Assembly and Operating Manual

GEDA®
MULTILIFT P18
STANDARD / COMFORT

Construction Hoist

For personnel and loads

Load bearing capacity: 1500kg / max.18 persons

Year of manufacture: .....

Serial number: .....

GEDA® ORIGINAL

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1 Preface

Who should read this Assembly and Operating Manual?

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

What does this Assembly and Operating Manual contain?

In this Assembly and Operating Manual, you will find instructions regarding

- Authorised intended utilisation
- Residual risks
- Safety
- Installation
- Operation
- Troubleshooting
- Customer service

This Assembly and Operating Manual communicates important information as a prerequisite for working safely and economically with the machine. It is assumed that the machine is equipped with all possible options.

What should be done immediately!

Read this Assembly and Operating Manual carefully before assembly and commissioning, observe all notes and, especially, the safety instructions.

What is not contained in this Assembly and Operating Manual?

This Assembly and Operating Manual is not a repair manual!

You will not find documents about repair work in this Assembly and Operating Manual.

What should be considered when re-selling the machine?

When selling the machine, provide this Assembly and Operating Manual together with the annual inspection entries and replacement parts list to the purchaser.

2 Safety

2.1 Explanations of symbols and notes

2.1.1 Health and safety symbol

This symbol is found next to all safety instructions where there is a risk to the life and limb of persons. Observe these instructions and proceed with caution!

2.1.2 Attention note

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

2.1.3 Note

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

2.2 General safety

The machine has been manufactured according to the current state of technology and is safe to operate. However, due to its work processes, the machine has sections and components that cannot be protected without impairing the function and operating capacity of the unit. For this reason, good personal safety practice is required to protect personnel and equipment. Risks are associated with this equipment if it is used improperly by untrained personnel or in a manner for which it was not intended or authorised.

- Prior to performing transport, assembly, commissioning, dismantling or maintenance activities, read and faithfully adhere to the machine's Assembly and Operating Manual

First read the Assembly and Operating Manual and ensure that it is understand; during work is too late!

- Maintain the Assembly and Operating Manual in the immediate vicinity of the machine.
- Supplementing the Assembly and Operating Manual are the generally valid, legal and other binding provisions for accident prevention and environmental protection respective to the country where the machine is being operated (e.g. wearing personal protective equipment such as head gear, safety shoes, etc.).

- Comply with attached notices and warning signs.

- Work only while wearing close fitting clothing, safety shoes and head gear. Do not wear any jewellery such as necklaces and rings. There is a risk of injury from getting caught or being pulled in.
- In the event of injury or accident, obtain medical assistance immediately.

Consequences of not complying with safety instructions

Non-compliance with safety instructions can result in danger both for personnel as well as for the environment and the machine. Non-compliance can lead to the forfeiture of any damage compensation claims.

2.3 Operating safety

- The machine must be set up and dismantled according to this assembly manual and under supervision by a qualified person appointed by the contractor.
- Install the equipment on a stable foundation, aligned in a precisely vertical position.
- Observe the load bearing capacity of the equipment.
- Only use the machine in a technically fault-free condition; use in a safety and risk conscious manner while observing the operating manual.
- Immediately remedy faults that could impair safety.
- Shutdown the machine immediately if there are safety-relevant changes to the unit or its operating behaviour and report the fault to the company management or its representative.
- Do not make any changes, attachments or modifications to the machine. This also applies to the installation and adjustment of safety devices, such as limit switches.
- Do not change, remove, bypass or bridge safety devices.
- Immediately replace damaged or removed notices and warning signs, as well as safety labels.
- If work is interrupted, switch the machine off at the main switch and secure it with a padlock against being switched back on.

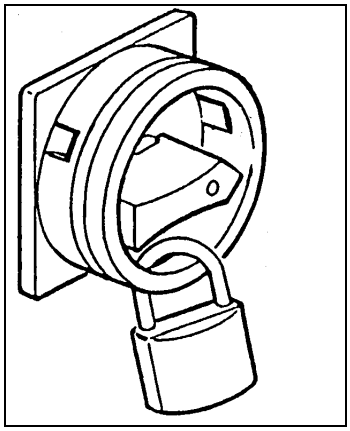


Fig. 1 Main switch

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

- Shutdown and lower the machine when wind speeds are >72 km/h (43 mph). (Wind force 7-8, wind moves trees and impedes pedestrians!)

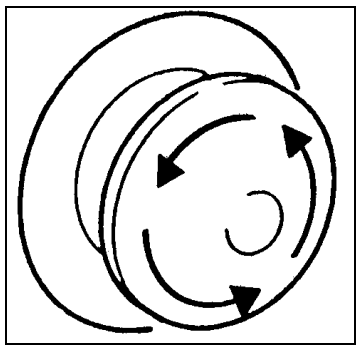


Fig. 2 EMERGENCY-STOP push-button

2.3.1 Inspection procedures

The **GEDA MULTILIFT P18** is a machine in compliance with the EC machinery directive 2006/42/EC. A copy of the conformity declaration is reproduced in this operating manual.

Tests after each installation → see section 7.6

The following tests have already been carried out at the factory:

- Dynamic test with 1.25 useful load.
- Electrical tests according to EN 60204
- Function tests.

Reoccurring inspections:

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

NOTE

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

- The results of the recurring inspection must be recorded in writing in the appendix of this operating manual.

2.3.2 Safety notes for assembly, operation and transport

- Before starting work at the place of use, acquaint yourself with the working environment, e.g. obstacles in the work and traffic area, ground load bearing capacity and necessary safeguarding of the installation site from public transport.
- Only load and transport equipment that has been carefully dismantled, packed and securely lashed down.
- Categorically secure the machine against unauthorised use (disconnect from power)!
- Position the load securely on the Lift cage. Any material that could slip or fall must be secured.
- Do not stand or work beneath the Lift cage!
- Do not place objects under the Lift cage.
- Evenly position loads in the Lift cage, observe max. load bearing capacity.
- Store material at a safety distance of min. 50cm from moving parts of the machine.
- Any accompanying persons must comply with instructions given by the operating person; in particular, they must not step over material that is being carried in the Lift cage.
- Check for externally recognisable damage, noises and defects. Report any changes or malfunctions detected immediately to the company management or its authorised representative. If necessary, shutdown and secure machine immediately.

2.3.3 Safety instructions for maintenance

- Switch off the power (e.g. remove mains plug) before maintenance work.
- The Lift cage must be secured using appropriate means (setting mechanism) when work is carried out under the Lift cage.
- Only allow servicing and repair work to be carried out by authorised, qualified persons. For example consider also those particular dangers arising from working on electrical systems.
- Properly reinstall all dismantled safety devices once maintenance work is complete.
- Arbitrary modifications or changes to the machine impair safety and are not permitted.
- Replacement parts must correspond to the technical requirements of the manufacturer.
- Recommendation: Only use original GEDA spare parts.

2.4 Promoting use of operating instructions

Operating instructions are rules compiled by a company to ensure safe operational procedures. These refer to binding instructions issued by a company within the context of its management rights. Employees are obliged to follow these instructions in accordance with accident prevention regulations.
The general obligation of the company to create and disseminate operating instructions must be derived from the accident prevention regulation "General provisions".
According to this guideline, the contractor must fulfil the instructions for preventing work-related accidents and must instruct the insured party about risks occurring during their work and the measures for averting said risks. The company can fulfil these requirements by means of operating instructions.
The operating manual provided here must be supplemented by national regulations regarding accident prevention and environmental protection! E.g.:
EN 60204-1 and EC directive

- 89/655/EEC regarding minimum requirements for safety and health protection for the use of work equipment by employees during work.
- 92/57/EEC regarding minimum requirements for safety and health protection for temporary or non-stationary work sites.
- 90/269/EEC regarding basic safety instructions.

2.5 Employees must be trained in the following:

- The potential risks when working with the Hoist and the necessary protective measures and codes of conduct including instructions in the case of danger and about first aid.
- Type and scope of regular inspections to ensure a safe working environment (see section 11).
- Maintenance
- Rectification of malfunctions
- Environmental protection
- Safe handling of electrical equipment.
- The user must ensure cleanliness and clarity at the place where the machine is set up by using instructions and checks.
- Responsibilities during set-up and tear-down (assembly/dismantling), operation and maintenance must be clearly defined and regulated by the operating company, and must be adhered to by all persons so that no unclear competencies arise with regard to safety.
- The operator must accept responsibility to operate the machine only in a fault-free condition. He/she is obliged to report immediately to his/her supervisor any changes occurring to the equipment that affect safety.
- Comply with attached notices and warning signs.
- The operator must ensure that no unauthorised persons are present on or near the machine.

3 Authorised intended use and scope of application

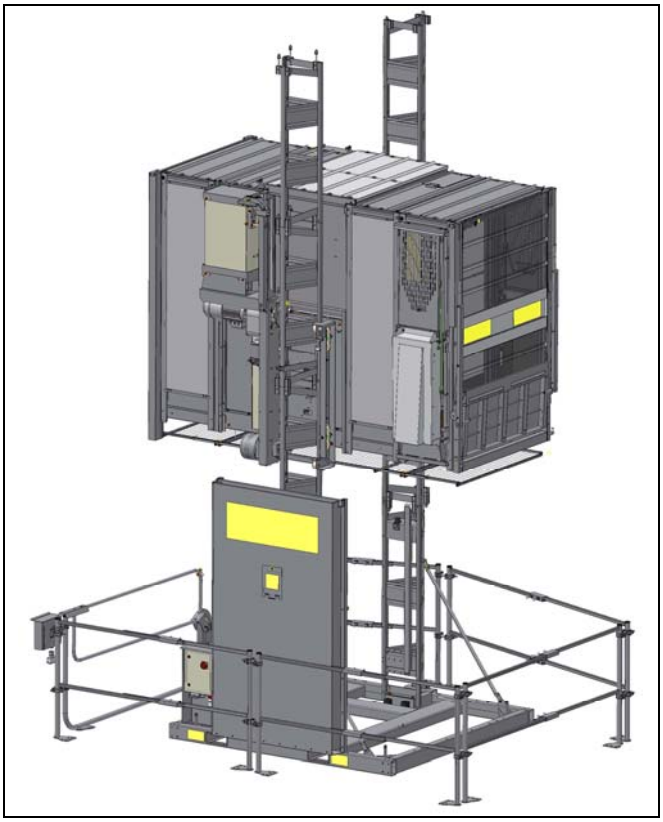
The machine is a Construction Hoist and is intended for provisional use on construction sites for transporting material and/or max. 18 persons, who can exit the Lift cage at installed and secured landing points.

- The MULTILIFT P18 is intended for provisional use on construction sites for transporting persons and material. It may only be used on construction sites by instructed personnel who can exit the Lift cage at installed and secured landing points.
- Landing level safety gates are absolutely necessary even when using it purely as a material hoist. The Hoist may only be operated once these Landing level safety gates have been installed!
- The maximum number of persons is limited to max. 18 (reduced to 14 persons with the Lift cage 2.0m x 1.4m).
- The Multilift P18 is controlled with relays (24 m/min.) or with a frequency converter (max. 40 m/min.).
- Operation is permitted only at wind speeds of up to 72 km/s (20 m/sec. ≈ wind force 7-8). If wind forces are greater, the Lift cage must be lowered to ground level and work must be stopped!
- The machine is equipped with an overload device which switches off the travel movement in both directions when the load capacity is exceeded; consequently a red warning lamp illuminates on the Lift cage control.

The Multilift can be operated with a low base enclosure (Standard) and with a 2.5 m high enclosure (Comfort).

MULTILIFT P18 STANDARD

- Base enclosure, 1.10 m high
- The control can be operated from the Lift cage, the ground station or the landing levels.



Exceptions:

- During assembly, only the Lift cage control is active. All other control points are switched off, only the EMERGENCY-STOP push-buttons remain functioning.
- During operation, the control at the upper landing levels can only be operated above the safety height of approx. 2 m. Downwards travel using this control unit is only possible down to 2.0 m above ground level.
- Travel within the safety range can only be carried out from the Lift cage or ground control unit. Since there is only a medium-high enclosure, an approx. 3 sec. warning tone is emitted before starting when in this range. An under-run protection is installed beneath the Lift cage, which stops the Lift cage if it comes into contact with obstacles on the descent.

- The MULTILIFT P18 STANDARD can be built up with or without clearance to the wall, depending on which sliding door design (with or without ramp) is mounted to the landing level entry side of the Lift cage. This Lift cage door also dictates which Landing level safety gates (with sliding doors or double doors) must be used.

MULTILIFT P18 COMFORT

- The Hoist is equipped with a 2.50 m high base enclosure.
- The Control system can be operated from the Lift cage, the ground station or the landing levels.

Exception:

- During assembly, only the Lift cage control is active, all other control points are switched off and only the EMERGENCY-STOP push-buttons remain functioning. During operation, the Control system can also be operated without restriction from the control console on the ground or from the upper landing levels.

- The MULTILIFT P18 COMFORT can be built up with or without clearance to the wall, depending on which sliding door design (with or without ramp) is mounted to the landing level entry side of the Lift cage. This Lift cage door also dictates which Landing level safety gates (with sliding doors or double doors) must be used.

3.1 Authorised intended utilisation provides that

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

3.2 Consequences of unauthorised utilisation of the equipment

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

3.3 Requirements of assembly personnel

The machine must be assembled, operated and maintained only by qualified persons who, based on their training, knowledge and practical experience, can guarantee proper handling of the machine and who are aware of the risks associated with it. These persons must be appointed by the contractor to carry out installation, dismantling and maintenance.

3.4 Operating personnel

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

- have been appointed by the contractor.
- have been appropriately trained and instructed in the risks.
- be familiar with the Assembly and Operating Manual.
- observe national regulations.

Residual risks

Despite all precautions taken, residual risks still exist.
Residual risks are potential, yet not obvious risks, such as:

- Injuries due to uncoordinated work methods
- Hazards from a malfunction in the control system
- Hazards from working on the electrical system
- Hazards from damage to the load carrying device
- Hazards due to an improperly secured load falling down
- Hazards due to high wind speeds (> 72 km/h - 43 mph)
- Hazards from entering and leaving the Lift cage.

4 Technical data

4.1 General data

GEDA® MULTILIFT P18	with two speeds	with frequency converter
- Drive output:	2 x 3.0/6.1 kW 400V / 50Hz	2 x 6.9kW 380V / 65Hz
- Drive power input:	2 x 7.5/13.8 A	2 x 16.0 Amp.
- Max. starting current:	approx. 95 / 65 A	
- Lifting speed:	24m/min. (12m in the lower safety area)	max. 40 m/min.
- Triggering speed of overspeed safety brake	approx. 32m/min.	approx. 45m/min.
- Drive traction power:	26000N	
- Max. assembly height:	100m	
- max. projecting mast length during operation:	6 m with 2.0 m x 1.4 m Lift cage 2 m with 2.6 m x 1.4 m Lift cage 2 m with 3.2 m x 1.4 m Lift cage	
- max. projecting mast length during assembly:	9.5m	
- Fastening distance:	max. 10m	
- Length of one mast element:	1.5m	
- Weight of one mast element:	44.4kg	
- Bolt tightening force:	150Nm	
- Distance of cable guides:	max. 6 m	
- Dimensions of sliding doors: clear gate width clear gate height	 1.36m 2.02m	
- max. dynamic pressure: during assembly during operation when shutdown	 q = 100 N/m² (45 km/h) q = 250 N/m² (72 km/h) EN12158-1 (Lift cage on ground)	
- Horizontal force when loading and unloading	Reduced to 7.5% load capacity as the loading ramp is lying on the landing level floor	
- Noise emission values: (measuring point in the Lift cage)	<78dB (A)	

- The machine is equipped with an overload device which switches off the travel movement in both directions when the load capacity is exceeded; consequently a red warning lamp illuminates on the Lift cage control.

4.2 Data depending on Lift cage dimensions

A 4.2.1 Data with 2.0 m x 1.4 m Lift cage

- Load bearing capacity: with overload warning light and control shutdown	**1500kg / 14 persons** (during assembly 500kg)	
- Inside dimensions of Lift cage [width (LW) x depth (L3) x height]	approx. 1.36m x 2.0m x 2.19m (width at assembly guard 1.33 m)	
- Weights:	**COMFORT**	**STANDARD**
Base unit with Lift cage and Cable box	2290kg	1890kg
(30 m flat cable)		
with 50 m flat cable	2300kg	1900kg
Flat cable per 25 m	+ 12.2 kg	+ 12.2 kg

A 4.2.2 Data with 2.6 m x 1.4 m Lift cage

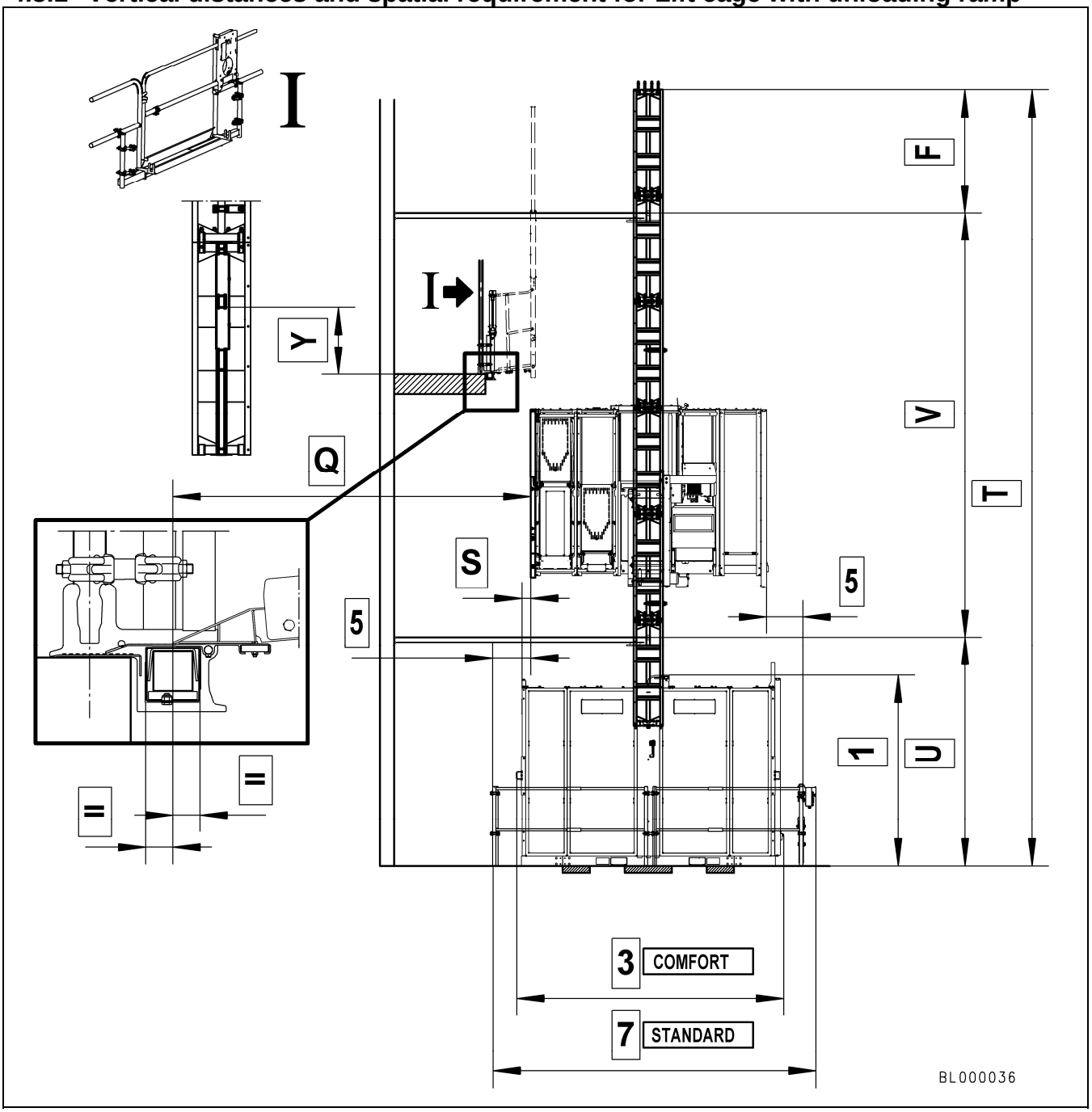
- Load bearing capacity: with overload warning light and control shutdown	**1500kg / 18 persons** (during assembly 500kg)	
- Inside dimensions of Lift cage [width (LW) x depth (L2) x height]	approx. 1.36m x 2,58m x 2.19m (width at assembly guard 1.33 m)	
- Weights:	**COMFORT**	**STANDARD**
Base unit with Lift cage and Cable box	2585kg	2090kg
(30 m flat cable)		
with 50 m flat cable	2595kg	2100kg
Flat cable per 25 m	+ 12.2 kg	+ 12.2 kg

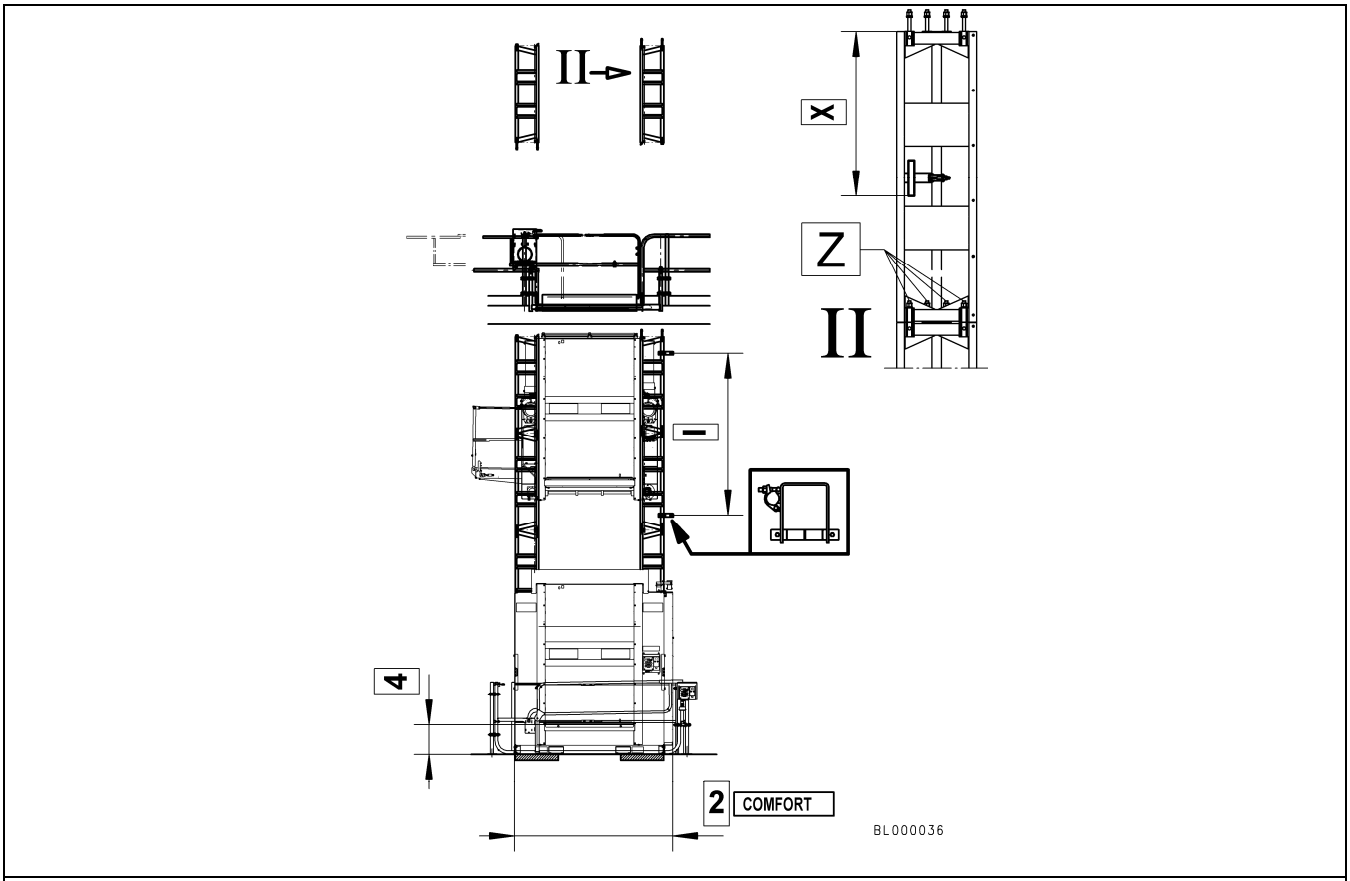
A 4.2.3 Data with 3.2 m x 1.4 m Lift cage

- Load bearing capacity: with overload warning light and control shutdown	**1500kg / 18 persons** (during assembly 500kg)	
- Inside dimensions of Lift cage [width (LW) x depth (L1) x height]	approx. 1.36m x 3,16m x 2.19m (width at assembly guard 1.33 m)	
- Weights:	**COMFORT**	**STANDARD**
Base unit with Lift cage and Cable box	2840kg	2230kg
(30 m flat cable)		
with 50 m flat cable	2850kg	2240kg
Flat cable per 25 m	+ 12.2 kg	+ 12.2 kg

