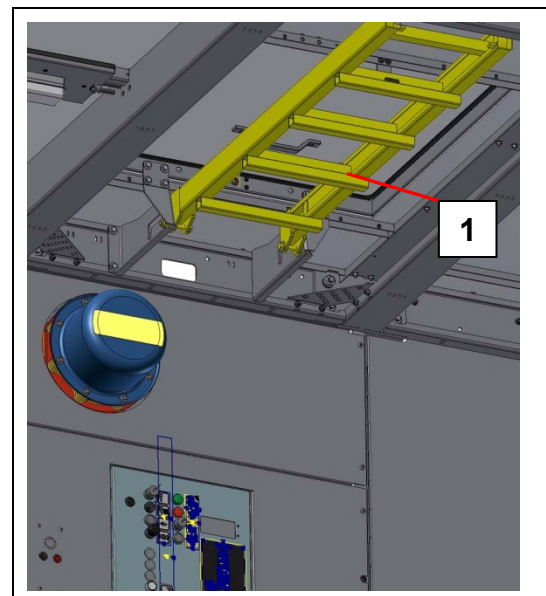
11.10 Roof hatch and ladder

The car roof can be accessed via the ladder (1) and the roof hatch (4) for maintenance, repair, assembly tasks, or to evacuate people.

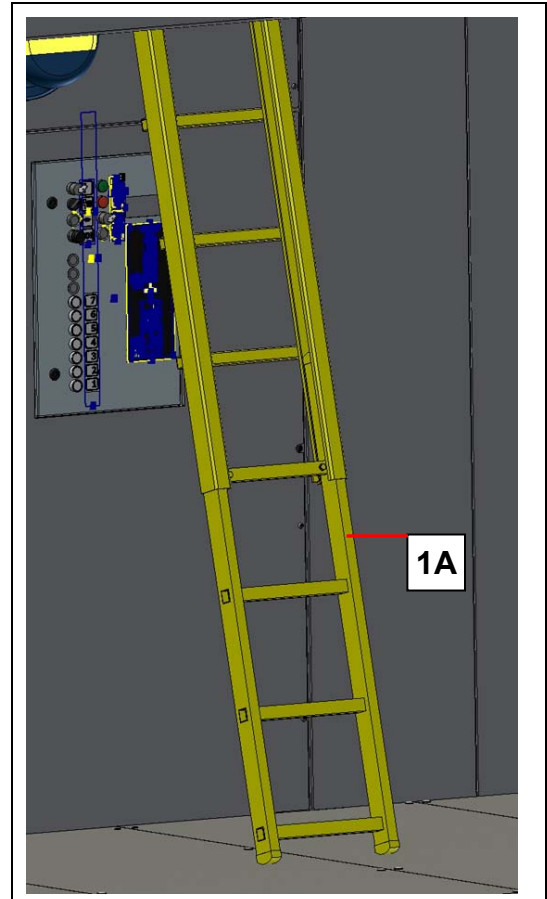
		DANGER
	<p>Danger to life Fall from the ladder. Only one person allowed on the ladder at a time. Always hold on with at least one hand. Always face the ladder to ascend and descend. Keep the ladder free of dirt and soiling.</p>	

		DANGER
	<p>Danger to life Fall from the roof of the car. Access only in an EMERGENCY or for servicing/maintenance work.</p>	

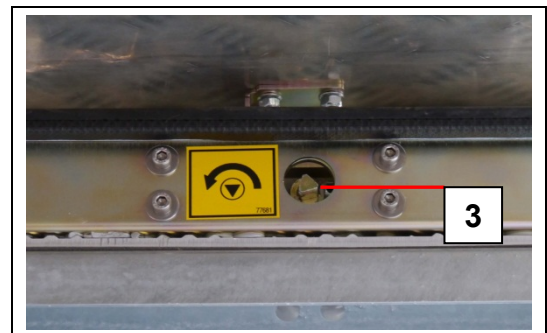
- Unhook the ladder (1) and fold downwards.



- Fully pull the extendible ladder (1A) from the ladder until it engages.

