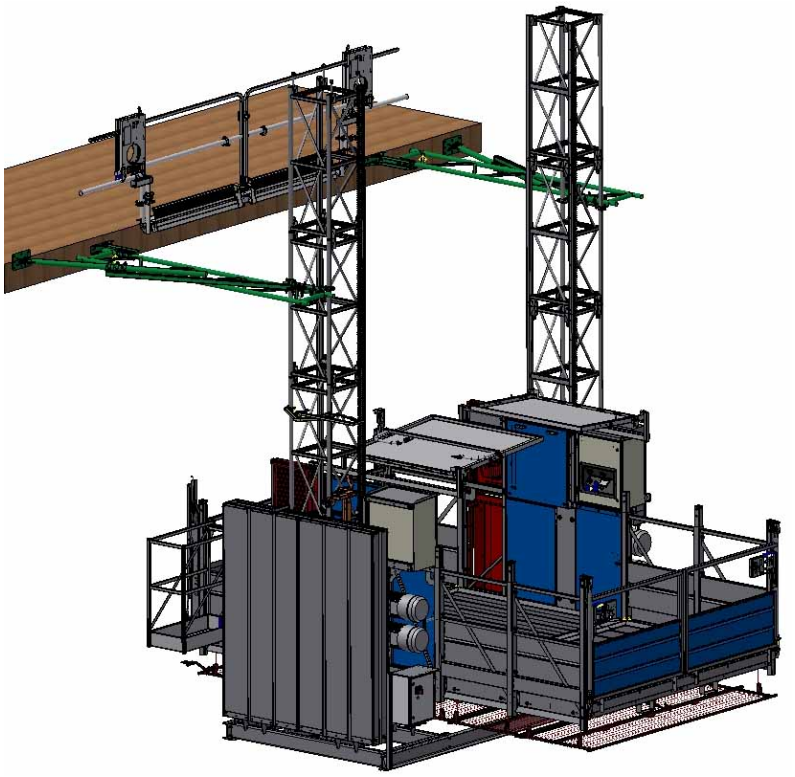
Assembly Instructions

GEDA®
3700 Z/ZP

Construction Hoist / Transport Platform

For persons and loads



GEDA®
ORIGINAL

Assembly instruction

Table of Contents

1 Guide

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

Text display	Meaning
Bold type	Emphasises particularly important words/passages
• List 1	Denotes lists
○ List 2	Denotes lists
(brackets)	Position numbers
➢ Handling instruction	Instruction to personnel. Always given in chronological order

For an easier reading style, we mostly use the masculine form in this manual. It goes without saying that both genders are always implied and addressed.

Images

The illustrations used refer to a specific machine type. They may only constitute a schematic representation with other machine types. The fundamental function and operation are not affected by this.

Warnings

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

Warning level		Consequence	Probability
	**DANGER**	Death/serious injury	is imminent
	**WARNING**	Serious injury	possible
	**CAUTION**	Minor injury	possible
	CAUTION	Tangible damage	possible

Attention information

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

Note

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

Abbreviations
The following abbreviations may be used in the manual.

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

2 Identification data

2.1 Machine

Machine model	**GEDA 3700 Z/ZP**
Works number:	**32T0101 – 31T0101**
Year of construction:	Refer to identification plate
Documentation version:	11/2017

3 For persons authorised to carry out assembly tasks

3.1 Assembly, servicing / maintenance specialist

A person who, due to qualified professional education, training and experience, is able to recognise risks and potential hazards during work/assembly/maintenance/repair work on the machine or subcomponents and can rectify these by introducing appropriate measures.

3.2 Obligatory safety instructions whilst working with the machine

- Also observe the safety notes in the instruction manual.
- The machine must not be used as steps or a climbing aid. Only use tested and stable steps/climbing aids. Keep steps/climbing aids free of dirt and soiling.
- At the end of work or if work is interrupted, the machine must be turned off at the main switch and secured against unauthorised switch-on (e.g. with a padlock).

3.3 Transportation of the machine

- No persons must remain in the area below or on the raised machine/parts of the machine.
- Only lift the machine using the necessary parts and at the specified mooring points.
- The machine must only be transported/installed on foundations with a sufficient load capacity.
- Ensure that stable balance is maintained when transporting with forklift trucks.