4.3 Anchoring and spatial requirement for all Lift cage dimensions

4.3.1 Vertical distances and spatial requirement for Lift cage with unloading ramp

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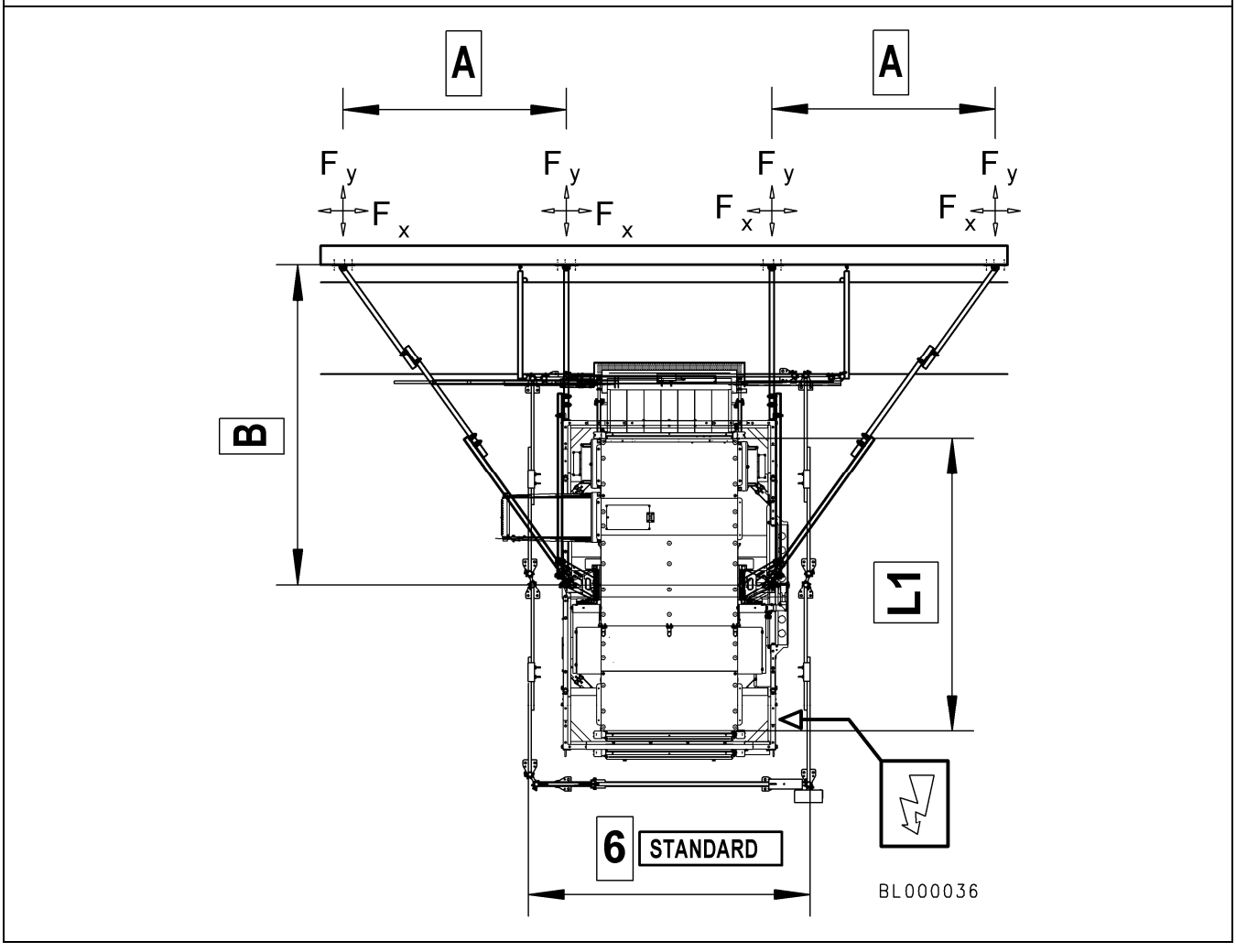
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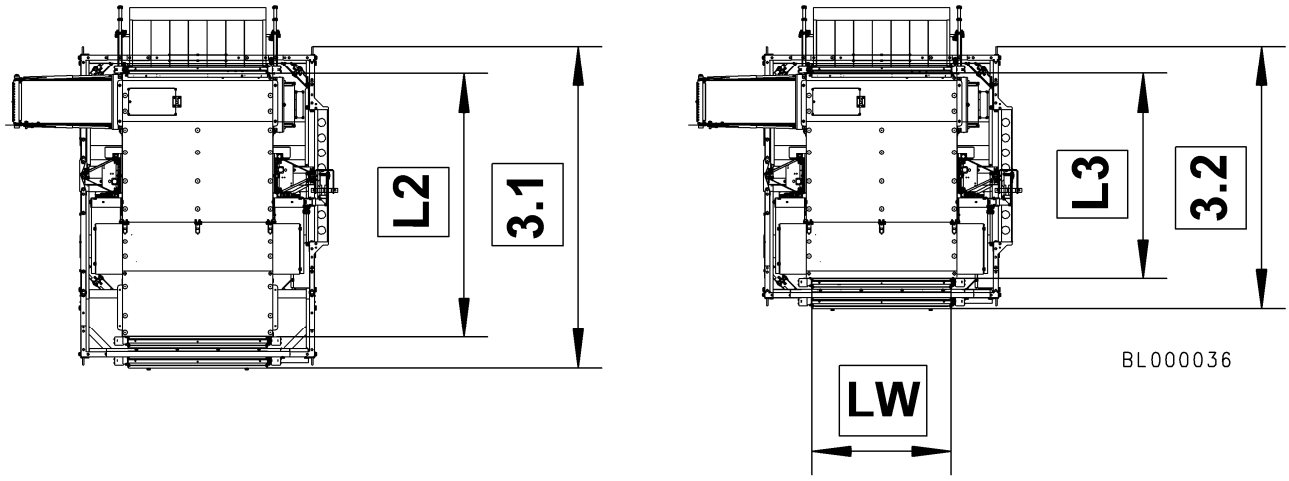
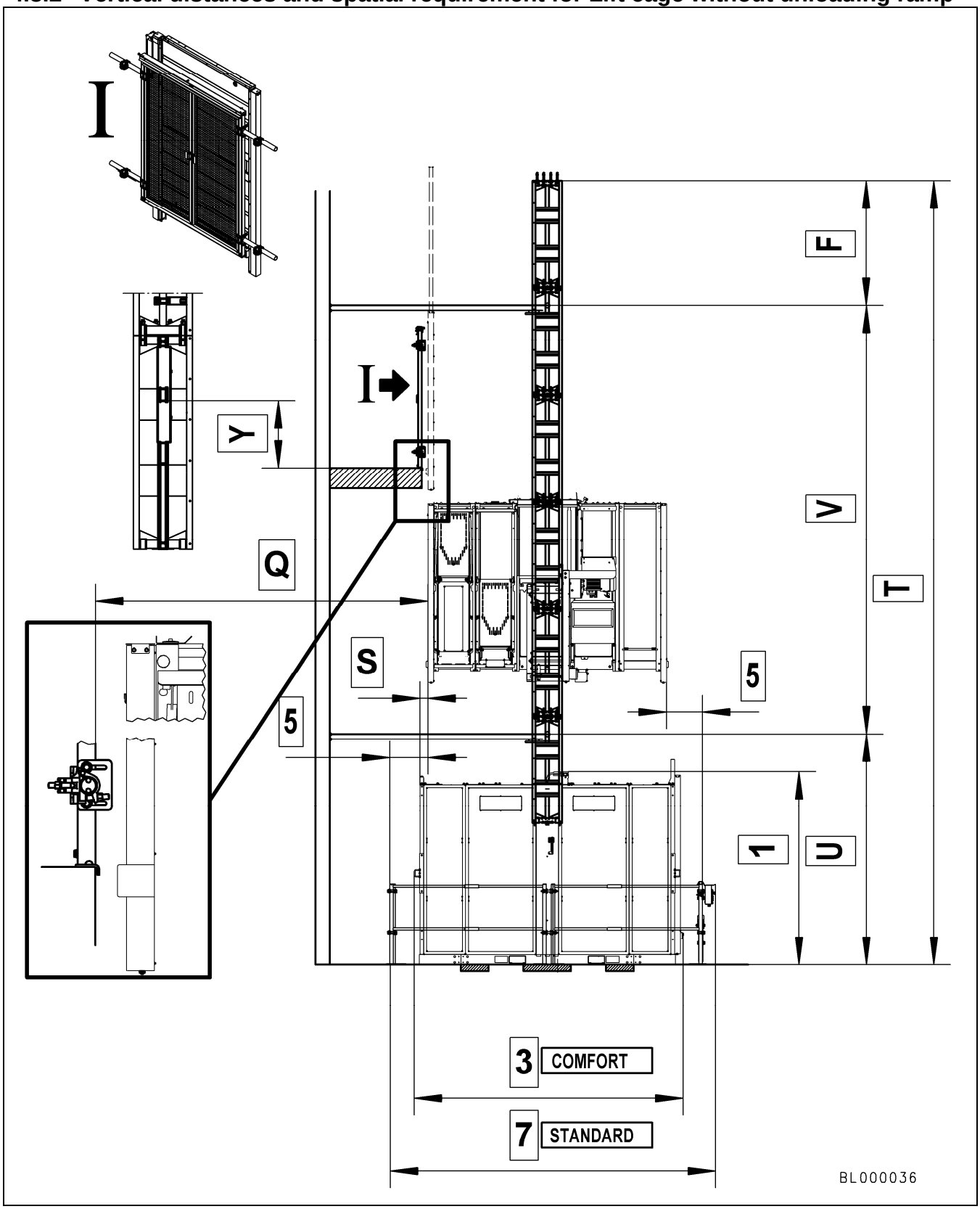


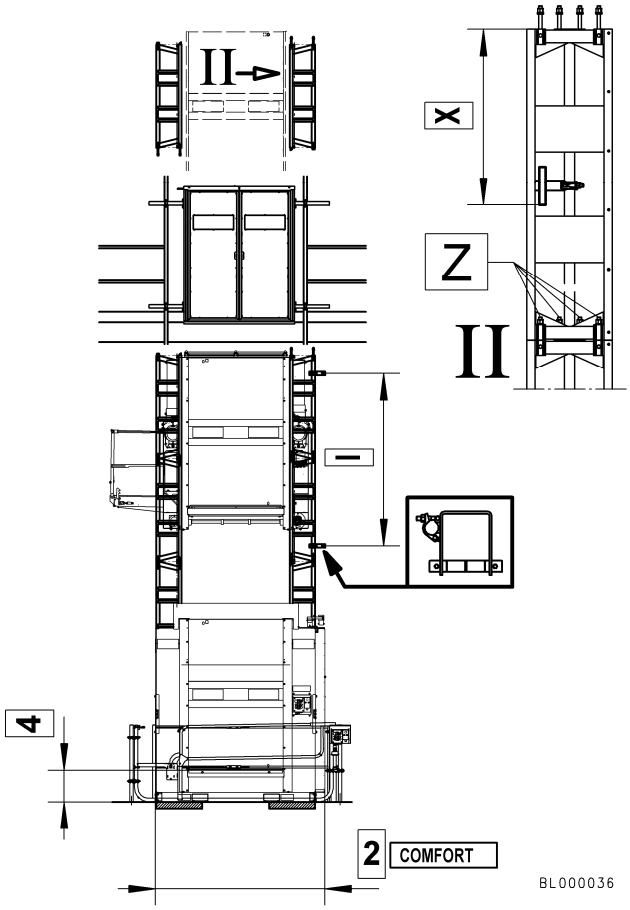
I	< 6,00m (19,684ft)
Q	0,57m (1,87ft)
S	0,12m (0,393ft)
T	max. 100m (328ft)
U	≤ 8,00m (26,247ft)
V	≤ 10,00m (32,8ft)
X	> 1,10m (3,609ft)
Y	0,5m (1,64ft)
Z	150Nm /SW24

1	2,70m (8,858ft)
2	2,4m (8,005ft)
3	3,74m (12,270ft)
3.1	3,16m (10,367ft)
3.2	2,58m (8,465ft)
4	0,45m (1,493ft)
5	0,5m (1,640ft)
6	3,18m (10,433ft)
7	L1;L2;L3+(2x0,5m) L1;L2;L3+(2x0,1,64ft)

Fig. 3 Spatial requirement for Lift cage with unloading ramp

4.3.2 Vertical distances and spatial requirement for Lift cage without unloading ramp

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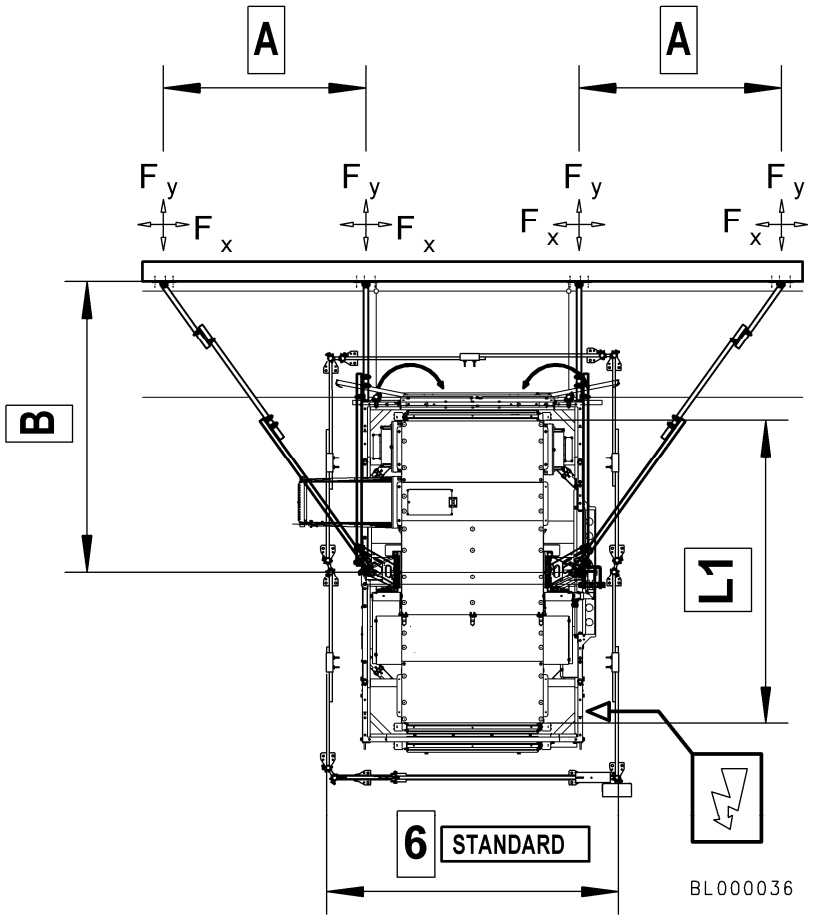
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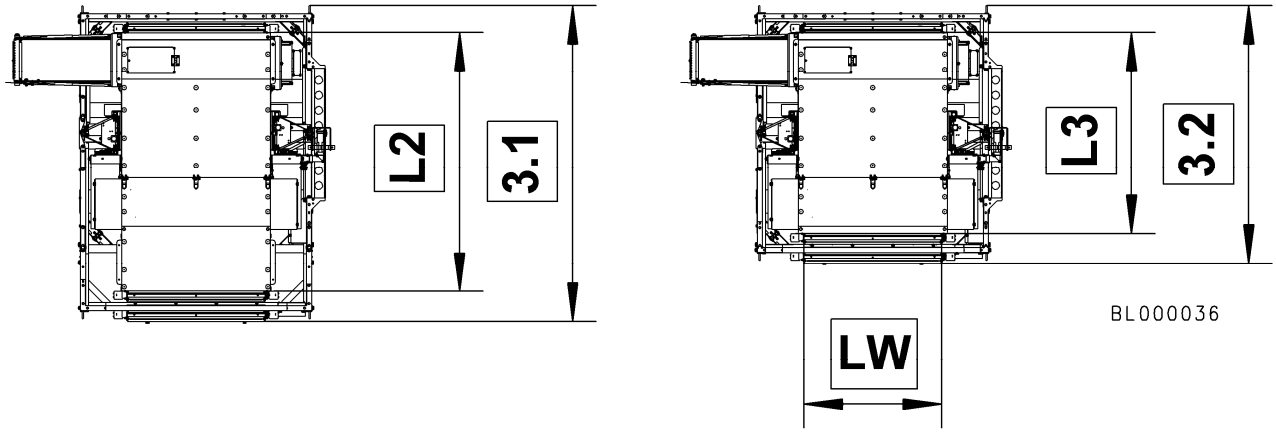


I	< 6,00m (19,684ft)
Q	0,085m (±0,01ft) (0,297ft ±0,0,033ft)
S	0,11m (0,361ft)
T	max. 100m (328ft)
U	≤ 8,00m (26,247ft)
V	≤ 10,00m (32,8ft)
X	> 1,10m (3,609ft)
Y	0,375m (1,23ft)
Z	150Nm /SW24

1	2,70m (8,858ft)
2	2,4m (8,005ft)
3	3,74m (12,270ft)
3.1	3,16m (10,367ft)
3.2	2,58m (8,465ft)
4	0,45m (1,493ft)
5	0,5m (1,640ft)
6	3,18m (10,433ft)
7	L1;L2;L3+(2x0,5m) L1;L2;L3+(2x0,1,64ft)

Fig. 4 Vertical distances and spatial requirement for Lift cage without unloading ramp

4.4 Anchoring forces for the Lift cage with loading ramp

Anchoring forces can be found in the following tables, depending on the respective location (see wind map), assembly height and assembly situation.

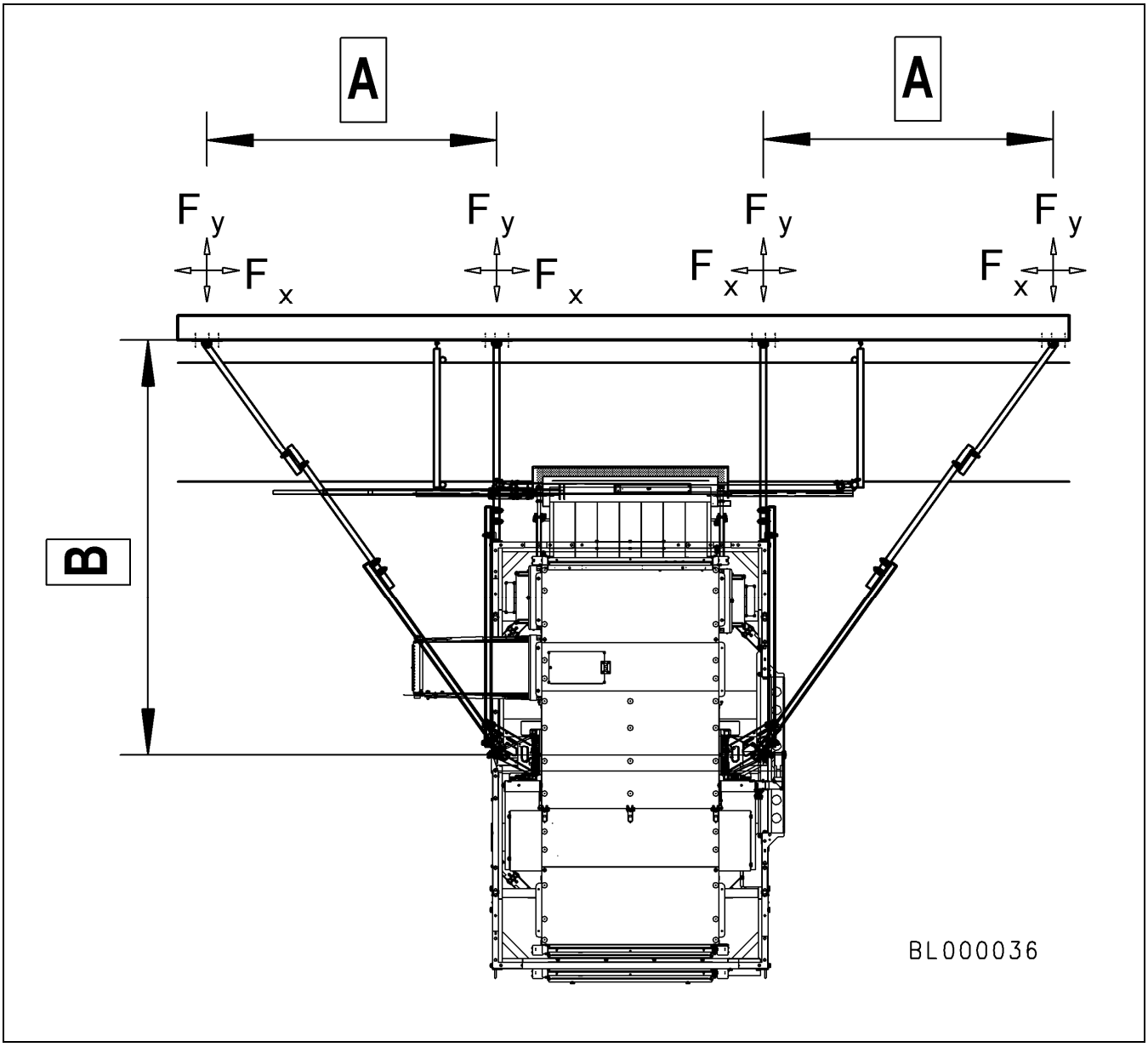


Fig. 5 Anchoring to the scaffold

If the assembly geometry shown is changed, the corresponding anchoring forces must be requested.

Anchoring distance = 10m
Load bearing capacity = max. 1500kg

4.4.1 Assembly in front of a scaffolding

	A (Distance between fastening plates)	**B** (Distance from the round mast tube, centre, to the wall)
Lift cage 2.0 m x 1.4 m	2.50m	2.83m
Lift cage 2.6 m x 1.4 m	2.50m	2.83m
Lift cage 3.2 m x 1.4 m	2.50m	3.40m

The anchoring forces are identical for all Lift cage sizes

	Uppermost anchoring Mast projection 2m		**Other anchorings** or uppermost anchoring **without** mast projection	
Wind region	**F_x**	**F_y**	**F_x**	**F_y**
A - C	6.27 kN	4.77 kN	4.14 kN	3.19 kN
D	6.27 kN	4.77 kN	5.24 kN	4.10 kN
E	6.63 kN	5.19 kN	6.63 kN	5.19 kN

The table values apply for each anchoring tube.

4.4.2 Assembly in front of a wall

	A (Distance between fastening plates)	**B** (Distance from the round mast tube, centre, to the wall)
Lift cage 2.0 m x 1.4 m	2.50m	2.22m
Lift cage 2.6 m x 1.4 m	2.50m	2.22m
Lift cage 3.2 m x 1.4 m	2.50m	2.85m

The anchoring forces are identical for all Lift cage sizes

	Uppermost anchoring Mast projection 2m		**Other anchorings** or uppermost anchoring **without** mast projection	
Wind region	**F_x**	**F_y**	**F_x**	**F_y**
A - C	5.29 kN	4.77 kN	3.45 kN	3.20 kN
D	5.29 kN	4.77 kN	4.35 kN	4.10 kN
E	5.51 kN	5.19 kN	5.51 kN	5.19 kN

The table values apply for each anchoring tube.