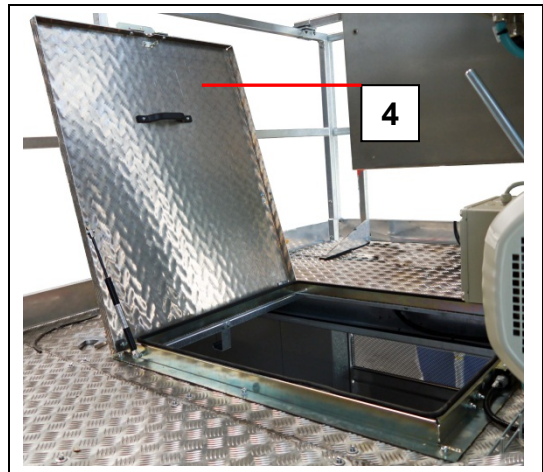


- Take the triangular wrench from the document and tool box in the car and place it on the triangular bolt of the roof lock (3).
- Unlock the lock (3) by turning the triangular wrench anti-clockwise.

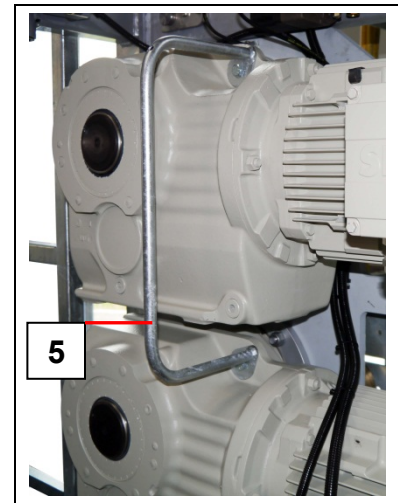


The roof hatch can be opened from the outside without a tool.

- Open the roof hatch (4) and, if necessary, secure it against shutting using appropriate measures, e.g. by a strong wind.



A bar (5) is installed to ensure safe entry onto and exit from the roof.



11.11 Releasing the motor brakes (EMERGENCY lowering device)

Releasing the drive brake is used exclusively for reaching the next landing level down in an emergency. This enables people trapped in the car to evacuate themselves.

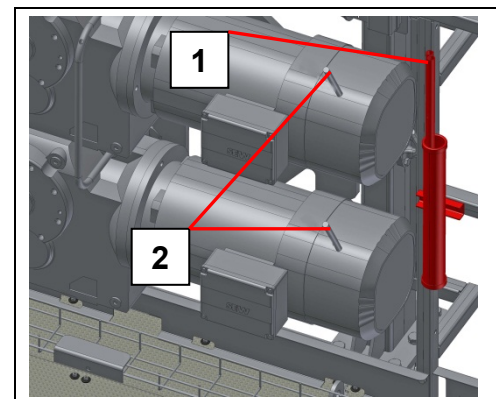


WARNING

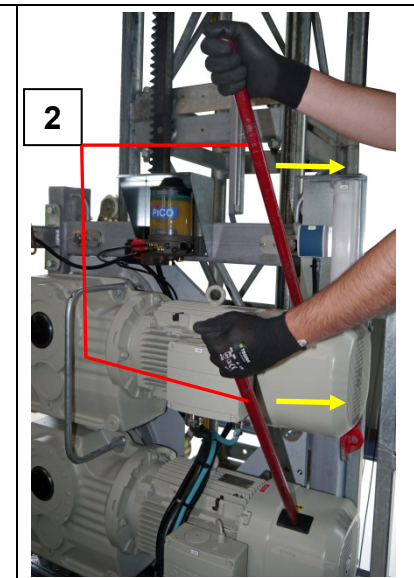
Triggering the safety gear by lowering too quickly. This disables the car which must then be subsequently enabled. Only lower the car very slowly.

The drives are located on the roof of the car.

- Remove the extensions (1) for the brake release lever (2) from the bracket and place over the brake release lever (2).



- Carefully release the motor brake by pulling on the extended brake levers (2). Car glides downwards.



After every 3.3 – 6.6 ft-(2 metres) of lowering, stop for approx. 2 minutes to avoid overheating the brakes.

- After the emergency descent, replace the extensions (1) in the bracket.

12 Rescuing persons trapped inside

Rescue may become necessary if, e.g.

- there is no mains voltage.
- malfunctions in the electrical system.
- the drive has failed.
- the safety gear has triggered.



WARNING

If the hoist supervisor does not feel sufficiently qualified to organise and carry out the rescue, the relevant authorities must also be notified (fire brigade, technical support, factory security office).

12.1 Basic conduct in the event of a rescue/malfunction

- Remain calm and do not act hastily.
- Get an overview of the situation.
- Keep unauthorised persons away.
- Contact any persons trapped in the car.
- Try to find out what has caused the malfunction/defect in the system.
 - Power supply failure (emergency lighting on).
 - Safety gear triggered.
 - If appropriate, error code on the landing display
- Inform any people trapped in the car about the further procedure.
- Inform your supervisor about the malfunction.
- Inform any rescue services.