3.4 Set up and connection/assembly

- Precautionary measures stipulated by the company for avoiding fires, explosions, dust, gas, steam and smoke (during welding, burning and grinding work) must be observed.
- Personnel must be acquainted with the on-site working environment, e.g. obstacles in the work and traffic areas, ground load bearing capacity and necessary barriers between the construction site and public areas.
- Appropriate lifting gear must be used when working with heavy parts.
- Adhere to the minimum requirements for thoroughfares, paths and emergency exits.
- Provide sufficient space to open gates and covers.
- Welding, burning and grinding work on the machine must only be carried out following consultation with and approval from GEDA.
- Make sure that the masonry is capable of absorbing the tie forces. A construction expert must check to ensure the house front is suitable for tie forces of this kind. The inspection results will determine whether plugs/dowels or through bolts must be used.
- In the event of wind speeds ≥ 45 km/h, bring the car down to the ground and cease operation.

3.5 Initial operation/daily operation

Ensure that:

- All safety covers and safety equipment are present and functioning.
- All connections are correctly connected.
- All parts are correctly installed.
- No tools or other parts are inside or on the machine.
- No tools or other parts are located in the path of travel of the machine.
- All warning signs and instructions on the machine are present and complete, clearly visible and undamaged.
- Illegible or missing warning signs and instructions must be replaced immediately.
- Before operation, carry out the checks stipulated in the national regulations.

4 Transport / storage

The transport platform should be transported by experienced and competent persons.

- During transportation, the platform must be empty.
- Only carefully load and transport equipment that has been **disassembled, packaged and lashed**.

Observe the national requirements for securing loads

- Always ensure that the machine is transported **without being knocked or jolted**. Make sure that the machine is stable during transportation. Support the platform before lashing down for transportation.
- Always secure transported loads **against falling or tipping over!**

Storage:

Temperature range:	minimum	-20 °C
	maximum	+40 °C
Air humidity (relative):		80 % RH.

- Store in dry rooms.
- No jolts or vibrations.
- No abrasive, corrosive substances.
- The machine must be protected against pest damage (insects, rodents, etc.).
- Before transportation/storage, the machine must be cleaned and checked for signs of damage.

4.1 Checks upon receipt of the transport platform

- Check the shipment for transport damage and for completeness according to the purchase order.
- Dispose of packaging/protective coverings according to legal requirements or keep them for later transport.
- Immediately notify the freight carrier (haulage company) and dealer of any transport damage.

4.2 Transport dimensions / Transport weights

GEDA 3700 Z/ZP with	Length	Width	Height	Weight (max.)
Platform "A" Base unit with platform and cable bin (100 m)	2.43 m	4.75 m	2.70 m [1)]2.55 m	3870 kg
Platform "B" Base unit with platform and cable bin (100 m)	3.38 m	4.75 m		4080 kg
Platform "C" Base unit with platform and cable bin (100 m)	4.33 m	4.75 m		4290 kg
Platform "D" Base unit with platform and cable bin (100 m)	5.28 m	4.75 m		4500 kg
Travelling cable, 25 m each				+ 41 kg
Mast section (1.5 m)	1.5 m			88 kg

- [1)] = Height for loading on a container (base unit lowered by 15 cm)
- Height (container) = 2.59 m
-

4.3 Loading and unloading the machine

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

WARNING

Danger to life
Raised load!
Do not stand under suspended loads.
Do not stand on a suspended load.
Only lift loads at the slinging points.
Only use suitable lifting gear.

- During the loading tasks, wear a **safety helmet, safety shoes** and **safety gloves**!
- Only use **appropriate, standardised and tested lifting gear** (forklift trucks) and slinging gear (round slings, lifting straps, sling ropes, chains) for transport at the assembly site.
- When selecting lifting equipment, always take into account the **maximum suspended loads!**

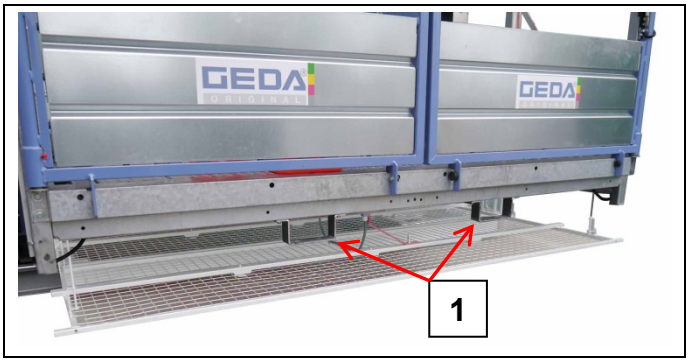
Only lift the base unit when the platform is empty.