4.5 Anchoring forces for the Lift cage without loading ramp

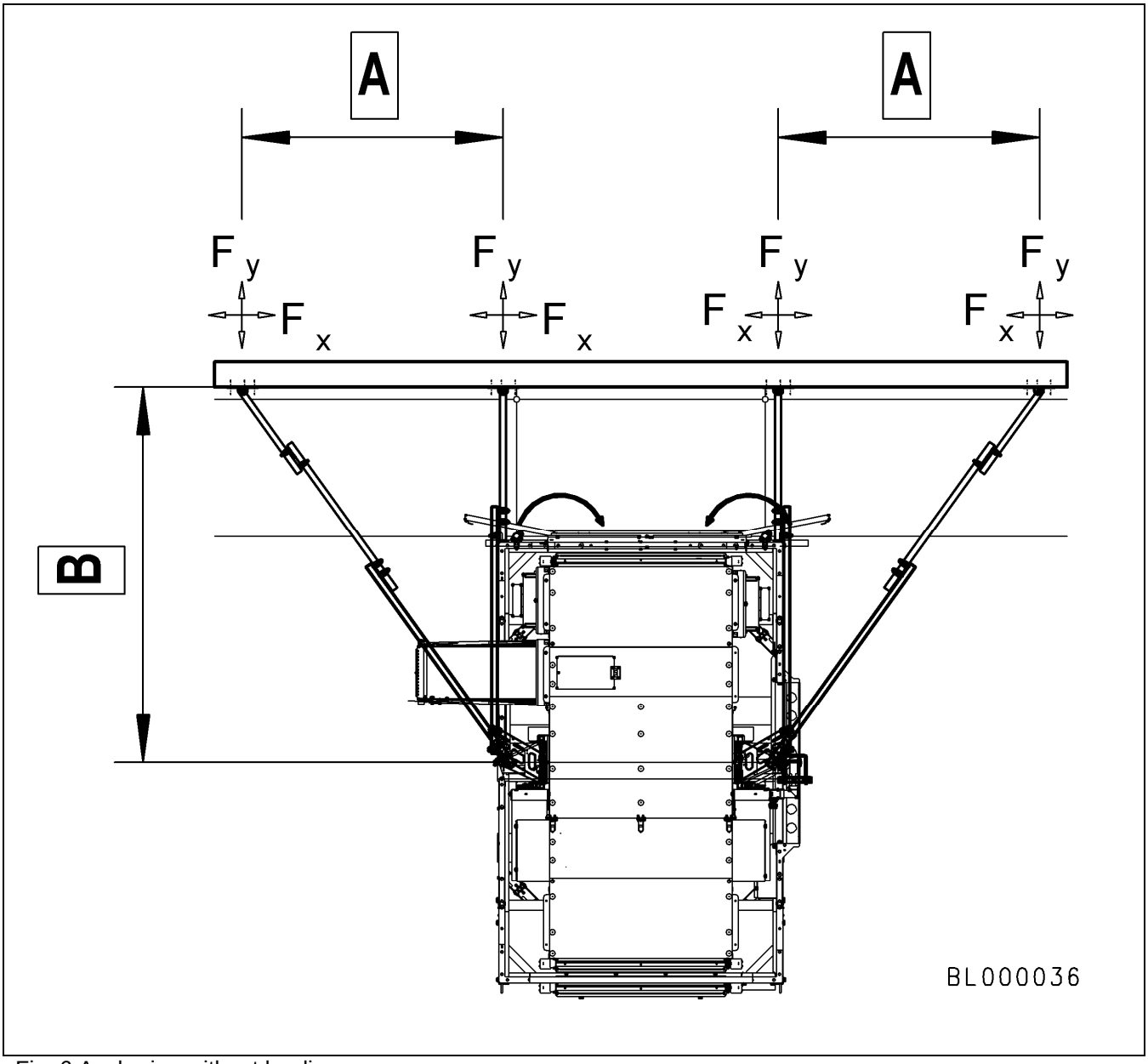


Fig. 6 Anchoring without loading ramp

If the assembly geometry shown is changed, the corresponding anchoring forces must be requested.

Anchoring distance = 10m
Load bearing capacity = max. 1500kg

4.5.1 Assembly in front of a scaffolding

	A (Distance between fastening plates)	**B** (Distance from the round mast tube, centre, to the wall)
Lift cage 2.0 m x 1.4 m	2.50m	2.27m
Lift cage 2.6 m x 1.4 m	2.50m	2.27m
Lift cage 3.2 m x 1.4 m	2.50m	2.85m

The anchoring forces are identical for all Lift cage sizes

	Uppermost anchoring Mast projection 2m		**Other anchorings** or uppermost anchoring **without** mast projection	
Wind region	**F_x**	**F_y**	**F_x**	**F_y**
A - C	5,29 kN	4,77 kN	3,45 kN	3,20 kN
D	5,29 kN	4,77 kN	4,35 kN	4,10 kN
E	5,51 kN	5,19 kN	5,51 kN	5,19 kN

The table values apply for each anchoring tube.

4.5.2 Assembly in front of a wall

	A (Distance between fastening plates)	**B** (Distance from the round mast tube, centre, to the wall)
Lift cage 2,0m x 1.4 m	1.30m	1.16m
Lift cage 2.6 m x 1.4 m	1.30m	1.16m
Lift cage 3.2 m x 1.4 m	1.30m	1.80m

The anchoring forces are identical for all Lift cage sizes

	Uppermost anchoring Mast projection 2m		**Other anchorings** or uppermost anchoring **without** mast projection	
Wind region	**F_x**	**F_y**	**F_x**	**F_y**
A - C	6,18 kN	4,67 kN	4,07 kN	3,27 kN
D	6,18 kN	4,67 kN	5,13 kN	4,18 kN
E	6,49 kN	5,29 kN	6,49 kN	5,29 kN

The table values apply for each anchoring tube.

4.5.3 European wind map

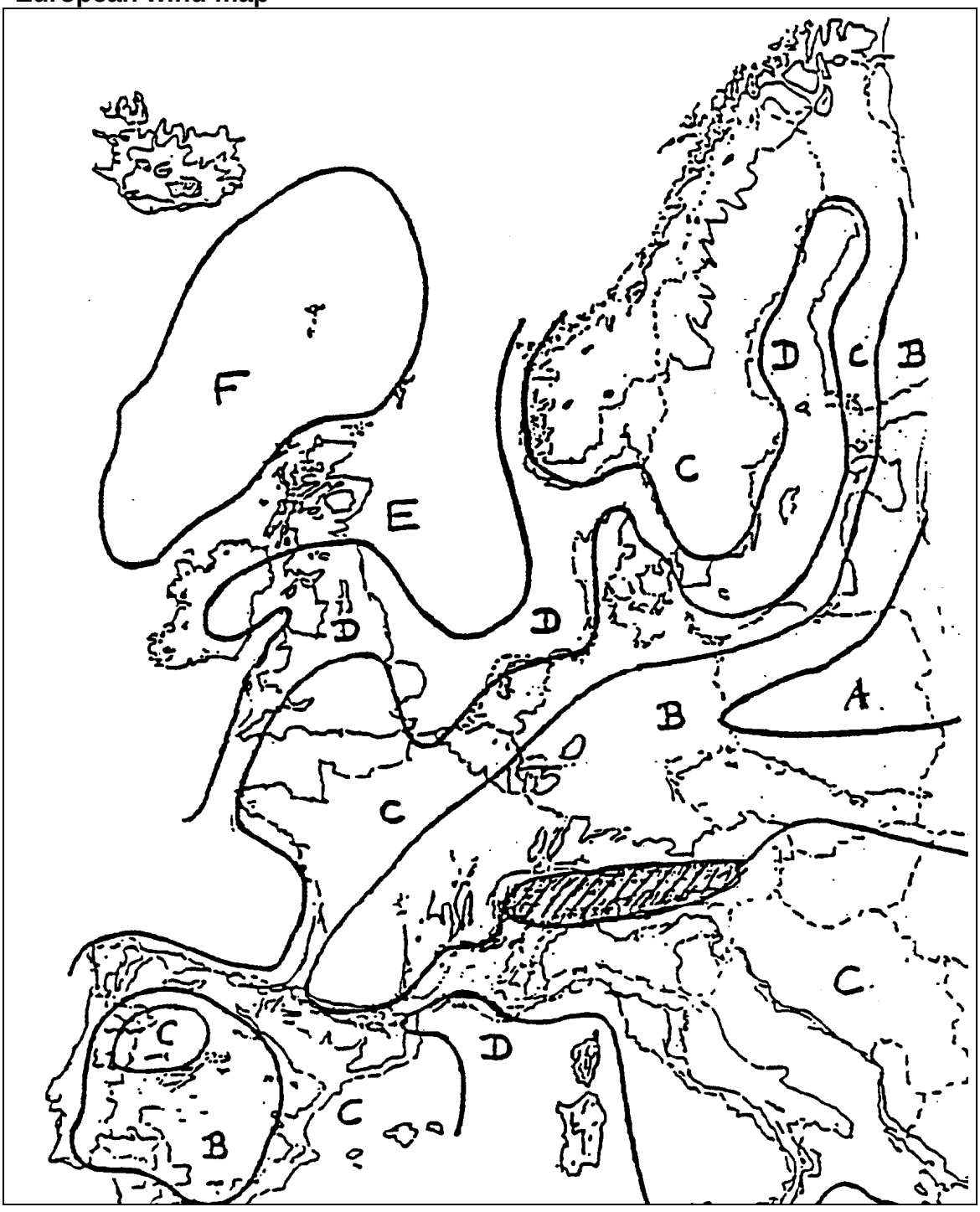
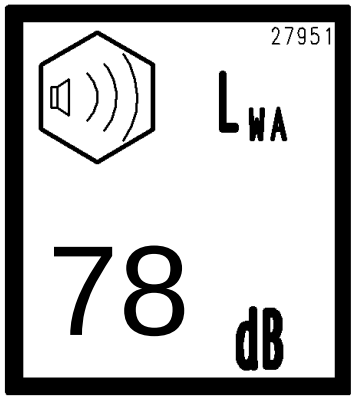


Fig. 7 European wind map

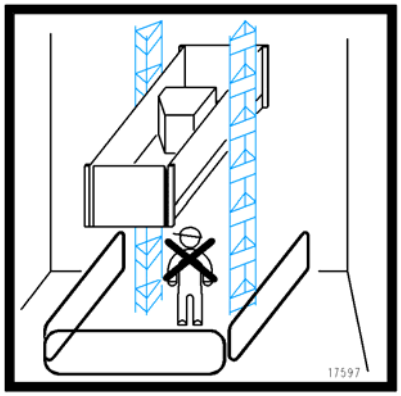
Assembly height H [m]	Wind forces for geographical regions [N/m²]			
	A/B	**C**	**D**	**E**
0<H≤10	544	741	968	1225
10<H≤20	627	853	1114	1410
20<H≤50	757	1031	1347	1704
50<H≤100	879	1196	1562	1977
100<H≤150	960	1306	1706	2159

4.6 Summary of the notices

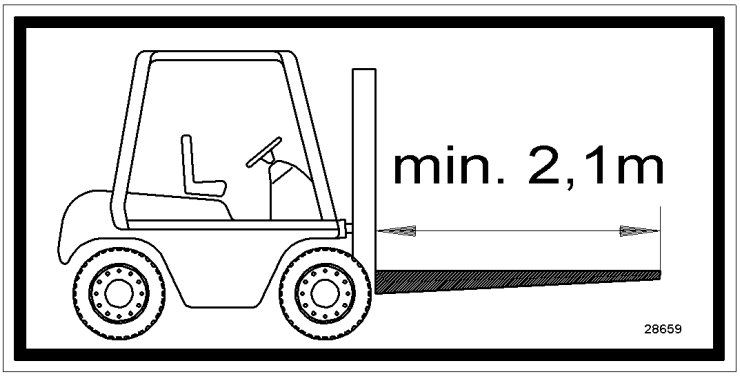


Item No. 33696 (Lift cage)

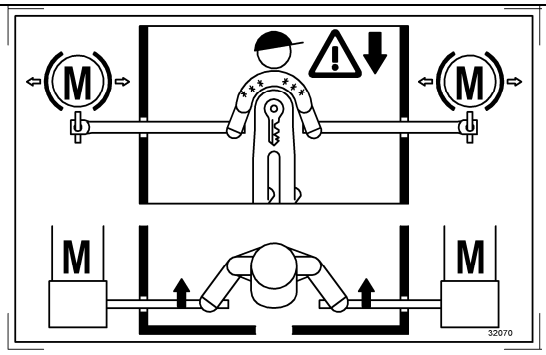
Item No. 14657 (Lift cage)



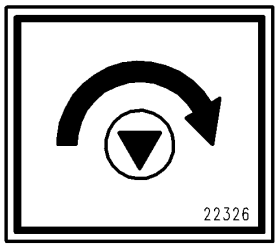
Item No.: 17597 (Enclosure 1.1 m high)



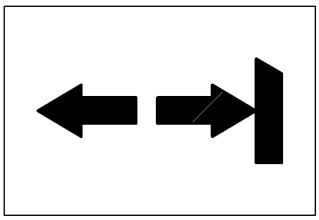
Item No. 28659 (Forklift take-up points)



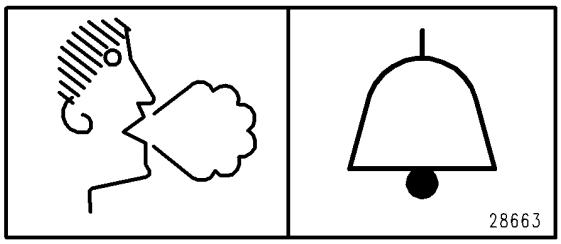
Item No. 32070 (Lift cage)



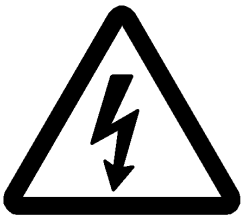
Item No. 22326 (Sliding doors)



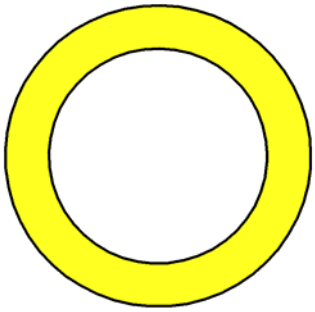
Item No.: 15431 (Overspeed safety brake)



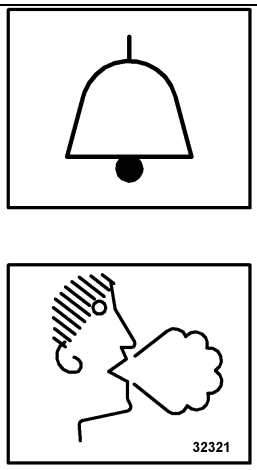
Item No. 28663 (Intercom system)



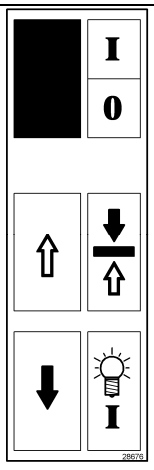
Item No.: 05242
(Switch cabinets)



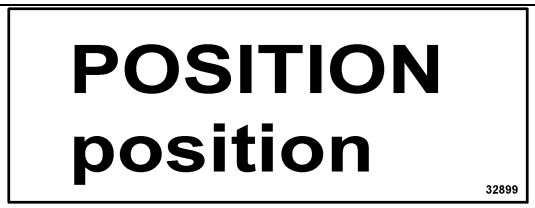
Item No. 29906
(EMERGENCY-STOP
Landing level control)



Item No. 32321
(Intercom system)

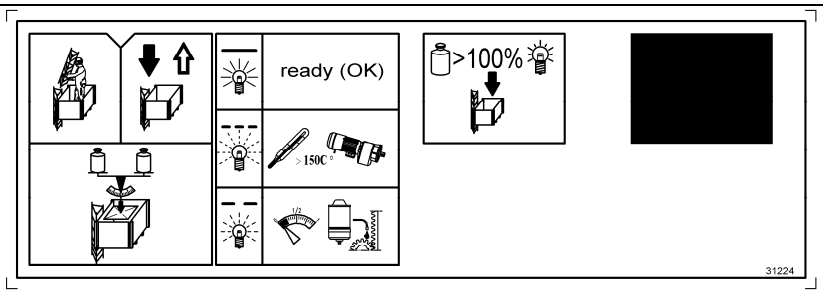


Item No. 28676
(Ground control)

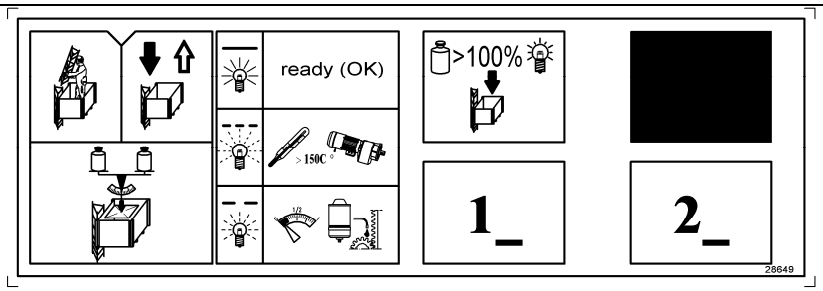


Item No. 32899 (Lift cage control)

Item No. 32899 (Lift cage control)



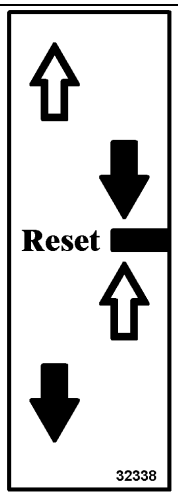
Item No. 31224 (Lift cage control)



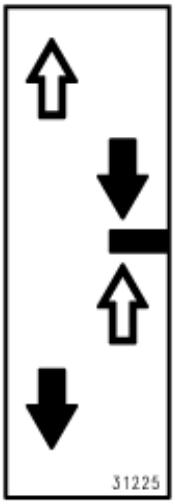
Item No. 28649 for the option with Landing level pre-selection control (Lift cage control)

Art.-Nr. 28674 [Lift cage 2.6m x 1.4m and 3.2m x 1.4m]
(Assembly guard and enclosure)

Item No. 28675 [Lift cage 2.0 m x 1.4 m]
(Assembly guard and enclosure)

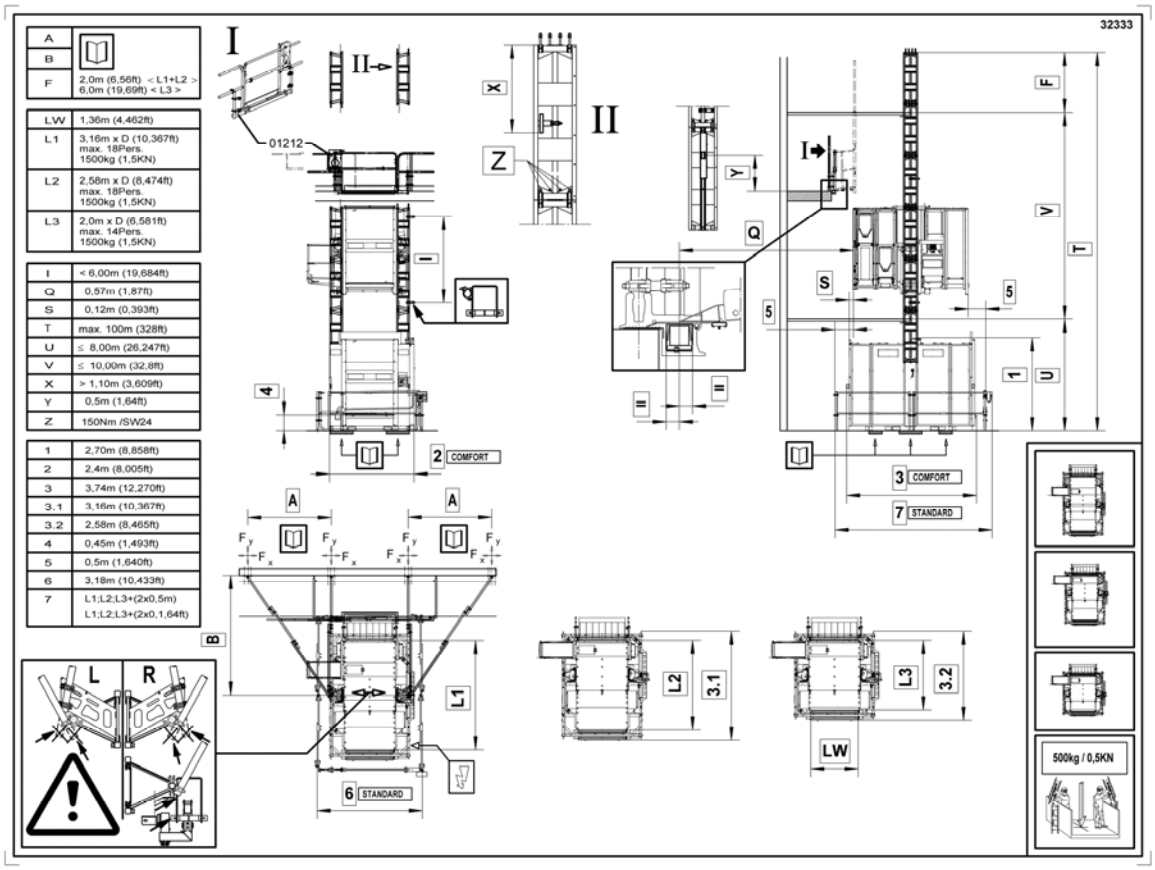


Item No. 32338
(Lift cage control)

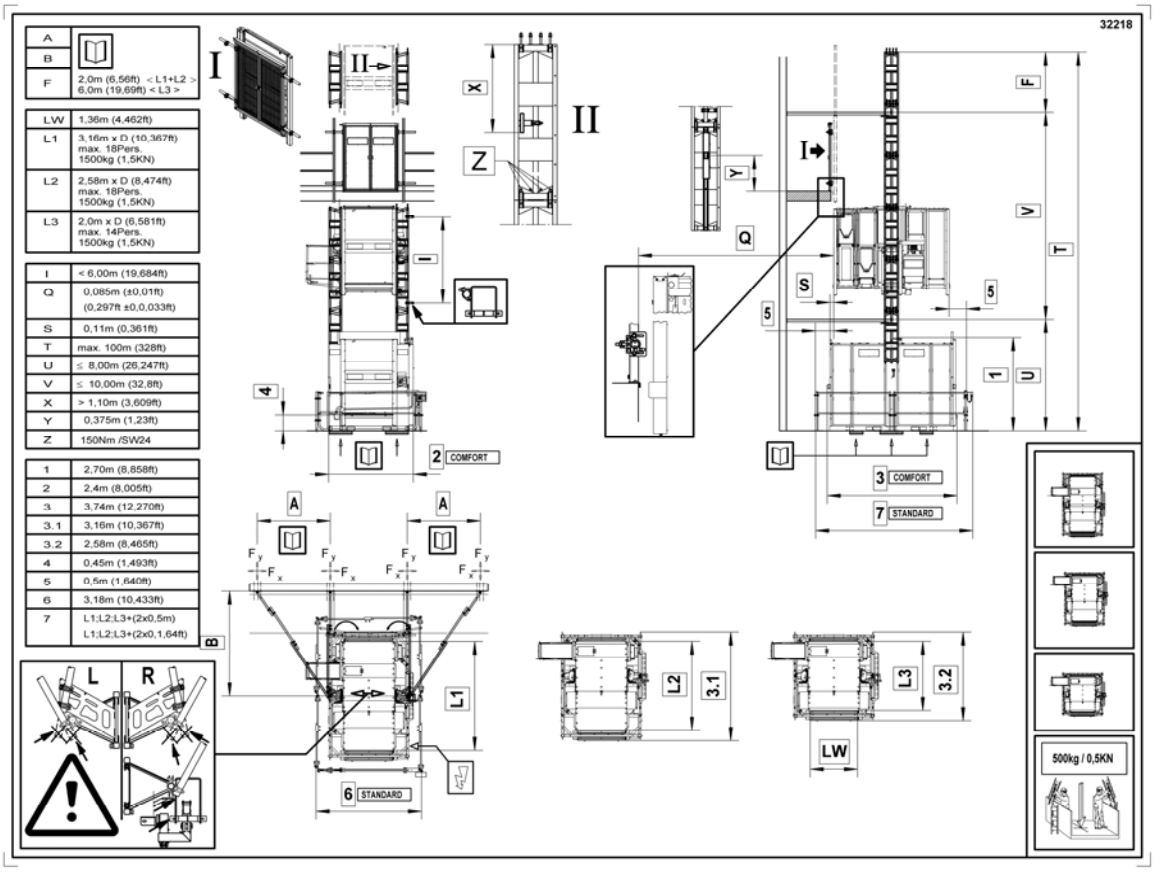


Item No. 31225
(Landing level control)

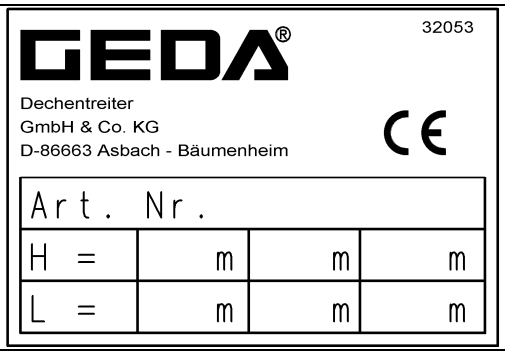
Item No. 32318
for the option with Landing level pre-selection control
(Lift cage control)



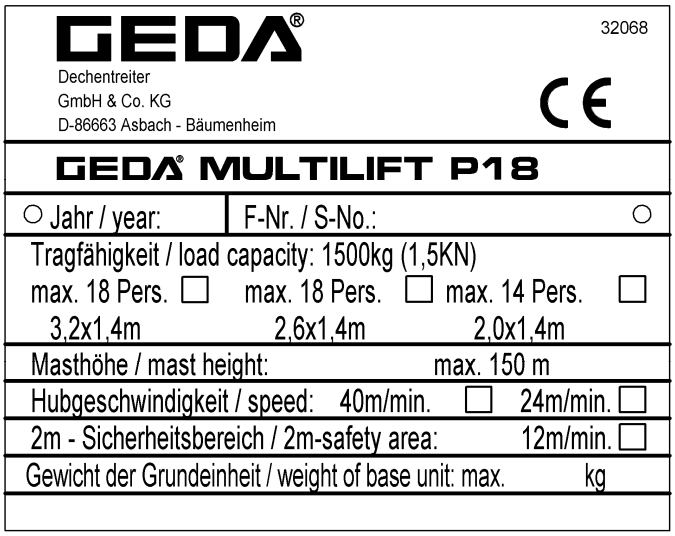
Item No.: 32333 for Lift cage with loading ramp (assembly guard)



Item No.: 32218 for Lift cage without loading ramp (assembly guard)



Item No. 32053 (Cable box)