The sequence of measures can/must be varied by the hoist supervisor/rescue personnel depending on the specific situation.

12.2 Rescue action plan

Persons in the car:

Action 1: Self-rescue with a **reference run**.

Action 2: Self-rescue using the **EMERGENCY lowering device**.

Action 3: Request help.

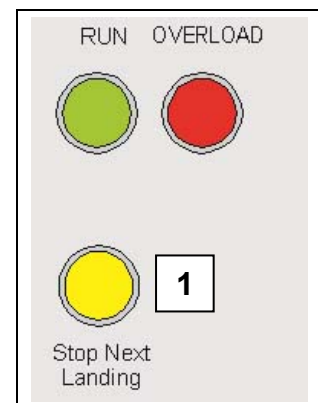
Action 4: Carry out retrieval according to the emergency plan of the operating company.

The following will explain the individual measures of the plan.

12.3 Rescuing persons from the car

Action 1: Self-rescue with a reference run

- Press and hold the yellow **button (1)**.
after approx. 30 seconds, the car moves to the ground station.
- Exit the car at the ground station.



Action 2: Self-rescue using **EMERGENCY** lowering device

To access the car roof, refer to Section 11.10.

For operating the **EMERGENCY** lowering device, refer to Section 11.11.


Action 3: Request help



- Using the intercom, contact the ground station.
- For operating the intercom, refer to Section 11.7.

Action 4: Carry out retrieval according to the emergency plan of the operating company.

See operating company's emergency plan.

13 Malfunctions - Diagnosis – Repair

	WARNING
	<p>Only have troubleshooting and fault elimination carried out by authorised personnel trained especially for this kind of work.</p> <p>Before troubleshooting, lower the car (if possible) and unload!</p> <p>Immediately discontinue operation if faults occur that endanger operational safety!</p>

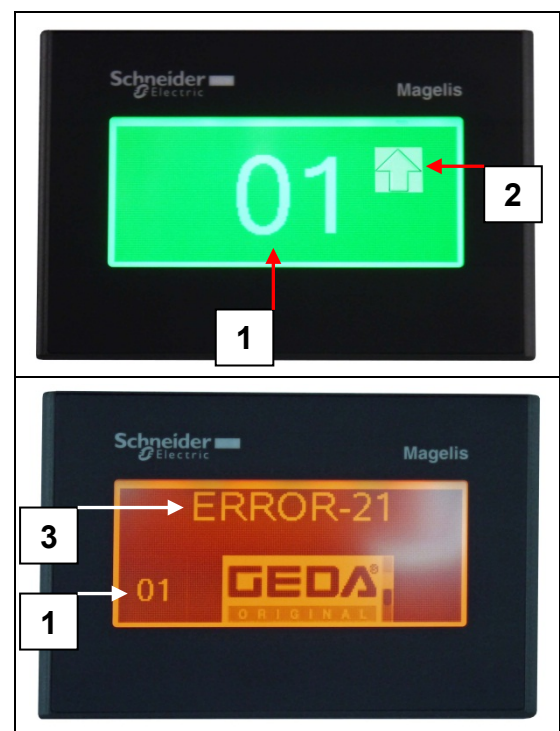
	 DANGER
	<p>Electric shock</p> <p>Before working on the electrical installation of the construction hoist, switch off and lock the main switch. For safety, disconnect the mains plug.</p>

13.1 Display module

The display module indicates the direction of travel and provides quicker and easier identification of the switching status of the limit switch and errors in the system.

- 1 = Landing indicator*
- 2 = Direction of travel indicator
- 3 = ERROR code

*For hoists with no landing limit-switch approach bar installed, **00** always appears as the landing indicator.



Actions for ERROR indications

- ERROR code displayed identifies and rectifies the fault.
- Wait until the control is automatically enabled.