- For the dimensions **and weights**, refer to Chapter 3.2 (Technical Data).

Weight of the heaviest part of the machine (base unit with platform “D”) approx. 4500 kg)

4.3.1 Lifting with a forklift truck

There are forklift take-up points (1) under the bearing profile of the platform (below the platform accesses).



Forklift tines must be at least 2.10 m long.

4.3.2 Lifting with a crane

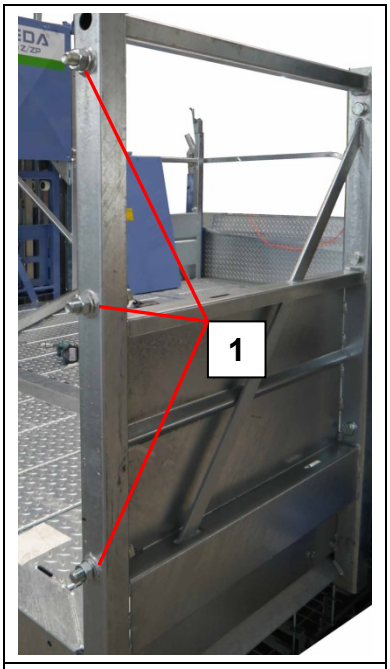
For machines up to works no. 32T00100, lifting with a crane is not intended.

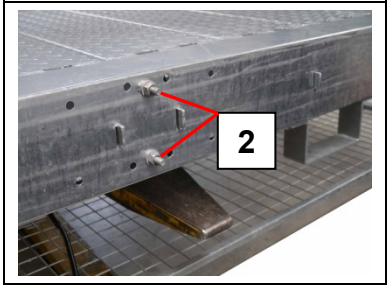
4.4 Assembly before and after transportation by lorry

When transporting by lorry, the platform extensions are dismantled on platforms “B”, “C” and “D”.

Assembly

➢ Undo and remove the connecting screws from the platform extension (1+2).

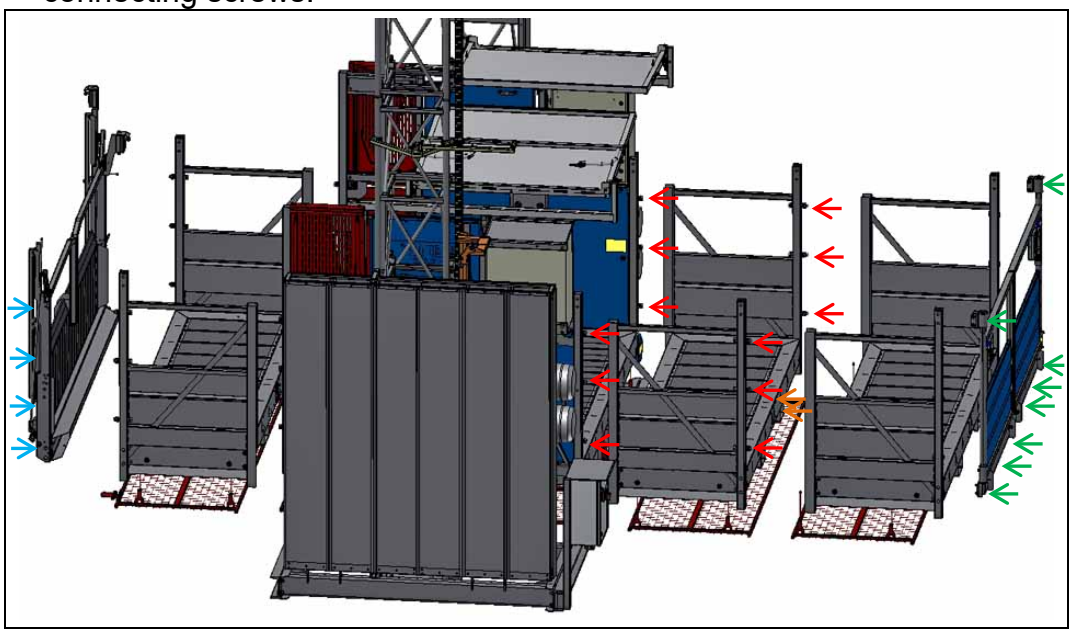




➢ Lift the platform extension and remove the transport brackets (3) on both sides.