Type plate (Lift cage control)

Type plate (Safety brake)

4.7 Equipment

4.7.1 GEDA MULTILIFT P18 STANDARD

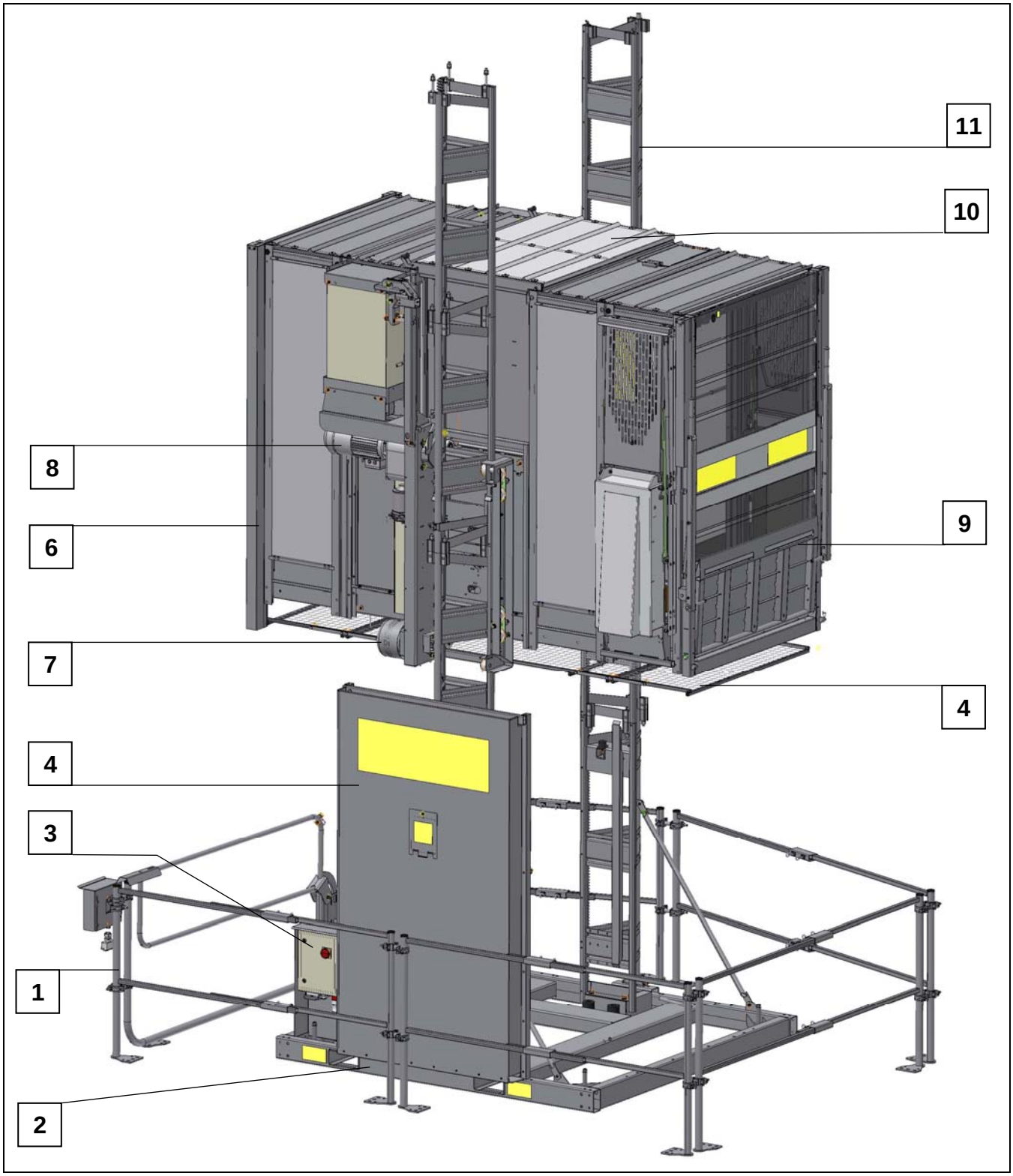


Fig. 8 MULTILIFT P18 STANDARD

1 = 1.10 m enclosure
2 = Foot section with base masts
3 = Switch cabinet to cable box
4 = Cable box for flat cable
5 = Under-run protection
6 = Lift cage
7 = Safety brake
8 = Drive, right
9 = Sliding doors with ramp
10 = Assembly flap
11 = Mast extension

4.7.2 GEDA MULTILIFT P18 COMFORT

Fig. 9 MULTILIFT P18 COMFORT

1 = 2.50 m Enclosure with sliding door(s)
2 = Cable box for flat cable
3 = Switch cabinet to cable box
4 = Drive, right
5 = Automatic lubrication equipment
6 = Safety brake
7 = Ground control
8 = Sliding doors
9 = Lift cage
10 = Lift cage control
11 = Trailing cable
12 = Mast extension

4.7.3 Sliding carriage with drive

1 = Drive motor, left
2 = Frequency converter switch cabinet (option)
3 = Assembly bridge, left

4 = Drive motor, right
5 = Overspeed safety brake
6 = Automatic lubrication equipment
7 = Lift cage control switch cabinet
8 = Trailing cable
9 = Cable box for trailing cable

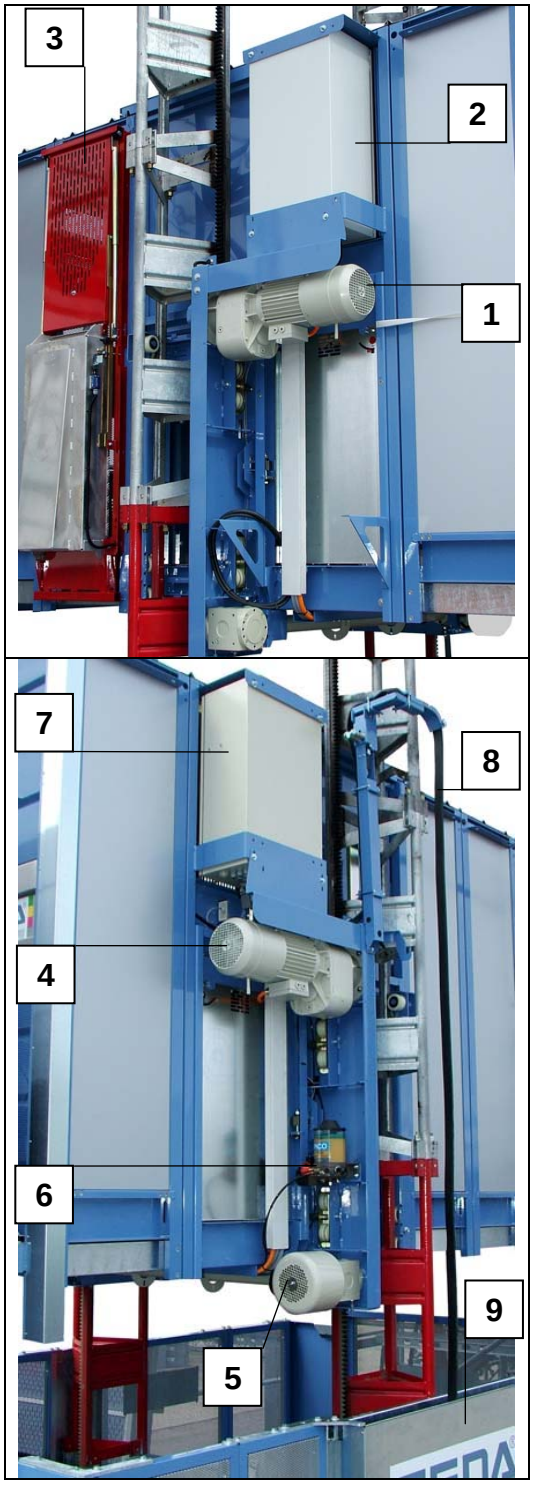


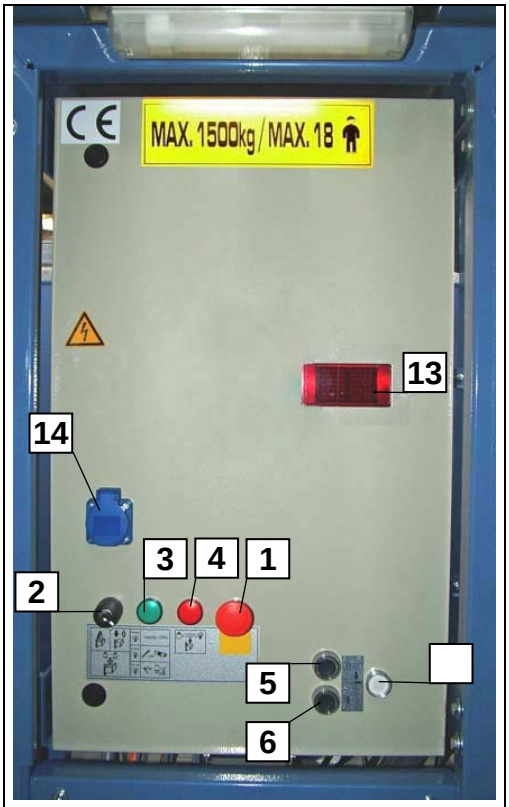
Fig. 10 Sliding carriage with drives

4.7.4 Lift cage or assembly control

1 = EMERGENCY-STOP push-button
2 = Key switch
➔ Position left = Assembly
(only the Lift cage control is active)
➔ Position right = Operation
(Lift cage control, ground control and
Landing level controls are active)
3 = Ready for operation control light
- continuous illumination → Hoist ready for operation
- slow flashing light → Lubrication equipment, lack of grease
- quick flashing light → Excess motor temperature
→ Excess braking resistance temperature

4 = Overload control light
5 = UP button
6 = DOWN button
7 = Landing level stop button (Lift cage stops at the next landing level) /
- Reset button for Lifts with frequency converter

13 = Landing level indicator
14 = Working plug socket 230V/50Hz/16A



NOTE
The Lift cage speed is approx. 24 m/min and approx. 40 m/min with frequency converter.

The Lift cage control must be disconnected from the mains (unplug trailing cable) before opening the switch cabinet door!

4.7.5 Ground control at the enclosure

- The limit switch of the sliding door monitor (enclosure) or barrier is plugged into the black 7-pole plug socket (8).
- The supply line (9) [16-pole plug] for the ground control is plugged into the cable box switch cabinet (see section 4.7.7).

1 = EMERGENCY-STOP push-button
2 = UP button (ascend to uppermost landing level)
3 = DOWN button (descend to ground station)
4 = Landing level stop button (Lift cage stops at the next landing level)
5 = Hoist ON/OFF key switch
6 = Ready for operation control light
7= Voice module

Fig. 11 Ground control

NOTE
On the **MULTILIFT P18 STANDARD** the UP button (2) and the DOWN button (3) must be depressed below the 2 m safety height.

4.7.6 Control system on the Landing level safety gate

On the **MULTILIFT P18 STANDARD**, the Lift cage can be driven only above the initial 2 m safety height with the "Up" (2) or "Down" (3) buttons.

On the **MULTILIFT P18 COMFORT**, the Lift cage can be driven using the Landing level control down to the ground station.

The Lift cage can be stopped at any time using the EMERGENCY-STOP push-button (1).

1 = EMERGENCY-STOP push-button (does not click into place)
2 = UP button
3 = DOWN button
4 = Landing level stop button (Lift cage stops at the next landing level)

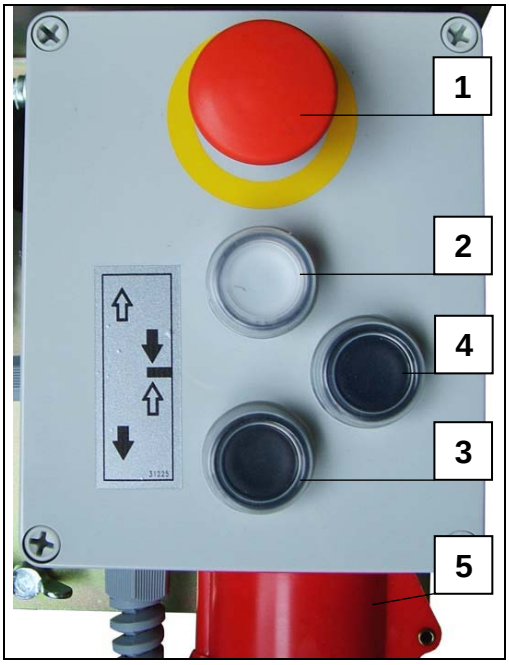


Fig. 12 Landing level control

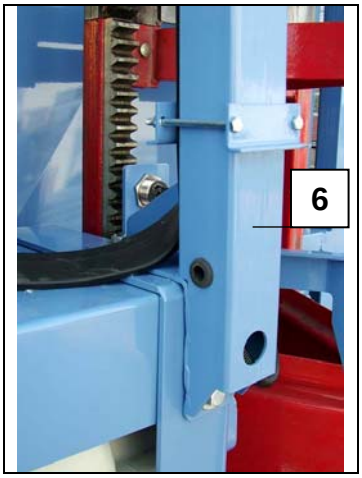
- The supply line (6) [7-pole plug, red] from the first Landing gate switch cabinet is plugged into the Cable box switch cabinet (see section 4.7.7).
- If there are several landing levels with Landing level control, the supply line (4) [7-pole plug, red] from the second landing level on will be plugged into the socket (5) on the Landing level control below.

NOTE
The dummy plug is removed from the Cable box switch cabinet and plugged into the uppermost Landing level control switch cabinet.

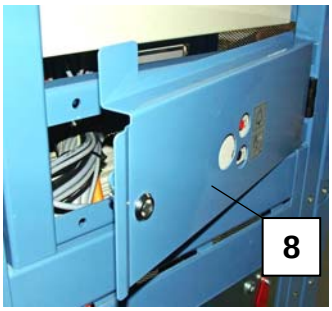
4.7.7 Switch cabinet for cable box and trailing cable

NOTE
The trailing cable holder and the trailing cable plug are factory-mounted and only have to be assembled as an exception for transport reasons or during initial commissioning.

- Mount the Trailing cable holder (6) on the right sliding carriage.



- Unlock and open the Voice module faceplate (8) with the triangular wrench (in Cable box switch cabinet).



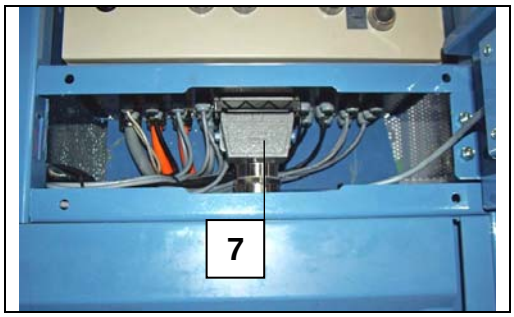


Fig. 13 Trailing cable

- Plug the Trailing cable plug (7) into socket under Sliding carriage switch cabinet and secure with a mounting clip.

- Connect mains supply line (5) to the mains (building site main cabinet).
- Plug supply line for ground control into the 16-pole socket (2).
- Plug supply line for first Landing level control into the 7-pole red socket (3).
- Plug limit switch line from the setting mechanism into the 4-pole circular socket (4).
- Turn on main switch (1).

1 = Main switch

2 = Socket (ground control)
3 = Socket (red) for Landing level safety gate
(or dummy plug during assembly)
4 = Socket for setting mechanism
5 = Mains supply line

Fig. 14 Cable box switch cabinet

4.7.8 Sliding door

It may only be possible to open the sliding door if the Lift cage (stopped by the Landing level limit switch) stops in front of a Landing level safety gate or is on the ground (stopped by "down" limit switch). This is the only sliding door that can be opened, i.e. when it is in front of the sliding door or barrier of the base enclosure or in front of a Landing level safety gate.

Open sliding door (1).

- Using the central handle grip (2) push the sliding door up until it stops.

NOTE

On the sliding door with ramp, the ramp automatically folds down when the sliding door is opened.

Close the sliding door from the outside.

- Using the lower handle grip (3) pull the sliding door down until it is completely closed.

NOTE

On the sliding door with ramp, the ramp automatically folds up when the sliding door is closed.

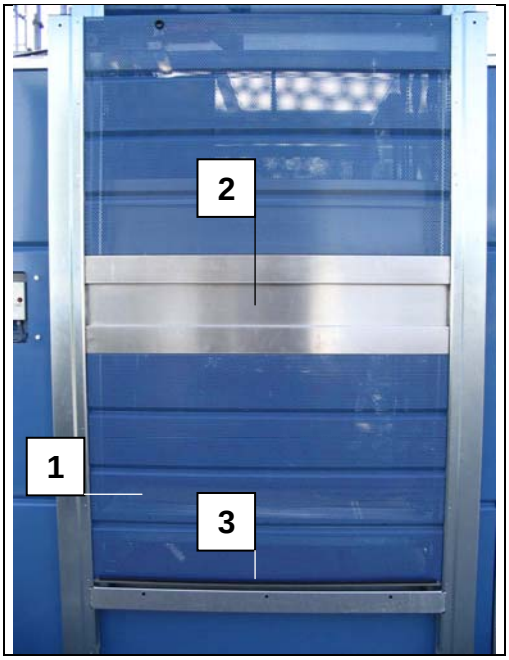


Fig. 15 Operating the sliding door from outside

Emergency interlock release

- To activate the Emergency interlock release, insert the triangular wrench through the bore on the outside of the sliding door and turn to the right.
- Turn the wrench back after interlock release has been actuated.

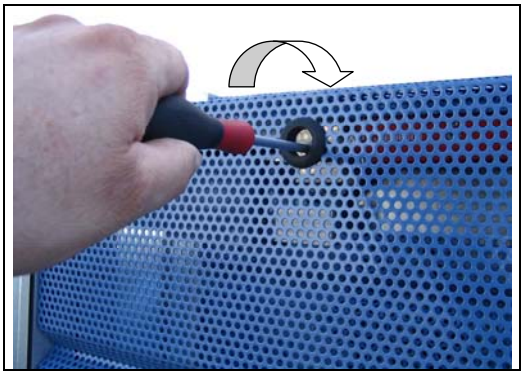


Fig. 16 Sliding door Emergency interlock release

4.7.9 Triangular wrench

The triangular wrench is in the Cable box switch cabinet.

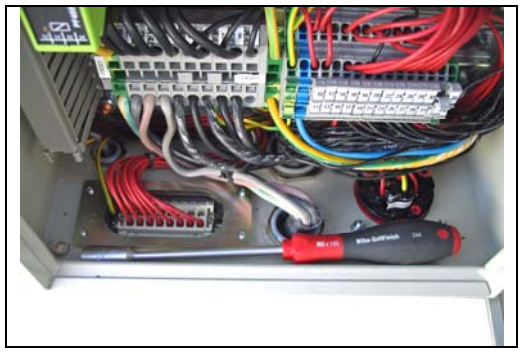


Fig. 17 Triangular wrench

NOTE

The triangular wrench can be used to open or close the switch cabinets, Emergency interlock release on the sliding doors and the safety interlock on the assembly bridge.

4.7.10 Lift cage lighting

- Lift cage lighting (1) is always on as long as the main switch is turned on.

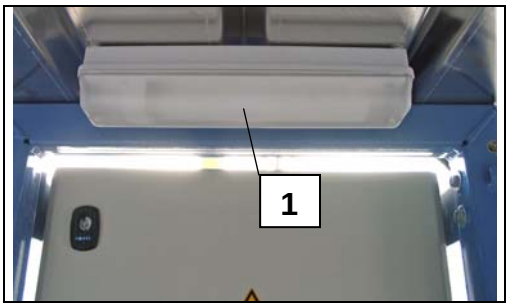


Fig. 18 Lift cage lighting

4.7.11 Roof hatch

A hatch can be opened in the Lift cage ceiling to transport material that is longer than the Lift cage (e.g. pipes).

- Loosen the Star screw (2) and unthread so far that the cover (1) can be folded upwards.

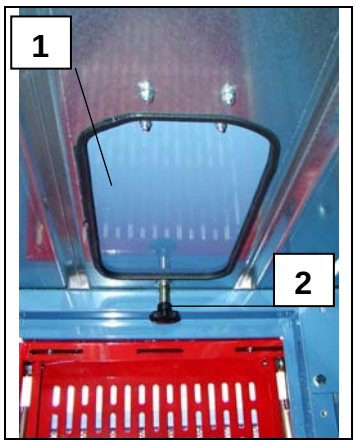


Fig. 19 Roof hatch

4.7.12 Emergency call system

Basics

- If people are locked in the Lift cage, they can contact ground personnel through the intercom system.
- The intercom system establishes contact with the ground station.
- The Emergency call system comprises a voice module next to the ground control switch cabinet and the voice module in the Lift cage near the Lift cage control.
- The intercom system uses the mains power supply when the base unit is connected to the power supply. If there is a power failure an internal battery provides power for operation.
- Each voice module has operating components comprising a call button (red) and a speak button (black).

Establishing communication

- An acoustic call signal is transmitted to the other end by pressing the red call button (1).
- The connection to the other person is established by pressing the black speak button (2).
- In order to hear the other person speak you must release your own speak button, and the other person must hold the speak button pressed for as long as they are speaking.

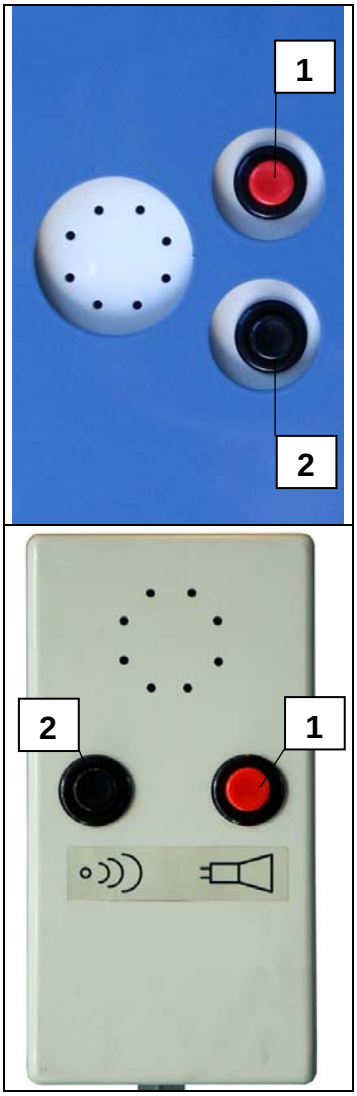


Fig. 20 Intercom system

4.8 Accessory components

4.8.1 1.10 m Base enclosure for the GEDA-MULTILIFT P18 Standard

- The 4-sided base enclosure is comprised of four equally long and two shorter components which are bolted to the ends with scaffold couplings.

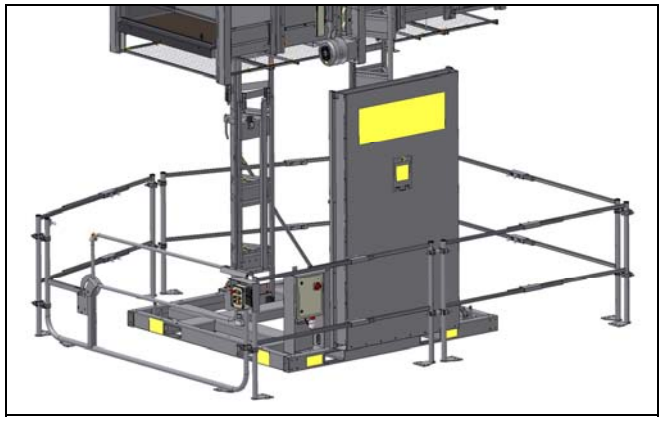


Fig. 21 1.10 m base enclosure

- The element with the barrier is mounted to the access side. The barrier can optionally be installed to open on the left or on the right.

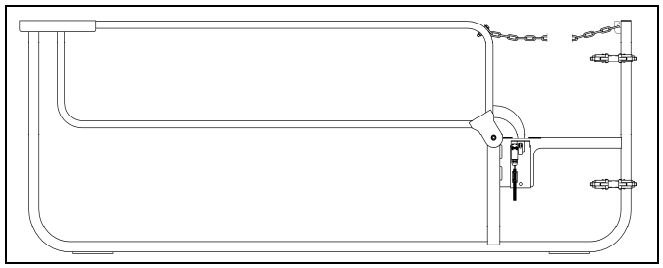
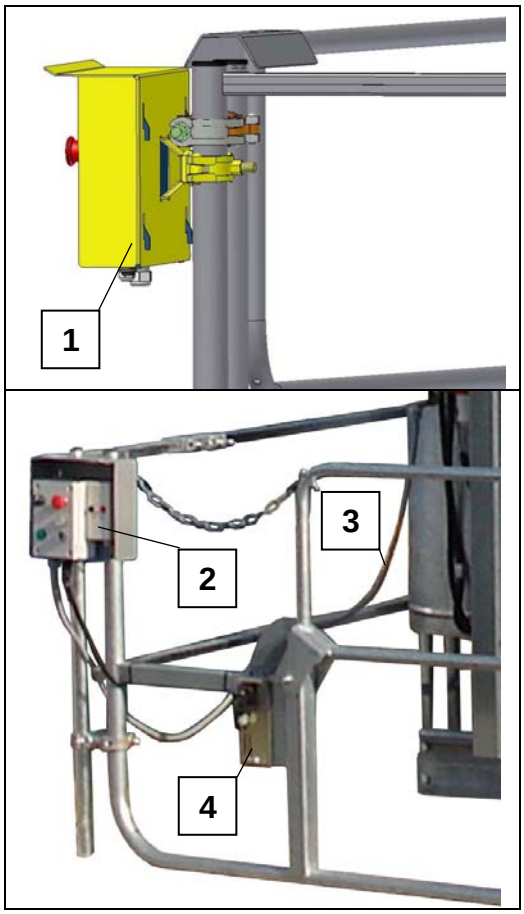


Fig. 22 1.10 m base enclosure barrier element

- Mount the cabinet (1) for the ground control to the side section of the enclosure using the scaffold coupling.