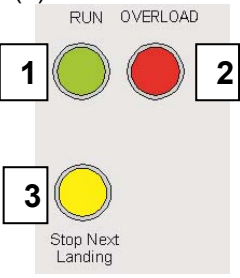
Significance of the symbols and number codes

Display	Explanation
↑	Ascend
↓	Descend
01	Actual position
ERROR 03	Door "A" open
ERROR 04	Door "B" open
ERROR 05	Door "C" open
ERROR 06	Door "D" / "E" open
ERROR 07	Enclosure door open / setting mechanism activated
ERROR 08	EMERGENCY STOP line of the ground station is interrupted (EMERGENCY STOP ground station, landing-level safety door control or dummy plug)
ERROR 10	EMERGENCY LIMIT UP car moved too high
ERROR 11	EMERGENCY LIMIT UP climbing formwork
ERROR 12	EMERGENCY LIMIT DOWN car moved too low
ERROR 13	EMERGENCY LIMIT DOWN climbing formwork
ERROR 14	Safety gear has triggered
ERROR 15	Roof hatch open
ERROR 16	Assembly bridge Roof 1 (extended)
ERROR 17	Assembly bridge Roof 2 (extended)
ERROR 20	EMERGENCY STOP ground station
ERROR 21	EMERGENCY STOP car control
ERROR 22	EMERGENCY STOP roof switch box
ERROR 23	Assembly / drop test control active
ERROR 25	EMERGENCY STOP landings
ERROR 26	EMERGENCY STOP buffer / dummy plug
ERROR 27	EMERGENCY STOP Dummy plug roof
ERROR 30	Car overloaded
ERROR 31	Interlock cam (activating rail is extended)
ERROR 32	Underrun protection, cable carriage (collision car with cable carriage)
ERROR 33	Wind sensor (excessive wind)
ERROR 34	Cold package (temperature < -20 °C / -4°F)
ERROR 35	Motor temperature excessive
ERROR 36	Temperature braking resistance too high
ERROR 37	Frequency inverter fault
ERROR 38	Lubrication device: lack of grease
ERROR 39	No mains voltage
ERROR 40	Battery charging fault
ERROR 41	Fuses -3F002 - -3F300 (in the roof switch box)
ERROR 42	Assembly crane (disconnection open)
ERROR 47	Fault in lubrication device "malfunction"
ERROR 48	Monitoring motor brake
ERROR 49	Car control not connected

Display	Explanation
ERROR 50	Maintenance / Servicing
ERROR 51	Fault in lubrication device: "slow travel"
ERROR 52	Fault in lubrication device: "No travel upwards possible"

13.2 Faulttable

Possible faults and the appropriate remedial action are given below.

Fault	Cause	Remedial action
<p>Green control light (1) off</p> 	<p>Mains plug disconnected Mains fuses</p> <p>Main switch off</p> <p>Illuminant defective</p> <p>Fuses in the switch box ground station okay</p> <p>Deficiency of grease in the lubrication device (more than 4 operating hours)</p>	<p>Connect mains plug Check mains fuse and replace / switch on if necessary</p> <p>Switch on the main switch</p> <p>Replace illuminant</p> <p>Check / correction</p> <p>Check / Change grease cartridge</p>
<p>Green control light (1) illuminates Car does not move</p>	<p>EMERGENCY STOP button (at a control point) pressed</p> <p>Sliding door of car open</p> <p>Enclosure door open</p> <p>Trapdoor open</p> <p>EMERGENCY limit switch has activated</p> <p>Locking bolts of the assembly crane are not removed</p> <p>Safety gear engaged</p>	<p>Unlock EMERGENCY STOP button</p> <p>Close sliding door of car</p> <p>Close enclosure</p> <p>Close trapdoor</p> <p>Refer to Car moved too high / too low</p> <p>Remove locking bolts (refer to Chapter 13.2.4)</p> <p>Reset safety gear (refer to maintenance instructions)</p>
<p>Red control light (2) illuminates</p>	<p>Overload protection has triggered</p> <p>Error code in the display module</p>	<p>Reduce load until the control light (2) goes off</p> <p>Indicated fault is rectified</p>
<p>Motors do not generate full power</p>	<p>Voltage drop of more than 10 %</p>	<p>Select a supply cable or extension cable with a greater cross section</p>
<p>Lifting platform moved too high (Refer to Chapter 13.2.2)</p>	<p>Faulty sensor or distance to the approach bar too large</p> <p>Fault in the electrical system</p>	<p>Check/adjust sensor and replace if necessary</p> <p>Check system</p>
<p>Car moves too low (Refer to Chapter 13.2.3)</p>	<p>Faulty sensor or distance to the approach bar too large</p> <p>Fault in the electrical system</p> <p>Brake air gap is too large</p>	<p>Check/adjust sensor and replace if necessary</p> <p>Check system</p> <p>Adjust air gap</p>

Fault	Cause	Remedial action
Door to the base enclosure / car does not open	Car is not exactly at the ground station Switch / door lock defective	Move car until it is in front of the landing door Door EMERGENCY unlock. Replace defective lock / switch
Car does not stop at the landing. (Stop Next Landing)	Error detecting the landing approach bar Faulty sensor or distance to the approach bar too large	Use the button (3) carry out a reference run to the ground station (refer to Chapter 12.3) Check/adjust sensor and replace if necessary
Hoist is moving in reduced speed	Deficiency of grease in the lubrication device (more than 4 operating hours)	Check / Change grease cartridge

13.2.1 Motor is not producing full output

Voltage drop of more than 10 % of the rated voltage.