- Hang the ground control with intercom system (2) onto the cabinet (1).
- Plug the Ground control supply line (3) (10-pole plug) into the Cable box switch cabinet.

- Insert limit switch with retaining plate (4) on the hinge of the barrier.
- Push retaining plate (3) up and tighten with the wing bolt.
- Plug limit switch with retaining plate (4) into the ground control (2).

Fig. 23 Mounting the electric module

4.8.2 Collision grille

If the Lift cage collides with obstacles it can cause severe damage to the Lift cage, the sliding carriage and the drive.

In order to give additional protection to the machine, the Lift cage is supplemented with a collision grille (1).

NOTE

If the collision grille (1) buckles, the control is interrupted by a limit switch which makes travel impossible.

Fig. 24 Collision grille

4.8.3 Catch control system

1 = EMERGENCY-STOP push-button
2 = "Release brake" buttons (for checking the overspeed safety brake)
3 = UP button (for going up or "neutral" running)
4 = DOWN button

NOTE

The catch control system may not be used for operating or for assembly of the Hoist. This control is exclusively for the safety brake test or "neutral" running when the Lift cage is too low.
The catch control system must be operated only by a technically qualified person.

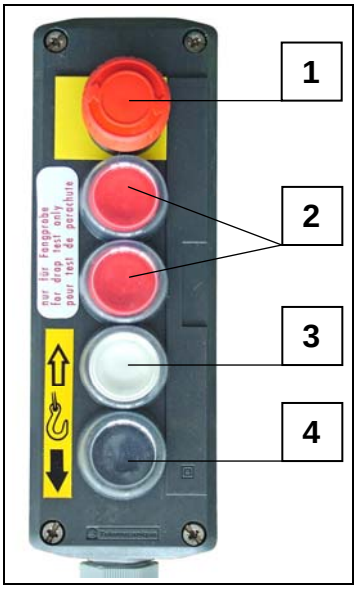


Fig. 25 Catch control system

4.8.4 Lift cage control with Landing level pre-selection control

1 = EMERGENCY-STOP push-button
2 = Key switch
➔ Position left = Assembly
(only the Lift cage control is active)
➔ Position right = Operation
(Lift cage control, ground control and Landing level controls are active)
3 = Ready for operation control light
- continuous illumination → Hoist ready for operation
- slow flashing light → Lubrication equipment, lack of grease
- quick flashing light → excess motor temperature or
→ Excess braking resistance temperature
4 = Overload control light
5 = Landing level pre-selection button for landing level 1 [UP button for assembly]
6 = Landing level pre-selection button for landing level 0 [DOWN button for assembly]

7 = - Landing level stop button (Lift cage stops at the next landing level) /
- Reset button for Lifts with frequency converter

Fig. 26 Landing level pre-selection control

8 = Landing level pre-selection button, landing levels 2 to 9
9 = Landing level pre-selection button, landing levels 10 to 19 (landing level 10 + Landing level button 1 to 9)
10 = Landing level pre-selection button, landing levels 20 to 29 (landing level 20 + Landing level button 1 to 9)
11 = Start button after landing level selection

12 = Landing level pre-selection display
13 = Landing level indicator
14 = Working socket 230V/50Hz

5 Installation site requirements

5.1 Foundation / Ground pressure

- The foundation must be horizontal and have sufficient load bearing capacity.
- Compacting of the subsoil must be carried out according to the **floor load [kN/m²]** (see assembly height).
- Depending on the assembly height, wooden planks or steel sheeting, for example, can be used as load distributing base supports.
- The total weight (see table) of the Multilift and mast sections are transferred into the subsoil via the foot section support.
- Total weight of the Multilift (complete with anchoring and cable guides).

- The Ground pressure is calculated with the 3.2m x 1.4m Lift cage and is reduced with the smaller Lift cage models.
- Weight reduction with 2.0m x 1.4m Lift cage = - 550kg
- Weight reduction with 2.6m x 1.4m Lift cage = - 255kg
- Load bearing capacity = 1500kg

Weight per mast	44.4kg	Load bearing capacity	1500 kg
Length per mast	1.5m		
Height of base unit	2.70m		
Equipment empty weight	2840kg		
Base area without base support (under both masts)	0.5m²		

Assembly height in m	10	20	30	40	50	60	70	80	90	100
Total weight [kg]	5710	6355	6925	7570	8215	8785	9430	10090	10650	11295
Ground pressure [kN/m^2]	**115**	**128**	**139**	**152**	**165**	**176**	**189**	**202**	**213**	**226**

5.2 Electrical connection (on-site)

An on-site construction power cabinet (IEC 60364-7-704) with 400 V/50 Hz and supply point fuse protection with min. 3 x 32 A slow-to-blow fusing (max. 35 A slow-to-blow) is required.

- Connect the Hoist mains supply line (3 m) to the building site main cabinet (plug CEE 5x32 A, 6h, red with phase inverter).
- A rubber hose line measuring at least 5 x 6 mm^2 is required for extending the mains supply line (see accessories) to avoid voltage drop and thereby any loss in motor power.

NOTE FOR MACHINES WITH FREQUENCY CONVERTER

This product can cause a direct current in the protective earthing conductor. At those places where a residual current device (RCD) or a residual current monitor (RCM) is used in the event of direct or indirect contact, then only an RCD or RCM of Type B is permitted on the power supply end of this product.

If the installation guidelines include plans for an "residual current device" (residual current circuit breaker), then you must use a **"Type B"** residual current circuit breaker (all-current sensitive) for three-phase frequency converters.

Select a product with the following features:

- Filters high-frequency currents.
- A delay that prevents triggering caused by interference capacities potentially charged at switch-on.
  This delay is not possible on 30 mA units. In this case, select a residual current circuit breaker that is resistant to accidental triggering, for example a residual current circuit breaker with enhanced immunity to interference (super-immune).

If several machines with frequency converters are operated from a mains connection, then one residual current device (residual current circuit breaker) must be used per machine with frequency converter.

6 Transport

Have the Hoist transported by experienced and qualified persons. (For weight of the Base unit, see section 5)

6.1 Inspection upon delivery of the Hoist

- Check the shipment for transport damage and for completeness according to the purchase order.
- Immediately notify the freight carrier (hauling company) and dealer of any transport damage.

6.2 Loading and unloading the machine

The machine sections/components are loaded and unloaded using a forklift truck or a crane.

6.2.1 Lifting with a forklift truck

- Forklift take-up points (1) are located on the access side and below the Base unit base masts.

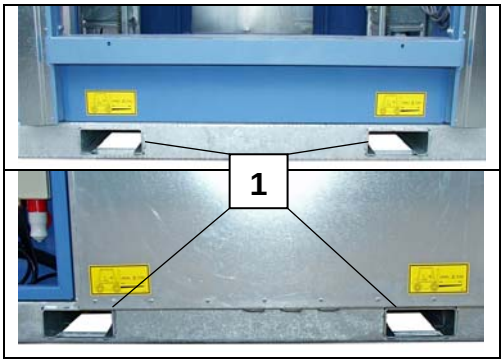


Fig. 27 Forklift take-up point

ATTENTION
Forklift runners must be at least 2.0 m long or appropriate underlays must be provided.

6.2.2 Lifting with a crane

- To lift with a crane, the assembly flap on the roof (see section 7.2) must be opened.
- Guide crane hook with chain suspension through the open assembly flap.
- Hang chain suspension (4) to the 4 crane lugs (3). (Crane lugs are located at all 4 corners of the Lift cage's base assembly)
- Raise the Base unit.

NOTE
Chain length of chain suspension, min. 3 m

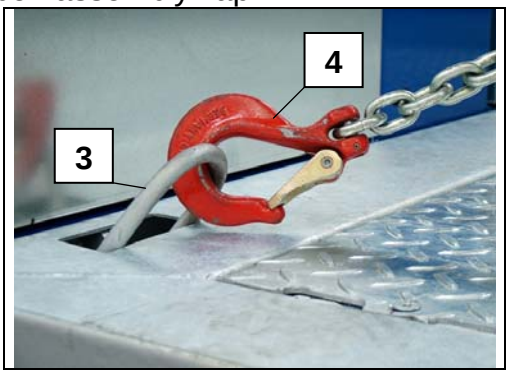


Fig. 28 Crane lugs for chain suspension

7 Installation

The GEDA Multilift P18 must be assembled in accordance with the Assembly and Operating Manual and under supervision of an authorised person designated by the Operating company!

Assembly personnel, see section 3.3

7.1 Safety notes

- Personnel must become acquainted with the on-site working environment, e.g. obstacles in the working and traffic areas, ground load bearing capacity and necessary barriers between the construction site and public areas.
- Cordon off danger zone for the **GEDA MULTILIFT P18 STANDARD**.
- Ensure that the danger zone at the lower loading point is cordoned off (base enclosure).
- No persons should be present beneath the Lift cage.
- The wind speed during assembly must not exceed 45 km/h (= wind force 5-6).
- National accident prevention regulations from the health and safety executive office and all applicable laws and guidelines must be complied with.
- Fall protection must be provided at loading points above 2.0 m to prevent persons from falling (use only original GEDA Landing level safety gate).
- Observe the load capacity of the Hoist.

ATTENTION
During assembly, the load bearing capacity is limited to 500kg.

- If the red overload warning light on the Lift cage control lights up, the Lift cage is overloaded. -Immediately reduce the loading weight. In this case, the control is interrupted until the warning light is turned off.
- During mast assembly, the projected mast may be extended out to max. 9.5m over the last mast bracket! (Upper edge of sliding carriage to the mast fastening point.) During operation, only 6m (with Lift cage 2.6m x 1.4m and 3.2m x 1.4m only 2m).
- Ensure that the masonry is capable of taking the anchoring forces. A construction expert must check to ensure the house front is suitable for anchoring forces of this kind. The inspection results will determine whether anchor plugs or through bolts must be used.

7.2 Installation of the basic unit

NOTE
- If the base unit is not connected to the mains voltage, the sliding doors (enclosure and Lift cage) can only be opened if they are unlocked one after the other with a triangular wrench (see section 4.7.8).
- The trailing cable holder is factory-mounted and only has to be assembled during installation for first commissioning as an exception for transport reasons(see section 4.7.7).

- The machine must be installed and deployed only in a vertical position! The base unit must be aligned parallel to the building or framework.
- Place the base unit at the support points (support plate of the spindles and especially on the foot section supports beneath the mast) on load distributing and level base supports. (Observe load bearing capacity of the foundation.)
- Align the base unit according to the specifications in sections 4.4 to 4.5 and the assembly diagram, section 4.3.

NOTE
The foot section must be secured against shifting at a minimum of 4 of the spindle support plates.

ATTENTION The foot section must be underpinned beneath the mast over an area measuring 0.5m x 0.5m (0.25m^2), the spindles are merely used for adjustment, not for transferring forces from the mast sections.

- Align the base mast vertically from the start using a water-level. This must also be checked when attaching each mast bracket.
- Ensure a safety distances of at least 50 cm to any moving equipment parts.
- After turning on the main switch, a green control light must light up on the ground control and on the Lift cage control which shows it is ready to be operated.
- If the control light does not light up, see section 10.

- The assembly flap on the roof must be opened to attach the mast.

- Loosen and remove assembly flap (3) screws (1).

(Allan wrench ⬣ = 8mm)

- Using one opening bar, pull the holder bracket down and pull the second opening bar (2) sideways from the bracket.

- Flip the assembly flap (3) up and open with the opening rod (2).

NOTE
On completion of mast assembly, the open assembly flap must be closed again.

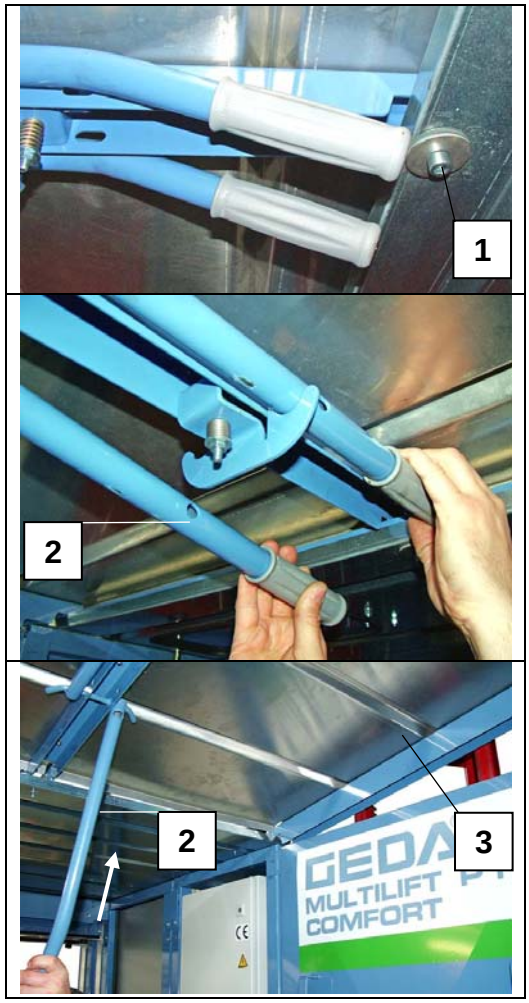


Fig. 29 Opening the assembly flap

NOTE
The assembly guard plate can be lowered only when the assembly flap is open.

- Slightly raise the assembly guard plate (4), pull forwards and lower.

Fig. 30 Opening the assembly guard plate

Only on Lift cage (3.2 m x 1.4 m) with second assembly bridge on each side

- In order to be able to unfold the building-side (external) assembly bridge (6) on the Lift cage, the locking screw (7) must be removed from above the safety latch.

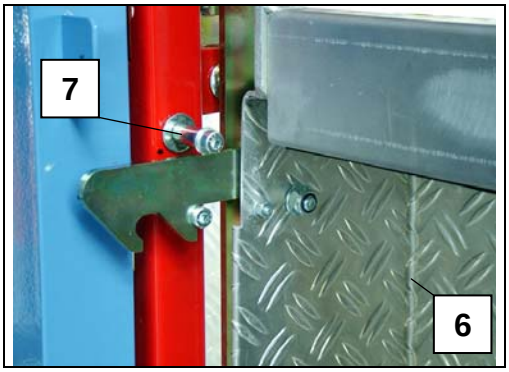


Fig. 31 Locking screw on assembly bridge

NOTE
Once assembly of the Multilift is complete, the removed safety screw must be replaced so that the assembly bridge cannot accidentally open during operation.

7.3 Extending the mast sections and anchoring to the building

If the equipment is erected in front of scaffolding it must be anchored to the building.

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

7.3.1 Assembling the mast sections up to approx. 8 m high

ATTENTION
Align the mast sections vertically from the start using a spirit level. This must also be checked when attaching each mast bracket.

The following points must be observed:

- The assembly engineers ascend in the Lift cage; operation is from the Lift cage control.
- The load bearing capacity during assembly is max. 500 kg.

The equipment is assembled from the Lift cage, the assembly bridge and scaffolding (if there is any).

To start with the Lift cage is on the ground:

- Depending on the model, open the sliding door or base enclosure barrier.
- Open the Lift cage's sliding door.
- Load Lift cage with mast sections, parts for mast anchoring and tools (max. 500kg).
- Close sliding door or barrier of base enclosure.
- Close the sliding door of the Lift cage from the inside.
- Turn the key for Multilift assembly to "Assembly" (to the left) on the Lift cage control switch.

NOTE
First close any open sliding doors and lowered assembly guards as they interrupt the control function.

Before the ascent of the Lift cage, check whether the base unit is standing securely.

- Press UP button (on Lift cage control) and ascend in the Lift cage until the proximity switch at the end of the mast stops the ascent.
- Slightly raise the assembly guard plate, pull forwards and lower.

- The 1.5 m mast sections should be set on by hand, the 4 eyebolts shut and securely tightened
  (always extend masts in pairs).

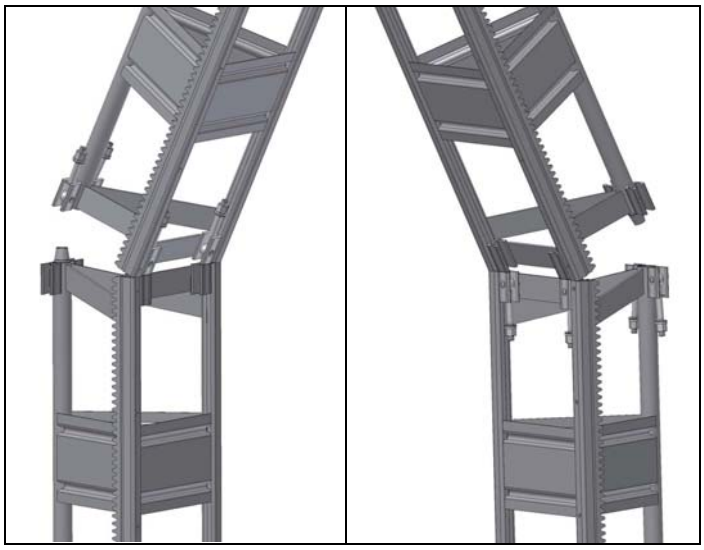
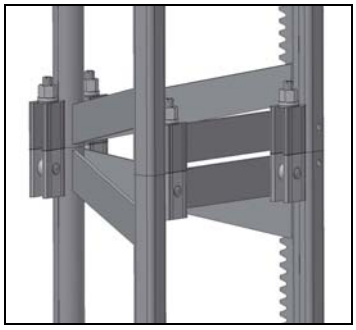


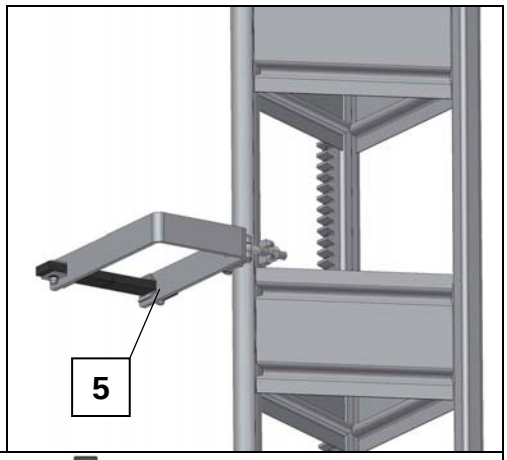
Fig. 32 Attaching the mast sections

NOTE
The bolt torque moment equates to **150 Nm**



Trailing cable guide

Trailing cable guides must be installed to ensure that the trailing cable runs freely into the cable box. The more acute the wind force at the location of the machine, the shorter the distances of the trailing cable guides must be. **Max. distance: 6m**.



- Attach the **first** trailing cable guide (5) at a distance of approx. 1 m from the upper edge of the cable box.

- Attach the trailing cable guide with the rubber lugs at a right angle onto the drive-side round tube of the right mast and align it centred on the sliding carriage cable holder (distance to the vertical cable holder square tube approx. 20 mm).

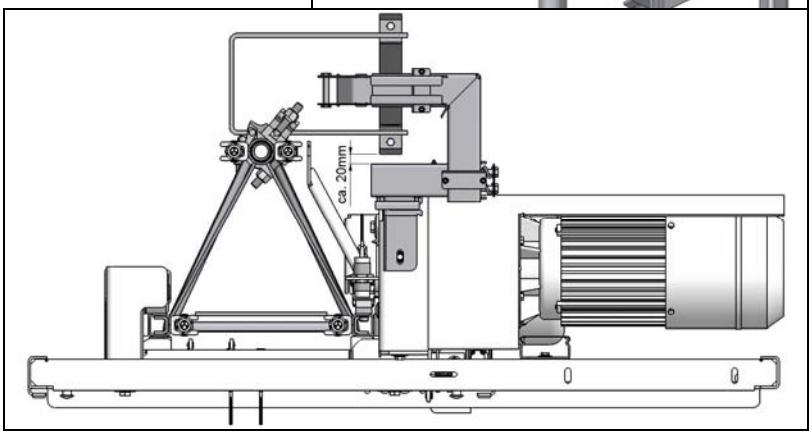


Fig. 33 Trailing cable guide

ATTENTION
Collision hazard with the sliding carriage!

- Slide up assembly guard in front of both masts and hang in to connect.
- Press UP push-button and ascend to the end of the attached mast section.
- Lower the assembly guard once again.
- Set on and bolt another mast section on each side.

- Set on two more mast sections on both sides as described.

- The **first two mast anchors** should be secured at a height of **max. 8m**.
- Slide up and hang in assembly guard plate.
- Raise the Lift cage high enough that the anchor can be set at a height that facilitates assembly.
- Lower the assembly guard once again.

Assembly bridge

The assembly bridge is a narrow folding platform. By using this platform, it is possible to assemble the Hoist just from the Lift cage (including in front of a facade without any scaffolding built in front of it). The assembly bridge may be used only during assembly and dismantling.

Fig. 34 Assembly bridges

NOTE

The Lift cage measuring 3.2 m x 1.4 m has two assembly bridges next to each other on each side; both have to be opened up for assembly.

- The locking screw (see Fig. 31) must be removed on the right-hand assembly bridge.

Ensure before each ascent/descent that the safety latch of the assembly bridge has clicked fully into place (second tooth) and that the lock is engaged.

- Raise the Lift cage high enough that the anchor can be set at a height that facilitates assembly.

Unfolding the assembly bridge:

- Remove the triangular wrench from the Cable box switch cabinet (see Fig. 17) and insert it into the bore hole on the mast-side assembly bridge.
- Open the safety interlock by turning the triangular wrench to the right (clockwise).

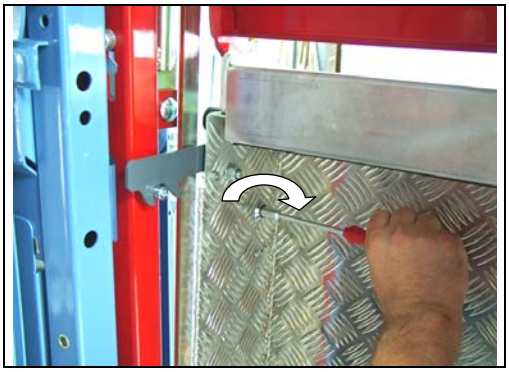


Fig. 35 Safety interlock

- With your right hand in the handle grip (3) of the assembly bridge, pull the assembly bridge towards you and open the safety latch (2) with your left hand.
- Press the handle grip (3) slowly outwards and grip the pulling bar (1) with the other hand.
- Release the handle grip (3) and completely lower the bridge using the pulling bar (1).

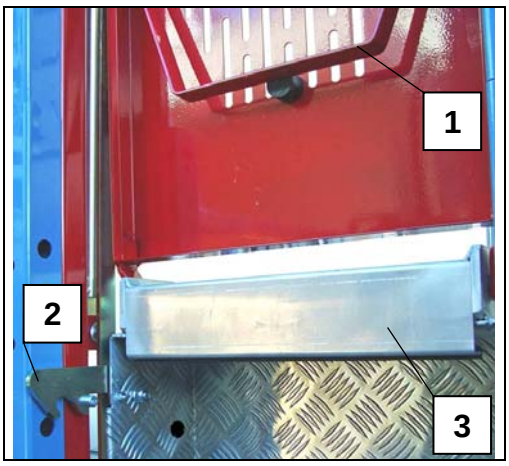


Fig. 36 Closed assembly bridge

- As soon as the base pan is lying horizontally it can be accessed in order to press the end wall outwards.
- The assembly bridge is now ready for operation.

NOTE
When the assembly bridge is unfolded, the control function is interrupted by a limit switch making travel impossible.

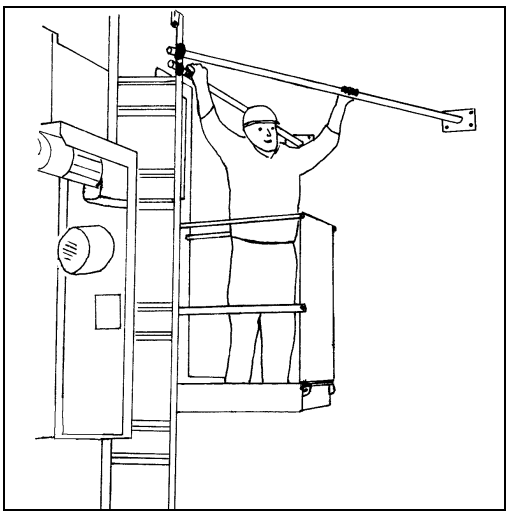


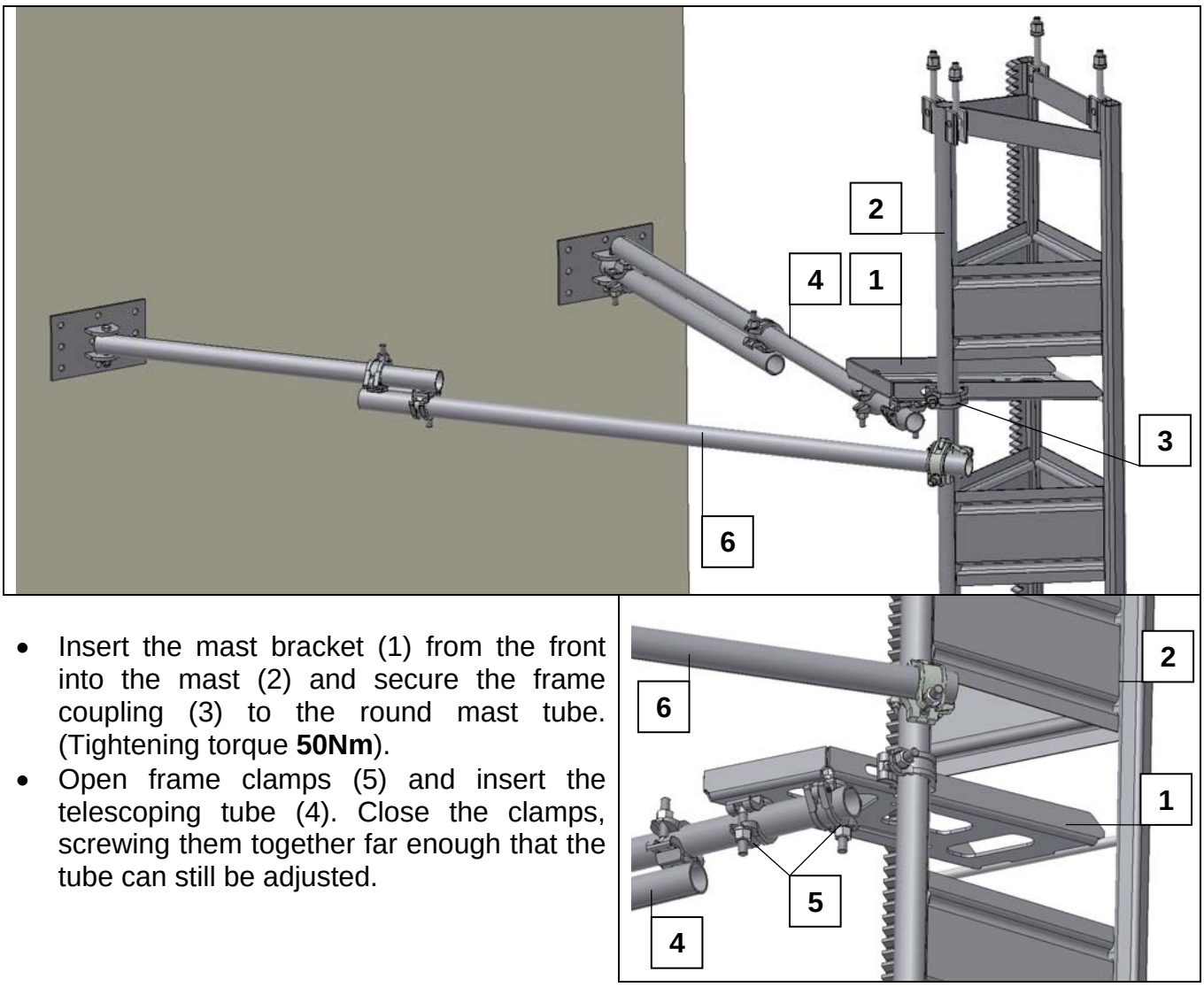
Fig. 37 Open assembly bridge

If extension tubes are used, the projecting tube ends must not reach into the travel range/area of the assembly bridge - danger of collision!

NOTE
The assembly bridge cannot be unfolded if the fixing tube is mounted at a height lower than 1.6 m above the floor of the Lift cage. The Lift cage must then be lowered a bit by carefully releasing the drive brake.

Folding in the assembly bridge:
- Step on the platform side and grip the pulling bar (1) to fold in the assembly bridge.
- Pull the front wall towards yourself using the pulling bar (1) until the base pan of the bridge moves with it.
- Pull the bridge towards yourself using the handle grip (3) to facilitate the remaining movement until the safety latch (2) engages with its second tooth.
- Close the safety latch's safety interlock by turning the triangular wrench to the left (anticlockwise).

NOTE
When the safety interlock is open, the control is interrupted by a limit switch which makes travel impossible.



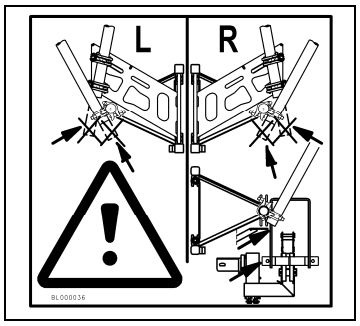
- Insert the mast bracket (1) from the front into the mast (2) and secure the frame coupling (3) to the round mast tube. (Tightening torque **50Nm**).
- Open frame clamps (5) and insert the telescoping tube (4). Close the clamps, screwing them together far enough that the tube can still be adjusted.

Fig. 38 Mast connection on left

- For adjusting the angle, loosen the nut below the tube clamps (5) and slide the one tube clamp into the elongated hole.
- Re-tighten all 4 nuts.
- The minimum clearance to the assembly bridge is 5 cm. The attachment plates should be bolted to the wall with anchor fittings or through bolts. (see also the table, Anchoring forces.)

NOTE
With greater distances to the building (e.g. frontal scaffolding), extension tubes should be used (see section 4.3).

The free ends of the mast anchoring tubes may project max. only 2 cm over the frame clamps!
Danger of collision!



- Secure the telescoping tube (6) to the outer side of the mast tube (torque moment **50 Nm**) with a starred frame coupling, pulling it towards the wall and anchoring it likewise. Select the furthest possible horizontal distance between the two anchoring tubes. (The minimum distance between the two fastening plates is dependent upon the distance between the mast and building, and with greater distances, extension tubes should be used).

NOTE The vertical and perpendicular alignment of the mast must be checked and corrected if necessary.

- Vertical alignment of the mast is by means of shifting the anchoring tubes in the mast bracket or at the frame coupling.
- Perpendicular alignment of the mast is by means of the two frame couplings (Fig. 38 Pos.5).

NOTE
The mast anchoring of the right mast will be attached at the same height, inversely to the anchoring described.

7.3.2 Assembly of mast sections above 8 m

- Assemble another 7 mast pairs as described in section 7.3.1, see also Fig. 32.
- In order to mount the mast brackets, ascend as far as necessary for these to be mounted easily. In this instance, the sliding carriage's upper edge may only ascend up to 9,5m (with a 500kg weight) above the last mounted mast bracket.

When assembling the mast, the projecting mast may be moved out over the last mast anchor by a max. of 9.5m (with max. of 500kg load)! (Upper edge of sliding carriage up to mast fastening point).

- Mount trailing cable guides at distances of max. 6 m (see section 7.3.1)
- Install the second mast anchor at a max. height of 28m, as described in section 7.3.1.
- Mount further mast sections as described previously.
- Mount other trailing cable guides at distances of max. 6 m (see section 7.3.1)
- Install other mast anchors as described beforehand (see sections 7.3.1).

Check cable length of the trailing cable!

- Assemble the Hoist until the desired height is reached (max. 100 m).

Maintain vertical distances for:
- Mast anchoring max. 10.0 m.
- Trailing cable guides max. 6.0 m.

NOTE
Prior to the initial commissioning with new mast parts, the gear racks must be lubricated manually!

- Once the Construction Hoist has been fully assembled, the assembly guard plate must be installed and the assembly flap in the ceiling must be closed (see Fig. 29 and Fig. 30).

7.3.3 Emergency limit switch bar

Emergency limit switch bar

- An Emergency limit switch bar (1) must be installed as an uppermost stop point before the drive pinions leave the gear rack. A minimal clearance distance of 1.10 m to the upper mast-end must be maintained (the Hoist is stopped at this bar by the UP-operating limit switch, or by the Emergency limit switch in the event of a fault).

- From the Lift cage, bolt the limit switch bar (1) to the round tube of the right mast with frame clamps.

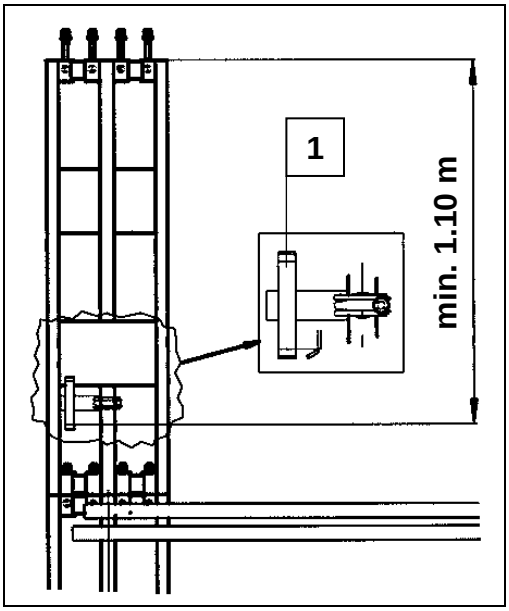


Fig. 39 Emergency limit switch bar

During operation, the mast may be driven out a max. of 6 m (with the Lift cage 2.6 m x 1.4 m and 3.2 m x 1.4 m only 2 m) over the last mast anchoring (mast anchoring to the Sliding carriage upper edge). Accordingly, the Emergency limit switch bar must be set low.

7.4 Safeguarding the loading and unloading points

Fall protection must be provided at **all** loading and unloading points for heights above 2.0 m to prevent persons from falling.
Only Landing gates which guarantee safe transfer to the building in combination with a platform are permitted for the tested and approved GEDA Lifts.

GEDA Landing gates with Item No. 01212, 01217, 29250 and 29280 have been tested and approved together with the GEDA MULTILIFT P18 and fulfil these requirements.

NOTE Assembly of the Landing level safety gates is described in their own operating manuals, which are supplied with them.

- The base enclosure (1.10 m) on the **GEDA MULTILIFT P18 STANDARD** is designed with a barrier.
- An enclosure must be assembled around the Hoist at a distance of at least 50 cm.
- The barrier is mounted in front of the ground-level access point (for enclosure assembly, see section 4.8.1).

- The base enclosure (2.50 m) on the **GEDA MULTILIFT P18 COMFORT** is designed with a sliding door.

- If the Lift cage sliding door on the landing level side does not have a ramp, then a Landing level safety gate with double doors (Item No. 29250 or 29280) must be assembled as fall protection.

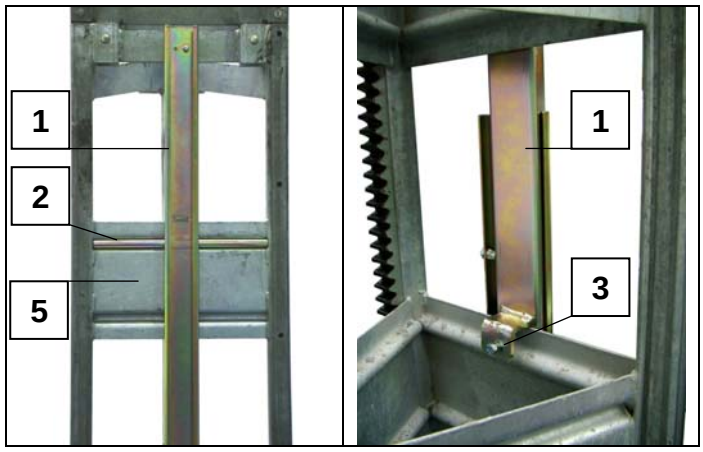
- If the Lift cage sliding door on the landing level side has a ramp, then a Landing level safety gate with sliding door (Item No. 1212 or 1217) must be assembled as fall protection.

ATTENTION
The opening width of the Landing gate (Item No. 01212 and 01217) can be adjusted by a movable frame coupling.
When doing this, make sure that the loading flap and Landing gate are correctly, mutually and mechanically locked (see operation manual for Landing gate).

7.5 Landing level limit switch bar

- Set the Landing level bar (1) in the right mast.

- From the Lift cage, hang the limit switch bar (1) on both mast connection plates (5) of the mast sections (the round tube (2) of the Landing level bar lies in the depression of the upper mast connection).
- Affix the back side of the limit switch bar (1) to the clamp bolts (3) on both mast connection plates (5).



- Depending on the Landing gate, adjustment of the approach plate (4) must be carried out.

Making adjustments with a Landing level double door

- Set the distance from the landing level floor to the opening of the variably adjustable approach plate (4) to approx. 37.5 cm.

Making adjustments with a Landing level sliding door

Set the distance from the landing level floor to the opening of the variably adjustable approach plate (4) to approx. 50 cm.

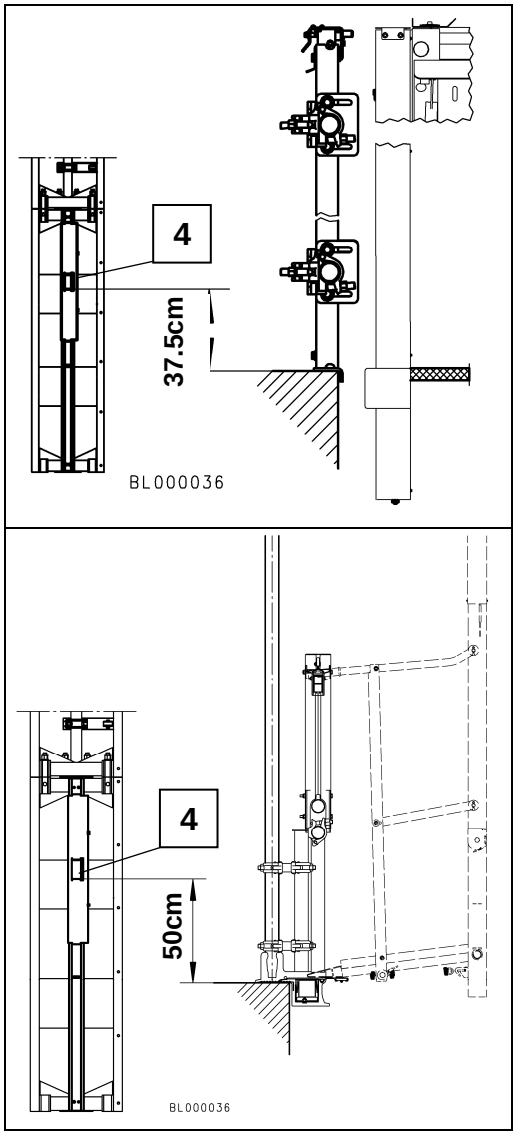


Fig. 40 Positioning the Landing level bar

7.6 Inspection after assembly and before each start of operation

- Check to ensure that
  - the gear rack is adequately greased
  - the prescribed maintenance work and inspection procedures have been implemented
  - there is no oil leakage at the gear motor
  - the supply cable has a sufficient cross section
  - the direction of motor rotation agrees with the UP/DOWN button movements
  - the trailing cable length is sufficient for the assembly height
  - the danger zone at the lower loading point is cordoned off
  - plates/notices are present and legible (see Technical data).
- Carry out a test run with a **loaded** Lift cage and check whether the brake functions correctly.
- Check whether the Lift cage control, ground control and level control are functioning correctly.
- The trailing cable, mains supply line and control lines must not show any damage.
- Test the function of the overspeed safety brake by performing a catch control test. (see section 11.9)
- Give handover report and documentation to the user.
- Give ground control key to the authorised and instructed person.

8 Operation

8.1 Safety notes

The Hoist may be operated only by a qualified person appointed by the Operating company. This person must be familiar with the Assembly and Operating Instructions, have sufficient experience and must be instructed in the hazards involved in working with the Hoist.

- Cordon off the danger zone of the Hoist (MULTILIFT P18 STANDARD).
- No persons may be present under the Hoist.
- No objects may be stored in the cordoned off area or under the Hoist.
- Operating personnel (see section 3.4)
- The Hoist must be operated from outside the danger zone.
- Secure the machine thoroughly against unauthorised access! - When work is finished or during breaks, Maintain the manual control securely or turn off main switch and secure with padlock.
- If the loaded Lift cage stops during operation due to a malfunction, operating personnel must recover the load. - Never leave a loaded Lift cage unattended!
- Operation of the Hoist must be stopped if:
  - wind speeds exceed 72 km/h (= wind force 7-8; stormy winds)
  - temperatures fall below –20°C
  - when damage or other faults occur
  - a recurring inspection has been missed (see section 2.3.1).
- Particular care is required near ground level.
- A max. of 18 person (including the platform operator) may be transported, whereby the corresponding materials transported must be reduced; max. Lift cage load = 1500kg.

8.1.1 Rules for accompanying persons

- Comply with the instructions of the operating person
- Do not step over material that is being transported.

8.1.2 Rules for ground personnel

- No persons may remain under the machine.
- Store material at a safety distance of min. 50 cm from moving parts of the Lift cage.
- No objects may be stored in the cordoned off area or under the Lift cage.

8.1.3 Rules for loading and unloading the Lift cage

- Fall protection to prevent persons from falling must be provided at loading points above 2.0 m. (Install Landing level safety gates.)
- The sliding doors on Landing level safety gates may only be opened once the loading ramp has folded down fully.
- Double doors on Landing level safety gates can only be opened if the Lift cage is stationary at a landing level.
- The Lift cage must always be loaded in such a way that the access points for loading and unloading and the control unit are kept clear.
- The load must be evenly distributed over the Lift cage.
- Position the load securely. Any material that could slip or fall must be secured.

ATTENTION
The brake release lever must never be used to lower the Lift cage during operation. It is intended for use in emergencies only (see section 10.1).

- Likewise, observe the safety instructions in section 2.

8.2 Safety inspections

Prior to starting work

Carry out a test run with an **empty** Lift cage and check whether the entire length of travel is clear for the Lift cage.

The Lift cage must be stopped immediately if
- an EMERGENCY-STOP push-button is pressed
- a Landing gate is open
- the DOWN limit switch is actuated
- the upper limit switch approach bar has been actuated or the carriage has reached the mast end.

The Lift cage may not start if
- it is overloaded (warning light on Lift cage control is illuminated).
- a sliding door or barrier is open.
- the assembly guard is lowered.
- an assembly bridge is open.
- the overspeed safety brake has triggered.

A sliding door may only be opened if
- The Lift cage is on the ground or stationary at a landing level.

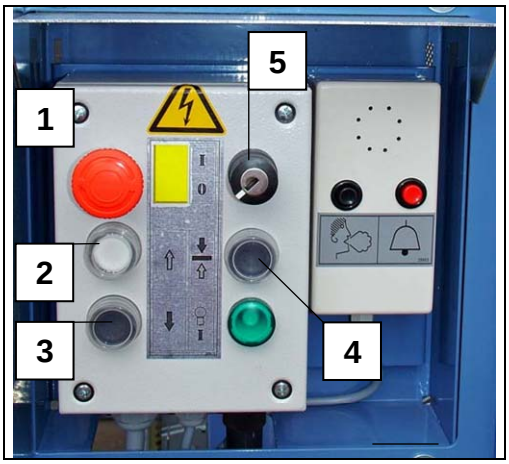
On the **GEDA MULTILIFT P18 STANDARD** the Lift cage must not be run automatically with an external control (ground-level or landing level) if
- the loading platform is near the ground (approx. 2 m).
- On the descent, the Lift cage stops above the 2 m safety height and can only be run to the ground following a warning tone and after pressing the down button again using the ground control or the Lift cage control. Ascent with the level control is possible only above the 2 m safety height.

8.3 Operating

- Sliding doors must be closed. The assembly guard plate must be properly hung. Assembly bridges must be closed and secured.
- Turn the main switch (on the switch cabinet of the cable box) to position ON.
- Turn on key switch (5) on the ground control.
- Turn on key switch (6) on the Lift cage control.

8.3.1 Operating the GEDA MULTILIFT P18 STANDARD

1 = EMERGENCY-STOP push-button



Ground control

Ascent

- Press UP button (2).

- The Lift cage traverses the lowest 2.0 m off the ground only as long as the UP button (2) is pressed. After passing this 2.0 m safety height, the UP button (2) must be released and the Lift cage drives automatically to the next landing level and stops there.

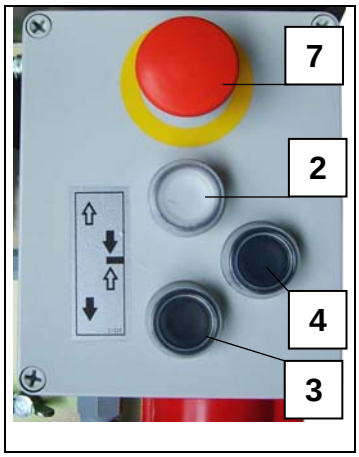
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed briefly just before that level.

Descent

- Press DOWN button (3) and release.

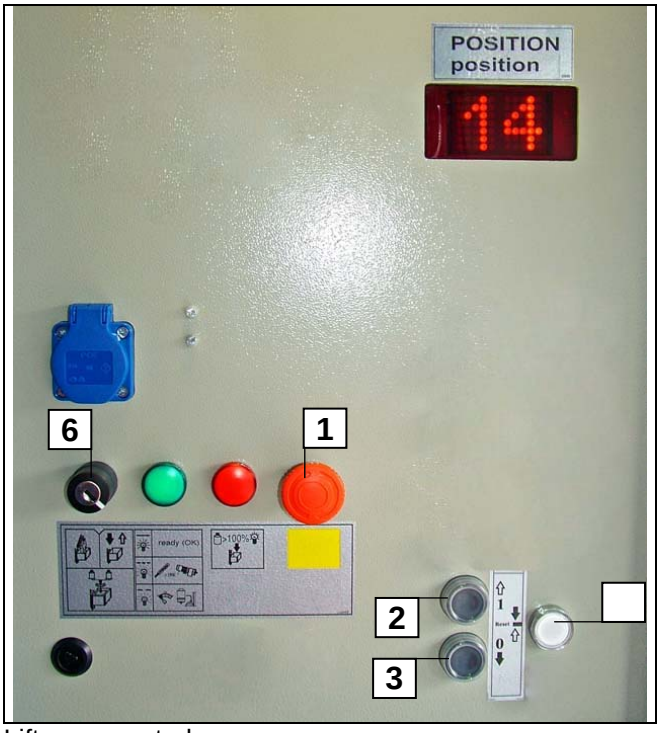
- The Lift cage drives directly down until reaching the approx. 2.0 m safety height.
- The remaining 2.0 m can only be travelled with ground control and with the DOWN button (3) held pressed again (dead man's control).
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed briefly just before that level.

7 = EMERGENCY-STOP push-button (does not click into place)



Landing gate control

1 = EMERGENCY-STOP push-button



Lift cage control

Ascent

- Press UP button (2)
- The Lift cage traverses the lowest 2.0 m off the ground only as long as the UP button (2) is pressed. After passing this 2.0 m safety height, the UP button (2) must be released and the Lift cage drives automatically to the next landing level and stops there.
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed just before this level.

Descent

- Press the DOWN button (3) and release.
- The Lift cage drives down and stops automatically approx. 2 m above the ground. It triggers an audible warning tone for approx. 3 seconds. During this time, the control function is interrupted.

The operator may continue the descent only after it has been ensured that the travel path below is free.

- Press the DOWN button (3) again and hold pressed; after the warning tone, the Lift cage drives down to the ground and is stopped automatically by the limit switch.
- If the Lift cage is to stop at an intermediate landing level, the level stop button (4) must be pressed just before this level.

8.3.1.1 Approaching a landing level using external controls

- Push the base enclosure barrier (1) up.

Fig. 41 Opening the barrier

- Open the Lift cage's sliding gate.
- Using the central handle grip (2) push the sliding door up until it stops.

- Load or unload the Lift cage.

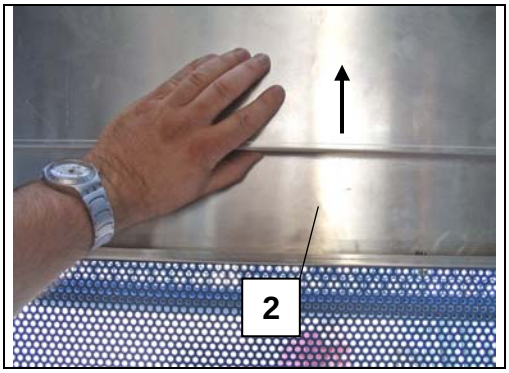


Fig. 42 Opening the sliding door

- Close the Lift cage's sliding door.
- Using the lower handle grip (3) pull the sliding door down until it is completely closed.