Select a supply cable with a greater cross-section.

The integrated thermoswitch switches off the frequency converter when overloaded. Work can continue after a certain cool-down period (possibly reduce load).



Refrain from repeated overheating/overloading. - Otherwise the service life of the motor/brakes will be shortened.

13.2.2 Lifting platform moved too high

The car emergency limit switch can reach the upper EMERGENCY limit switch bar if

- the sensing device is defective;
- there is a fault in the electrical system.

Action:

- Operate motor brake using the release lever (refer to Chapter 11.11)

13.2.3 Car moves too low

Cause

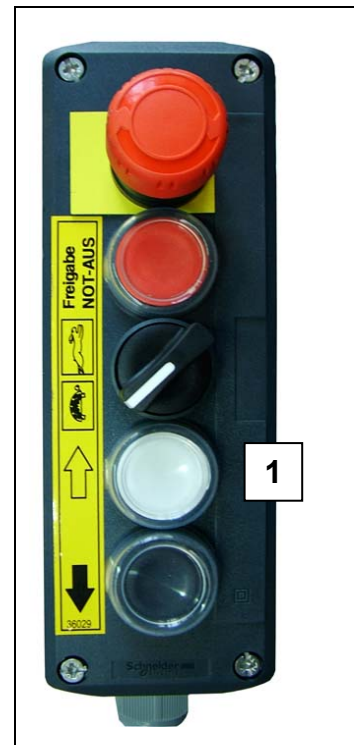
The emergency limit switch of the car can reach the lower **EMERGENCY** limit switch approach bar if

- the brake's air gap is too large,
- the sensing device is defective;
- there is a fault in the electrical system,
- the car is overloaded (overload protection),
- the car was lowered with the manual brake release.

Measures:

- Connect the assembly control to the switch cabinet on the car roof.
- Press the button **UP** (1).

The car now moves out of the **END** position.



☞ If this effect occurs repeatedly although the car is not overloaded, have the brake checked or adjusted by a qualified person.

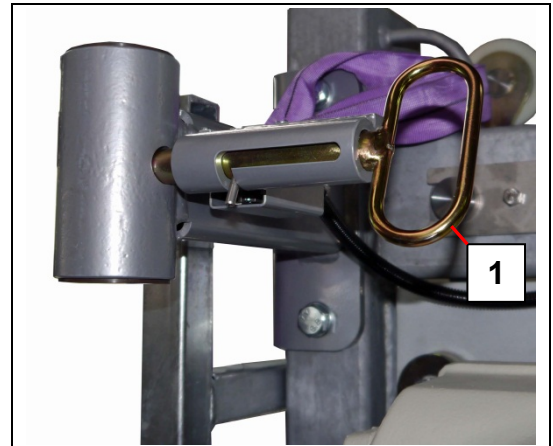
13.2.4 Monitoring locking of the assembly crane

During travel, the assembly crane must not swing into the path of travel (mast). Thus, this must be locked in a secure position.




The locking bolts (1) removed interrupt the safety circuit and the car will not move.

- Push the locking bolts (1) towards the bracket and lock.




The locking bolts (1) must be removed if no assembly crane is installed.

13.3 Repair

	WARNING
	<p>Repair tasks must only be carried out by trained and competent persons because they require special expert knowledge and skills. Neither is communicated in this operating manual.</p>

13.3.1 Ordering spare parts

	WARNING
	<p>Spare parts are ordered exclusively through the manufacturer/representative. Only original GEDA spare parts may be used. Only original GEDA spare parts guarantee full function as well as safety and reliability. The use of non-approved spare parts releases GEDA from any liability for damage arising as a consequence of any such use.</p>

When ordering spare parts please provide the following:

- Type
- Year of manufacture
- Serial No.
- Item number
- Name of the item
- Operating voltage
- Quantity required

The nameplate is located on the trolley of the base unit.



Spare parts must conform to the technical specifications of the manufacturer! Only use original spare parts from GEDA.

For service or repair work, please contact our customer service department:

For the sales and customer service address, refer to Chapter 2



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BL148 GB Edition 11/2017