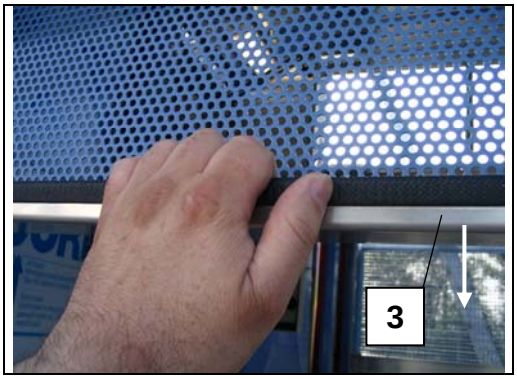


Fig. 43 Closing the sliding door

- Close the base enclosure barrier.

- Press UP button (ground control) and only release when above the 2 m safety height.
- The Lift cage drives up to highest level. If the Lift cage is to stop at an intermediate level, the level stop button must be pressed briefly just before that level.

- On sliding doors without ramp, open the Landing level double doors.
- Simultaneously pull forcefully on both handles.
- Open the double doors.

Fig. 44 Opening the landing double doors

- Open the Lift cage's sliding door.

NOTE
On the sliding door with ramp, the ramp automatically folds down when the sliding door is opened.

- On sliding doors with ramp, open the landing sliding gates.
- To open, press the lever up (in the direction of the arrow).
- Push up sliding door.

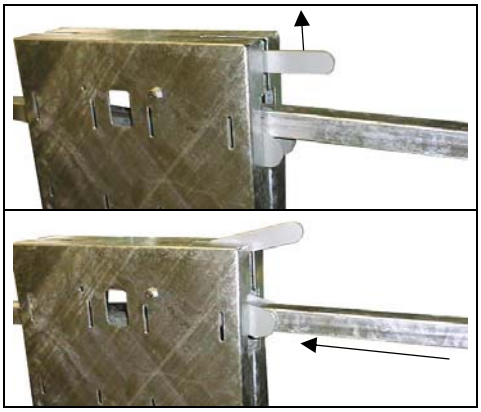


Fig. 45 Opening the landing sliding gate

- Load or unload the Lift cage.

- For the descent, close the Landing gate on the Landing level safety gate again, make sure the safety lever or safety bar clicks into place again.
- Close the Lift cage sliding door
- Briefly press the DOWN button (ground control or level control). - Lift cage drives down to 2.0 m safety stop. (If the Lift cage is to stop at an intermediate level, the Landing level stop button must be pressed briefly just before that level.)
- Press DOWN button (ground control) again and hold pressed.
- After approx. 3 sec. (after the warning tone), the Lift cage drives down until it is automatically stopped by the limit switch.
- Swing the base enclosure barrier up.
- Open sliding door on Lift cage.
- Load or unload the Lift cage.

8.3.1.2 Approaching a landing level with the Lift cage control

- Swing the base enclosure barrier up.
- Open sliding door on Lift cage.
- Load the Lift cage with tools or materials and persons can access the Lift cage.
- Swing the base enclosure barrier back down.
- Close the sliding door on Lift cage.
- Press UP button (2) and hold pressed. After passing this 2.0 m safety height, the UP button (2) must be released and the Lift cage drives automatically to the next landing level and stops there. If the Lift cage is to stop at an intermediate level, the Landing level stop button (4) must be pressed just before this landing level.
- Open sliding door on Lift cage.

NOTE
On the sliding door with ramp, the ramp automatically folds down when the sliding door is opened.

- Open the Landing level safety gate.
- Accompanying persons can exit the Lift cage and material can be unloaded.

- The Lift cage can be re-loaded and personnel can enter the Lift cage for the descent.
- Close the Landing level safety gate again.
- Close the Lift cage sliding door
- Press DOWN button (3) and release. The Lift cage drives down and stops automatically approx. 2 m above the ground. It triggers an audible warning tone for approx. 3 seconds. During this time, the control function is interrupted. If the downward travel path is clear, press the DOWN button (3) again and hold pressed; after the warning tone, the Lift cage drives down to the ground and is automatically stopped by the limit switch. If the Lift cage is to stop at an intermediate level, the level stop button (4) must be pressed briefly before reaching this level.

The operator may continue the descent only after it has been ensured that the travel path below is free.

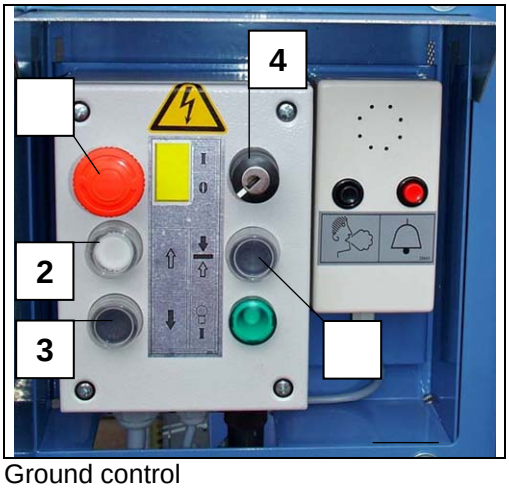
- Open sliding door on Lift cage.
- Swing the base enclosure barrier up.
- Accompanying persons can exit the Lift cage and material can be unloaded.

8.3.2 Operating the GEDA MULTILIFT P18 COMFORT

Ascent

- Press UP button (2) and release.
- The Lift cage drives directly to the highest level and stops there.
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed briefly just before that level.

1 = EMERGENCY-STOP push-button

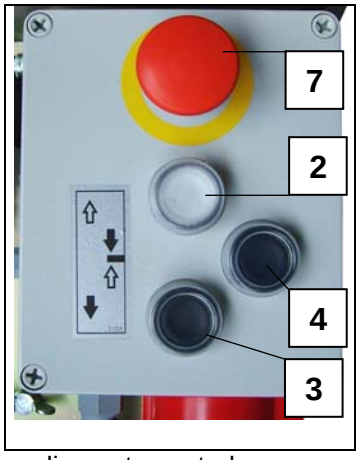


Ground control

Descent

- Press DOWN button (3) and release.
- The Lift cage drives from any landing level down to the ground station.
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed briefly just before that level.

7 = EMERGENCY-STOP push-button (does not click into place)



Landing gate control

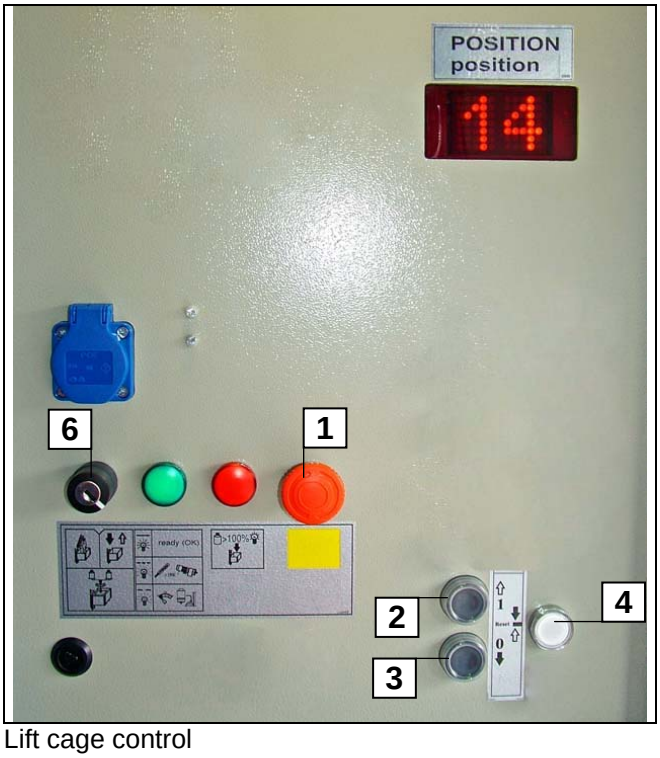
Ascent

- Press and release UP button (2).
- The Lift cage drives automatically to the uppermost landing level and stops there.
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed just before this level.

Descent

- Press and release DOWN button (3).
- The Lift cage drives down to the ground and is automatically stopped by the DOWN limit switch on the base unit.
- If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed just before this level.

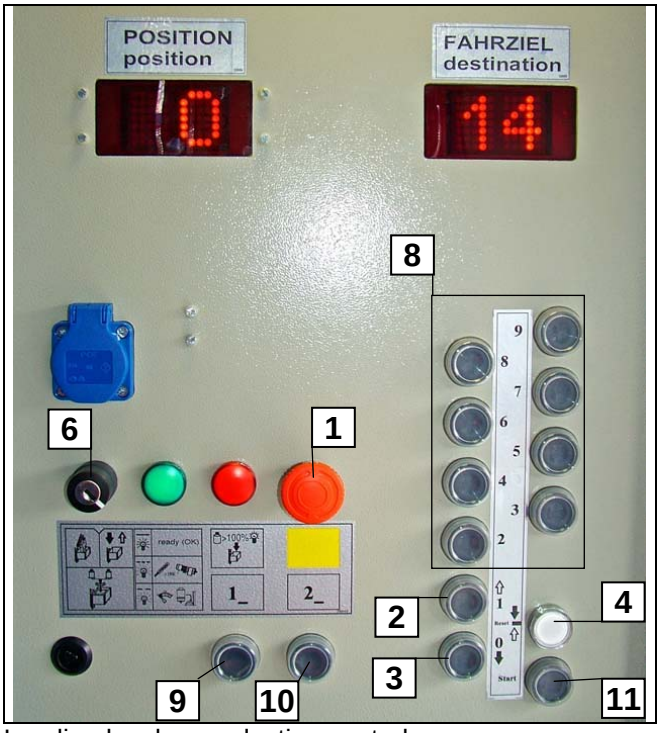
1 = EMERGENCY-STOP push-button



Lift cage control

Operating the Lift cage control with Landing level pre-selection [option]

1 = EMERGENCY-STOP push-button



Landing level pre-selection control

For landing levels 1 to 9

- Pre-select the stop level you want by briefly pressing a destination button for landing levels 1 to 9 (Pos. 2 or 8) and then press the start button (11). - the Lift cage drives to the selected landing level and stops there.

For landing levels 10 to 19

- Pre-select the desired destination landing level by pressing the button for landing levels 10 to 19 (Pos. 9) and the destination button for landing levels 1 to 9 (Pos. 2 or 8), and then press the start button (11). - the Lift cage drives to the selected landing level and stops there.

For landing levels 20 to 29

- Pre-select the desired destination landing level by pressing the button for landing levels 20 to 29 (Pos. 10) and the destination button for landing levels 1 to 9 (Pos. 2 or 8), and then press the start button (11). - the Lift cage drives to the selected landing level and stops there.

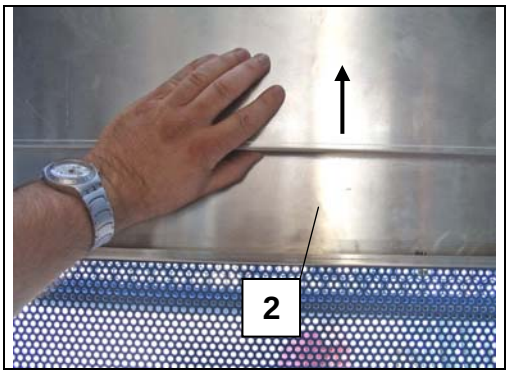
For the ground station

- Pre-select the ground station by pressing the destination button for landing level 0 (Pos. 3), and then press the start button (11). - the Lift cage drives to the ground station and stops there.

8.3.2.1 Approaching a landing level with external controls

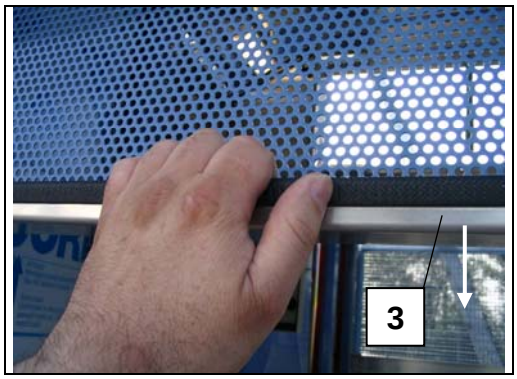
- Push base enclosure sliding door up.
- Using the central handle grip (2) push the sliding door up until it stops.
- Open the Lift cage's sliding door like the base enclosure sliding door.

- Load or unload the Lift cage.



Opening the sliding door

- Close the Lift cage's sliding door.
- Using the lower handle grip (3) pull the sliding door down until it is completely closed.
- Open the base enclosure sliding door like the Lift cage sliding door.



Closing the sliding door

- Press and release UP button (ground control).
- The Lift cage drives up to highest level. If the Lift cage is to stop at an intermediate landing level, the Landing level stop button must be pressed briefly just before that level.

- On sliding doors without ramp, open the Landing level double doors.
- Simultaneously pull forcefully on both handles.
- Open the double doors.

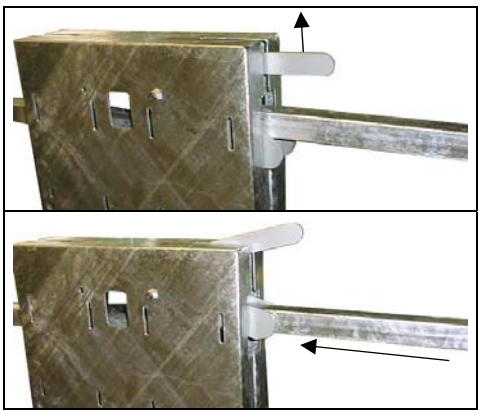
Opening the Landing level double doors

- Open the Lift cage's sliding door.

NOTE

On the sliding door with ramp, the ramp automatically folds down when the sliding door is opened.

- On sliding doors with ramp, open the landing sliding gates.
- To open, press the lever up (in the direction of the arrow).
- Push up sliding door.



Opening the landing sliding gate

- Load or unload the Lift cage.

- For descent with sliding doors without ramp
- Close the Lift cage's sliding door.
- Close the landing double doors.

- For descent with sliding doors with ramp
- Close the sliding gate on the Landing level safety gate again, make sure the safety lever or safety bar clicks into place.
- Close the Lift cage sliding door

- Briefly press the DOWN button (ground control or level control). - The Lift cage drives to the ground station and stops there. If the Lift cage is to stop at an intermediate landing level, the Landing level stop button must be pressed briefly just before that level.
- Push base enclosure sliding door up.
- Push sliding door on Lift cage up.
- Load or unload the Lift cage.

8.3.2.2 Approaching a landing level with the Lift cage control

- Push base enclosure sliding door up.
- Push sliding door on Lift cage up.
- Load the Lift cage with tools or materials and persons can access the Lift cage.
- Close base enclosure sliding door.
- Close the sliding door on Lift cage.
- Press UP button (2) and release. The Lift cage drives automatically to the highest landing level and stops there. If the Lift cage is to stop at an intermediate landing level, the Landing level stop button (4) must be pressed just before this level.

Model with Landing level pre-selection control [option]

o *Pre-select the desired destination landing level by pressing the destination button(s) (2, 8, 9 and 10), and then press the start button (11). - the Lift cage drives to the selected landing level and stops there.*

- Open sliding door on Lift cage.

NOTE

On the sliding door with ramp, the ramp automatically folds down when the sliding door is opened.

- Open the Landing level safety gate.
- Accompanying persons can exit the Lift cage and material can be unloaded.

- The Lift cage can be re-loaded and personnel can enter the Lift cage for the descent.
- Close the Landing level safety gate again.
- Close the Lift cage sliding door
- Press DOWN button (3) and release. The Lift cage drives automatically down to the ground and is automatically stopped by the DOWN limit switch. If the Lift cage is to stop at an intermediate level, the Landing level stop button (4) must be pressed briefly before reaching this level.

Model with Landing level pre-selection control [option]

o *Pre-select the ground station by pressing the destination button for landing level 0 (Pos. 3), and then press the start button (11). - The Lift cage drives to the ground station and stops there.*

- Push sliding door on Lift cage up.
- Push base enclosure sliding door up.
- Accompanying persons can exit the Lift cage and material can be unloaded.

8.4 Shutting down in an Emergency

- In situations that present a risk to operating personnel or to the Hoist, the Lift cage can be shut down by pressing the EMERGENCY-STOP push-button.
- An EMERGENCY-STOP push-button is located on the Lift cage control and on the ground control.

NOTE

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

8.5 Work interruption - end of work

- Lower the Lift cage to the ground using the DOWN button and unload.
- Turn the key in the key switch on the Lift cage control downwards and remove the key.
- Turn the main switch to OFF position and secure with a padlock.
- Remove the mains power plug.

9 Dismantling (disassembly)

The same rules and safety instructions as described in section 7 apply for dismantling.

In general disassembly is carried out in reverse order to assembly, in addition note the following:

- First dismantle the Landing level safety gates (fit three-part protection first).
- Then check whether all mast connection bolts are in contact.
- The Lift cage must be stopped in such a way that the mast joint of the mast to be removed is located over the upper edge of the sliding carriage.
- Only release the mast anchors if there are no longer any mast sections above the anchor.
- Always unload the Lift cage in the interim (the Hoist cannot be driven if overloaded).

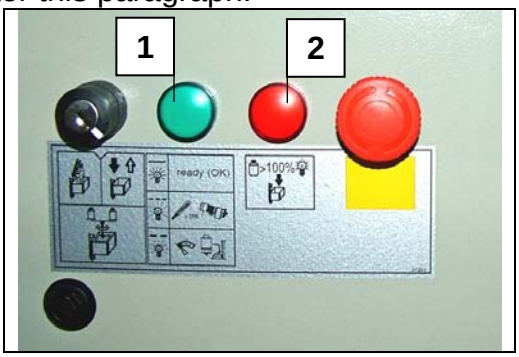
10 Fault – Cause – Remedy

Faults may only be remedied by qualified persons! Before each troubleshooting session, drive the Lift cage down and unload, if possible!

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

If a fault occurs, check the following:

- Mains supply line plugged in?
- Is the mains switch (on the cable box switch cabinet) on?
- Is the key switch on the ground control turned on?
- Fuses in building site main cabinet (32A or 35A, slow-to-blow)?
- Correct extension cable (5 x 6 mm²)?
- Are the EMERGENCY-STOP push-buttons at the control points unlocked?
- Are the Lift cage sliding doors closed?
- Are the assembly guard plates closed?
- Are the assembly bridges closed?
- Emergency limit switch actuated?
- Platform run too low or too high (see section 10.1.3/10.1.4)
- Are the proximity switches for monitoring the gear racks the right distance away from the metal (5-7 mm)?
- Are the actuating controls for the up and down limit switches functioning properly?
- Has the overspeed safety brake engaged (see section 10.2 for release)?
- Check the automatic circuit breaker in the switch cabinet for the cable box (primary fuse 3A, control fuse 1A).
- Is the key switch on the Lift cage control system set correctly for the mode of operation?
- Is the red control light (2) on the Lift cage control illuminated (Lift cage overloaded)?
- Is the green control light (2) on the ground control illuminated? - If not, see section 5.2 electrical connection or note after this paragraph.
- Is the green control light (1) on the Lift cage control blinking?



➢ Continuous illumination → Hoist is ready for operation

➢ Slow flashing light → Lubrication equipment, lack of grease
The grease reservoir must be refilled before it empties.

➢ Fast flashing light → excess temperature of drive motors
→ excess temperature of frequency converter's braking resistances

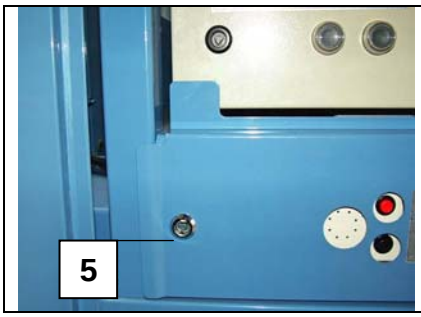
NOTE
Ascent of the Lift cage is no longer possible if the braking resistance temperature is excessive.

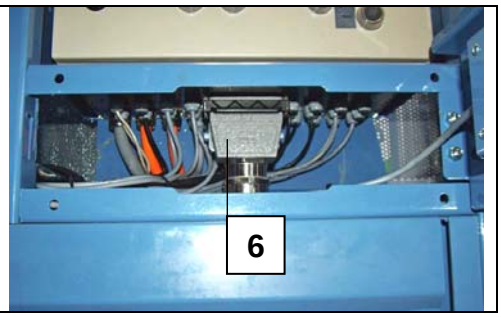
If the green control light is not illuminated, check the following points:
- Is there a phase failure?
- Is the phase sequence incorrect?
- If the phase sequence is incorrect, correct it on the phase inverter (mains supply line plug) by turning the two plug pins 180° using a screwdriver.
- Is the trailing cable plugged into the sliding carriage?
- Are the fuses in the Cable box switch cabinet functioning?

Pull out the mains supply plug before opening the switch cabinet!

Prior to opening the Lift cage control switch cabinet, the trailing cable plug must be unplugged!

- Unlock and open the Voice module (5) faceplate.





- Unplug the trailing cable plug (6) prior to opening the opening the Lift cage control switch cabinet.

Motor is not producing full output:
- Voltage drop of more than 10% of the rated voltage.
- Select supply cable with higher wire cross section.
- The integrated thermo-switch turns off the control current when overloaded. A fast flashing control light (2) on the Lift cage control warns of excess temperature on the drive motors. Work can continue after a certain cooling period (possibly reduce load).

ATTENTION Repeated overheating/overloading must be avoided as otherwise the service life of the drive motor and motor brake are drastically reduced.

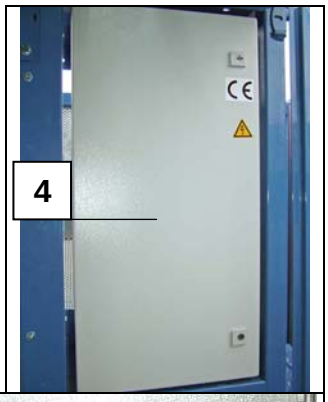
Only on machines that are controlled by frequency converter (option)

NOTE REGARDING RESET BUTTON

Lift commands are deleted by an open safety circuit (e.g. EMERGENCY-STOP push-button; EMERGENCY-STOP push-button at the Landing level control, etc.). The Lift cage will not restart after switching the EMERGENCY-STOP push-button back on.
If a lift command is given although the frequency converter is malfunctioning, the Lift cage will not start; the lift command will remaining pending for 10 minutes. It can be deleted again by the EMERGENCY-STOP push-button.

However, if a reset is carried out on the frequency converter while a lift command is still pending, the frequency converter will carry out the command and the Lift cage will start.

- Open the frequency converter switch cabinet opposite from the Lift cage control (4).



- Is the red LED fault signal (3) on the frequency converter illuminated?
  → if the red LED fault signal (3) is illuminated, then the frequency converter has switched off.

The button (7) on the Lift cage control has a dual function:

1. Level stop button when the Lift cage is being operated.
2. Reset button for the frequency converter when the Lift cage is stationary.

- Press the reset button (7) briefly to reset the frequency converter. (Red LED fault signal (3) goes out)

NOTE

The frequency converter can also be reset by switching off the mains supply (approx. 5 minutes).

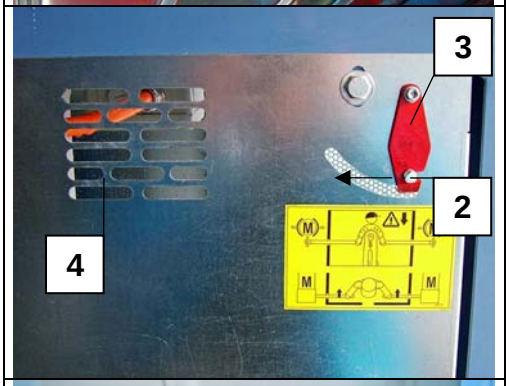
10.1 Possible faults during operation

10.1.1 Power failure or defective motor

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

- Remove brake release rods (1) from the holding brackets (support section of assembly flap).

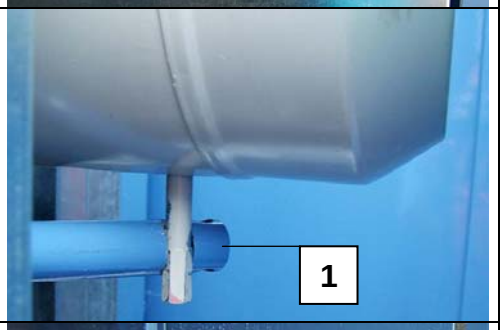
- Loosen the triangle bolts (2) on both sides for the Lift cage and pivot the cover plate (3) to the side.



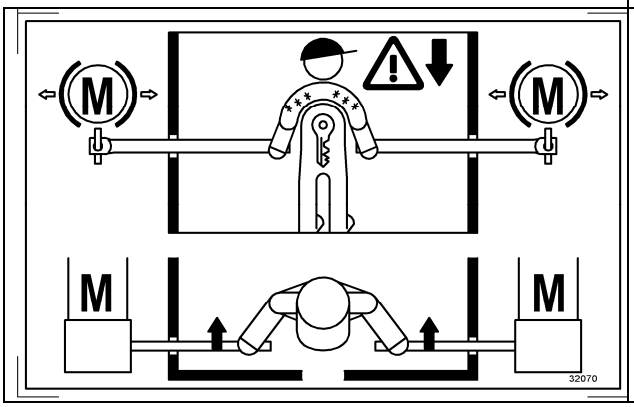
- Push brake release rods (1) through the opening on the side panelling on both sides and guide to the drive brake release lever.

NOTE

The brake release rod can be monitored through the slots (4) on the respective side panelling.



- Release motor brake by carefully metered pulling (towards the centre of the Lift cage) of the brake release rod (1).
  - Lift cage glides downwards



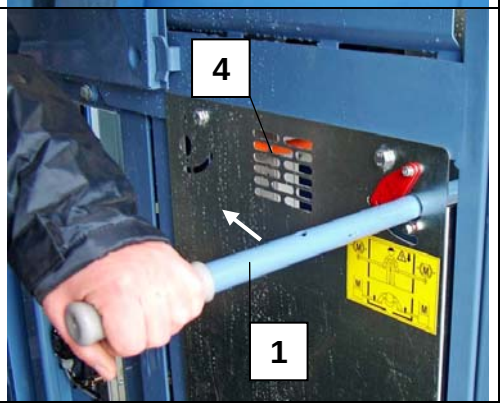


Fig. 46 Releasing the motor brake

The manual release lever must be operated extremely carefully to prevent the overspeed safety brake from engaging. Lower the Lift cage only very slowly! If the overspeed safety brake has engaged once, it will not be possible to progress any further without raising the Lift cage.

- Remove the brake release rod (1) again and reinsert in the holding bracket.
- Re-secure cover plate (3) again with the triangular wrench (2).

10.1.2 Recovery of persons locked inside

It is not possible to lower the Lift cage by releasing the motor brake if, for example, the safety brake has triggered.

- Drive system components can now be checked for breakage, damage or functionality. In this case, the overspeed safety brake must not be opened. **The Hoist must be shutdown!**

- Establish contact with the ground station via the voice module to discuss how best to proceed.
- Exit the Lift cage via the assembly platform.

NOTE

If the operator does not feel confident or qualified to organise and carry out the rescue, please notify the relevant authorities (fire brigade, technical support, factory security office).

- In the event of emergency recovery, the assembly bridge (together with the mast) can be unlocked from outside.
- Turn down the safety interlock (1) anticlockwise.
- Open assembly bridge from the inside (see Fig. 36)

- The safety latch of the assembly bridge can also be opened from the outside.
- Press the base pan (3) inwards and press the lever (2) on the safety latch down.

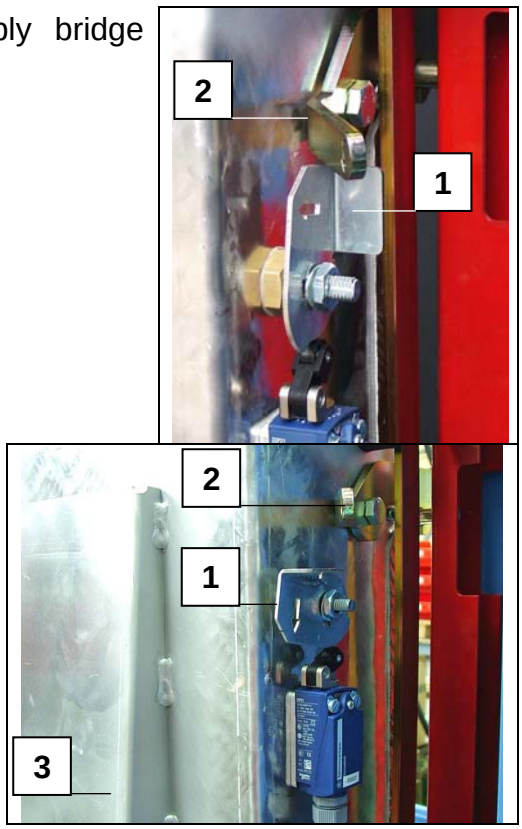


Fig. 47 Safety interlock

NOTE

If the safety interlock (1) is open, the control function is interrupted. After rescue/repair, the assembly bridge must be closed and the safety interlock (1) must be pushed up.

10.1.3 Lift cage has ascended too high

The Lift cage Emergency limit switch can reach the upper Emergency limit switch bar if

- the UP limit switch is defective,
- there is a fault in the electrical system.

Measure:

- Operate motor brake using the manual release lever (see section 10.1.1)

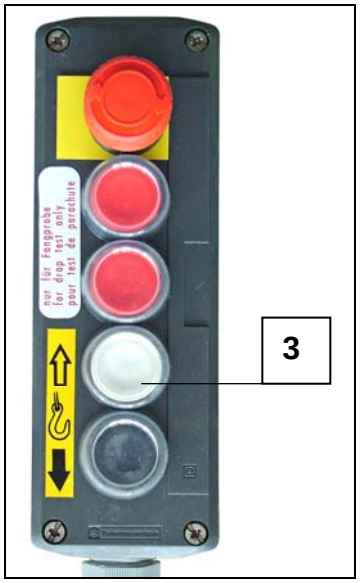
10.1.4 Lift cage has descended too low

The Lift cage Emergency limit switch can reach the lower Emergency limit switch bar if

- the brakes' air gap is too large,
- the DOWN limit switch is defective,
- there is a fault in the electrical system,
- the Lift cage is overloaded.

Measures:

- Open the Lift cage control switch cabinet.
- Unplug the dummy plug from the plug socket in the Lift cage control switch cabinet.
- Plug in the catch control system at the plug socket (see Fig. 54).
- Press UP button (3) outside the Lift cage.
  - the Lift cage now drives out of the EMERGENCY-END position.



The UP button (3) must be pressed, as this control by-passes the Emergency limit switch. If the red Safety brake test buttons are pressed inadvertently, the motor brake will release and the motor can drop and severely impact the foot section (risk of damage).

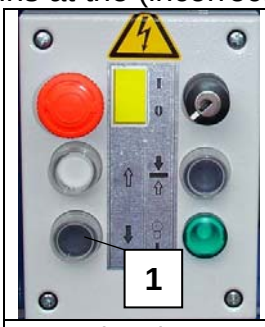
- If this effect occurs repeatedly, although the Lift cage is not overloaded, have the brake checked and/or adjusted by a qualified person.

10.1.5 Lift cage does not recognise the selected landing level

If the Lift cage drives past the selected Landing level or stops at the wrong level, then a referencing run down to the ground station must be carried out.

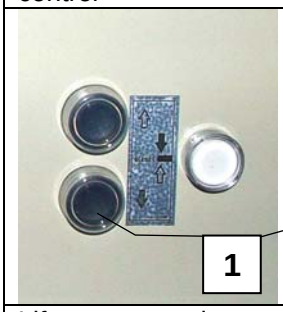
- Press the DOWN button (1) on the Ground station, Landing level or Lift cage controls and release. The Lift cage drives downwards and remains at the (incorrect) landing level 0.
- The remaining travel path to the ground station must be manually controlled.

- Press the DOWN button (1) on the Ground station, Landing level or Lift cage controls and hold pressed.
- After approx. 30 sec. the Lift cage drives slowly downwards (12 m/min.) to the ground station and stops at the lowest limit switch.
- The Lift cage can now be operated normally again.

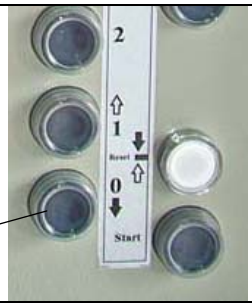


Ground station control

Landing gate control



Lift cage control



Landing level pre-selection control

10.1.6 Overload warning device has triggered

The Hoist is equipped with an overload warning device which prevents the Lift cage from starting when it is overloaded. If the Lift cage is overloaded, a red control light illuminates on the Lift cage control.

If the control light is illuminated

- Reduce load in the Lift cage until the control light goes out. - Only then is ascent or descent possible.

10.2 Overspeed safety brake has been triggered

The Hoist is equipped with an overspeed safety brake, which provides braking action if it is travelling too fast. It is not possible to continue travel once the overspeed safety brake has triggered.

All persons must first leave the Lift cage. Determine why the overspeed safety brake has engaged, secure Lift cage and repair damage before releasing the overspeed safety brake!

Releasing the overspeed safety brake

- Open the Lift cage control switch cabinet.
- Unplug the dummy plug from the plug socket in the Lift cage control switch cabinet.
- Plug in the catch control system at the plug socket (see Fig. 54).
- Press the UP button from outside the danger zone and run the platform up by approx. 20-30 cm.
- After "neutral" running, unplug the catch control system and reinsert the dummy plug.
- Close the Lift cage control switch cabinet.
- Dismantle the right enclosure field by the safety brake.
- Loosen the safety nut (1) on the safety brake.
- Turn the safety brake cover guard (2) to the left until the limit switch tag (3) clicks into the slot of the cover guard (2).
- Retighten the safety nut (1).
- The Multilift P18 is operationally ready again.

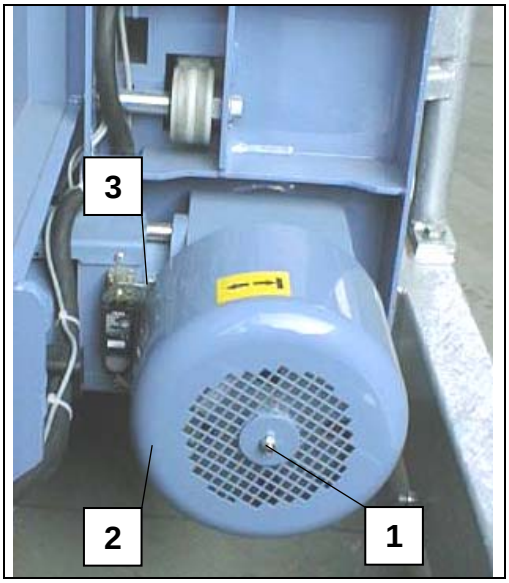


Fig. 48 Overspeed safety brake

ATTENTION

Check the overspeed safety brake for damage, establish the cause of safety braking and rectify.

The overspeed safety brake must be checked by a qualified person.

- Loosen the safety nut (1) on the overspeed safety brake, remove the guard cover (2) and check for any damage.
- Replace the guard cover (2) so that the limit switch tag (3) engages into the slot on the guard cover.
- Re-tighten the safety nut (1).
- Reinstall the enclosure field.

Any descent is mechanically blocked by the overspeed safety brake and may be pressed again only after a brief ascent!

11 Maintenance

Maintenance work may only be carried out by qualified persons. Dispose of lubricants and replacement parts in an environmentally friendly way.

Report any changes or faults determined immediately to the company management or his/her authorised representative. If necessary, shutdown and secure the Hoist immediately.

On the MULTILIFT P18 COMFORT, sections of the base enclosure must be dismantled, or the Lift cage must be raised above the base enclosure, in order to perform service and maintenance work on the sliding carriage, drives and the overspeed safety brake to be carried out.

- Loosen the bolting on the fastening latches and remove the enclosure field.

Fig. 49 Remove the enclosure field

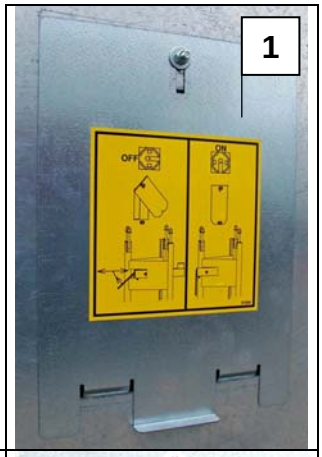
11.1 Setting mechanism

When performing service and maintenance inside the enclosure on the ground, the setting mechanism must be activated to protect maintenance personnel. The setting mechanism prevents decent of the Lift cage below the approx. 2 m safety height.

- Drive the Lift cage upwards above the setting mechanism.
- Turn off the main switch on the Cable box switch cabinet and secure it against being switched on with a padlock.

Setting mechanism, right

- To activate the right setting mechanism, the Cable box cover plate must be pivoted out of the way.
- Push the cover plate upwards and pivot it away to the side.



NOTE

The setting lever is accessed by reaching through the cable box.

- Pivot the setting lever (2) upwards and raise to release. Then push the setting mechanism (1) to the Lift cage side of the mast.

- When work is completed within the enclosure, pull the setting mechanism (1) out again and pivot the setting lever downwards.

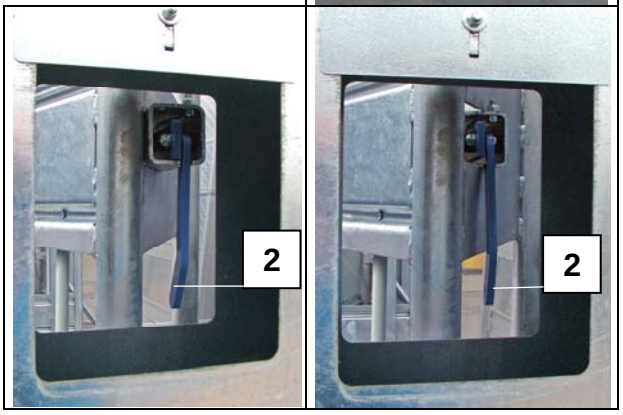


Fig. 50 Setting mechanism, right

Setting mechanism, left

- Pivot the setting lever (2) upwards and raise to release. Then push the setting mechanism (1) to the Lift cage side of the mast.

- When work is completed within the enclosure, pull the setting mechanism (1) out again and pivot the setting lever downwards.

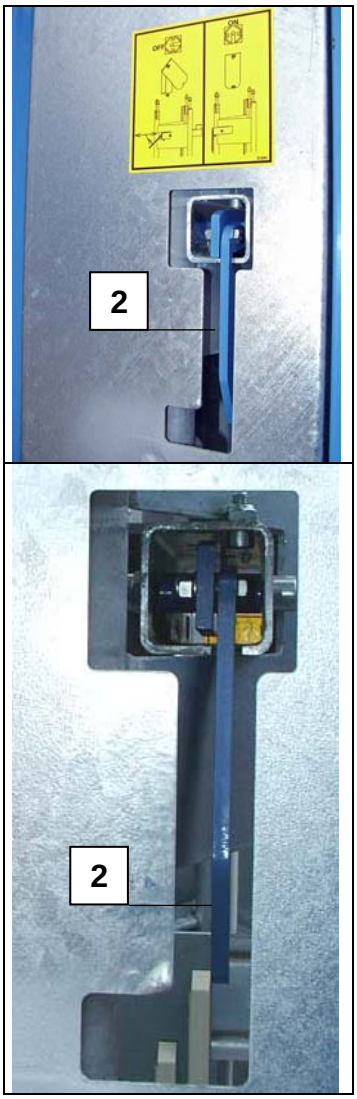


Fig. 51 Setting mechanism

NOTE

The control function is interrupted if the setting mechanism is activated.
After maintenance work, the setting lever (2) must be returned to its vertical position.

- Remove the padlock from the main switch and turn the main switch on.
- Lower the Lift cage control switch cabinet to the bottom limit switch.

11.2 Daily cleaning

- Clean all contaminants from the Hoist.
- Clean proximity switches (on the drive gear box case) of grease and chips/shavings.
- Clear the cable box (keep free from snow and ice in winter).
- Keep working area around the Hoist clean and free from obstruction.

11.3 Daily checks

- Check visually to ensure that the full travel path of the Lift cage is clear.
- Perform a test run with an empty Lift cage control switch cabinet and check whether
- the operating limit switch at the landing levels and ground station are functioning.
- the sliding door latching devices are functioning; it should not be possible to execute a lift movement with the sliding door open.
- the EMERGENCY-STOP push-button works; if it is pressed, it should not be possible for the Hoist to drive up or down!
- the Lift cage stops when the Landing level safety gate is opened.

Only on the MULTILIFT P18 STANDARD

- the service limit switch is functioning (the automatic downwards movement of the Lift cage must switch off at a height of approx. 2 m; it should not be possible to operate the Lift cage from the level in this lower range).
- is the horn is functioning? When approaching from above, the Lift cage must stop approx. 2 m above the ground and a corresponding warning tone must sound for approx. 3 seconds. (During this time the control function is blocked.)

NOTE

For faults, see section 10

11.4 Weekly inspection/maintenance

- Check the braking distance.

- **On the model with two speeds**
  Stop the loaded Lift cage (see load capacity) when travelling downwards (e.g. 2m safety area). The run-on of the motor brakes must not exceed 100 mm.

- **On the model with frequency converter**
  The frequency converter adjusts the motor speed downwards so that the brakes lock when almost at standstill.

- Check the gear rack and drive pinion for wear.
- For first lubrication or as an alternative to the automatic lubrication device, the gear rack can also be lubricated manually.
  Recommended lubricant: → GEDA special spray Item No. 2524
  Grease cartridge Item No. 13893 for grease gun

NOTE

The gear rack must be greased more often corresponding to increased use or multi-shift operation.

- Check the trailing cable, mains supply line and control lines for damage.

11.5 Monthly inspection/maintenance

- Check that the mast connection bolts, EMERGENCY limit switch bar and mast anchors/bolts on the mast and building are secure; re-tighten if necessary.
- Rub the trailing cable with a lubricant.

- Recommended lubricants: Continental Talcum powder

- Check wear on the drive pinion and gear rack; replace if necessary.

11.6 Quarterly inspection/maintenance

- Are the notices/plates present and easily legible? (see section 4.6)?
- Check lubrication device

The grease quantity in the container is enough for approx. 60 hours of normal operation.
(The green control light on the Lift cage control switch cabinet control flashes slowly if there is not enough grease.)
The grease reservoir must be refilled before it empties.

- Filling quantity: 1,2l

Recommended lubricant: Multi-purpose grease/cartridge for grease gun GEDA Item No. 16744

- Attach manual lever grease gun to the filling nipple (1) (underneath of the grease reservoir) and pump grease into the reservoir.
- Fill reservoir to the "MAX" mark.

Fig. 52 Lubrication device

ATTENTION

Greases with solid lubricants are not suited to this pump.

Quick-filling with filling gun

- Unscrew the dust cap from the filling connection (2) to fill up and insert the neck of the filling gun (3) to the stop point in the filling connection (2).
- Inject grease until the „MAX“ mark is reached.

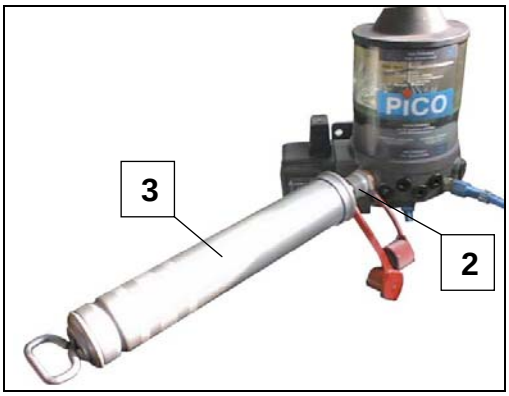
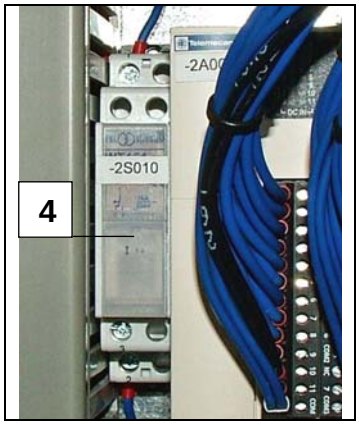


Fig. 53 Filling gun

- The function of the lubrication device can be checked by using the "Test" button (4) in the Lift cage control switch cabinet.



Venting the system
If the grease level switch is defective and the pump has run completely dry, it may be necessary to vent the system.

- Fill the pump via the filling nipple until the grease is approx. 4 cm over the "min. grease level" mark.
- Unscrew the lubrication hose from the pump housing.
- Remove the pump element or locking screw (M20x1.5) and keep open until bubble-free grease is discharged.
- Screw the pump element or locking screw back on.
- Trigger the lubricating impulse until bubble-free lubricant is discharged at the pump outlet.
- Reconnect the lubrication hose.

11.7 Annual maintenance

- Check the gear oil; fill as necessary. Observe the external system operating manual.

Gear oil recommendation:

- Aral Degol BG 220
- ESSO Spartan EP 220
- BP Energol GR-XP 100
- Quantity approx. 1.8 litres per drive

- Check that the gear rack is secure.
- 60 Nm tightening torque (8 mm Allen wrench).

11.8 Servicing every 3 years

The GEDA overspeed safety brake must be repaired or adjusted only by the manufacturer's service staff or its trained and authorised representatives.

The overspeed safety brake has been type-tested and must be replaced every 3 years or checked by the manufacturer or its authorised representatives.

11.9 Check the overspeed safety brake in the context of recurring inspections

(see section 2.3.1)

The safety brake test must be carried out only by a qualified person appointed by the contractor who, based on their training, knowledge and practical experience, can evaluate the risks can assess the safe condition of the overspeed safety brake.

NOTE

The catch control system has a direct effect on the motor relays; it is also active when the PLC control for the Lift cage control switch cabinet is switched off or has failed.
The sliding doors of the Lift cage cannot be opened when the catch control system is plugged in. Access following a safety brake test is via the assembly bridge (see section 10.1.2) or via the Lift cage sliding door, which must be emergency released (see section 4.7.8).

- Turn the main switch to the ON position.
- Unplug the dummy plug (5) from the plug socket in the Lift cage control switch cabinet.
- Plug the control for the catch control into the plug socket (5) and take the manual control outside in front of the enclosure.

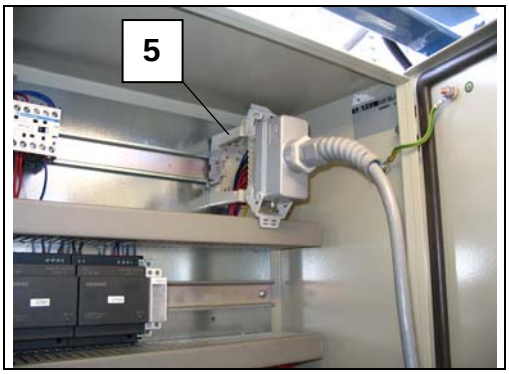
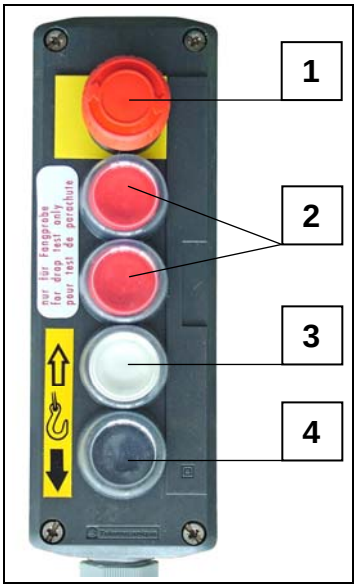


Fig. 54 Plugging in the catch control system

- Press the UP button (3) from outside the danger zone and drive the empty Lift cage to a height of approx. 5 m.
- At the same time press **both red buttons** (2). - Drive brakes open, the Lift cage glides down and speeds up excessively. The overspeed safety brake must engage after 2-3 m and stop the platform. If this does not happen, immediately release the buttons!
- Reinsert the dummy plug after the safety brake test.



1 = EMERGENCY-STOP push-button
2 = "release brake" buttons
3 = UP button
4 = DOWN button

Fig. 55 Catch control system

ATTENTION

After the overspeed safety brake has triggered, upward and downward travel of the Lift cage is blocked mechanically and electrically. Release the overspeed safety brake as described in section 10.2.

12 Repairs

Repair work may only be carried out by trained and qualified persons because this work requires special expert knowledge and special abilities. Neither are communicated in this operating manual.

When ordering replacement parts please provide the following:

- Type
- Year of manufacture
- Serial No.
- Operating voltage
- Desired quantity

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

NOTE

Replacement parts must meet the manufacturer's technical requirements! Use only original replacement parts from GEDA.

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

Sales and customer service addresses:

GEDA®
ORIGINAL

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

13 Disposing of the machine

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

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

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

14 Warranty

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

Copy of the EC Conformity Declaration

EC Declaration of Conformity

CE

The manufacturer

GEDA-Dechentreiter GmbH & Co. KG
Mertinger Str. 60
DE-86663 Asbach-Bäumenheim

hereby declares that the machine

Designation:	**Construction hoist for personnel and loads** (for temporary, non-public use by authorised persons)
Type:	**GEDA® MULTILIFT P18**
Year of manufacture:	see type plate of the machine
Serial No.:	31M / 32M

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

Directives:		Applied conformity evaluation procedure:
2006/42/EC	Machinery Directive	Appendix VIII
2006/95/EC	Low Voltage Directive	Appendix IV
2004/108/EC	EMC Directive	Appendix II
2000/14/EC	Noise Emissions Directive	Appendix V

Applied (harmonised) norms:

EN ISO 12100-1/-2	EN 12158:2001	EN 81-1:1998
DIN EN ISO 14121-1	EN 12159	
EN 60204-1/32	pr EN 81-7	
EN 50081-1/2	EN ISO 3744:2009	

EC type testing procedure:

Type testing certification		NL 08-400-1001-068-07
European notified body	0400	LIFTINSTITUUT Buikslotermeerplein 381 1020 MA Amsterdam

This EC 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.

Asbach-Bäumenheim 2011-01-03

Johann Sailer
(Managing Director)

15 Appendix for entering recurring inspections

Inspection findings

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