☞ **Retain the transport brackets for subsequent transport.**

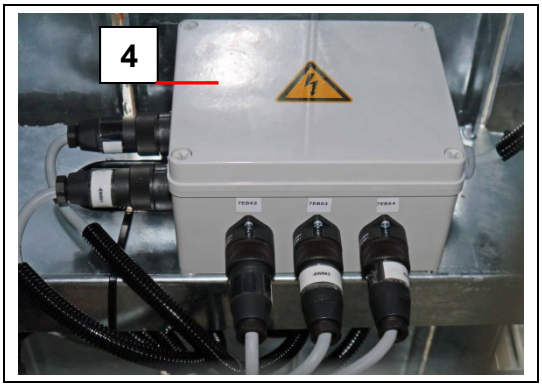
➢ Lift the platform extension on the base unit and secure using the connecting screws.



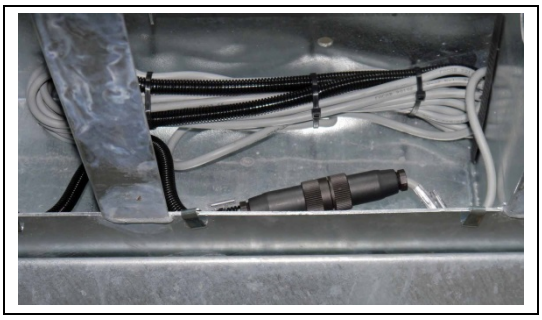
Tightening torque bolts M20 = 400 Nm

☞ **When delivered, access doors and barriers are already fitted with loading ramps. These may need to be moved when retrofitting platform extensions.**

- Route the end-switch cables from the protection grid underneath the hoist car to the distributor box (4) below the base unit, and connect them.



- Route the couplings (-8EB33 + -8EB34) to the access doors and connect to the door lock plugs.



- Route the couplings (-8EB31 + -8EB32) to the barriers with loading ramp and connect to the ramp end switch plugs.

5 Electrical connected loads

Mains connection (refer to the nameplate)	400 V / 50 Hz / 3 Ph/PE
	480 V / 60 Hz / 3 Ph/PE
Mains fuse	3 x 63 A slow-to-blow
Protection class	IP 54 (NEMA 3)

Connection to the building site distributor in accordance with IEC 60439-4:2005

The cables provided by the customer must be designed so that:
- They correspond to the connected load of the machine.
- No interference voltages or interference frequencies occur.
- The response behaviour of the safety equipment meets the relevant legal requirements.

The necessary cable cross-section must be determined while taking into account the requisite installation type according to DIN VDE 0298 Section 4 and DIN VDE 0100 Section 430. Country-specific rules must be observed.

WARNING

The equipotential bonding for the transport platform must be connected to the primary equipotential bonding of the building!
The machine must be integrated into the lightning protection concept of the building.

Note for machines with frequency converter

WARNING

Electric shock
The frequency converter can prevent correct function or lead to malfunctions in the “type A” residual current device.
In the event of defects e.g. in the wiring, this can lead to electric shocks.

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 for protection 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 a “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 residual current circuit breaker with the following features:
- Filtering of high-frequency currents.
- A delay that prevents triggering caused by interference capacities which may be charged at switch-on.
  This delay is not possible on 30 mA residual current circuit breakers. 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 for each machine with a frequency converter.

6 Assembly

6.1 Assembly drawings

If installation conditions vary, specific installation drawings can be prepared by GEDA.
Assembly drawings supplied and released must be kept until disassembly of the platform.

6.2 Foundation / Substructure

The foundation and load-distribution substratum(substrata) must safely transfer any existing loads into the subsoil. Therefore, before beginning installation task, determine the following points.

- Verification of the payload of the foundation / load-distributing substratum (substrata).
- Verification of the load-bearing capacity of the subsoil

Since the load-bearing capacity of the subsoil is often very difficult to estimate, a specialist subsoil investigator should be called on if there is even the slightest doubt, in particular for high/complicated superstructures.

The following points must be taken into account when assessing the subsoil:

- Maximum permissible soil pressure
- Predicted settlement
- Predicted groundwater levels
- Predicted thawing and frost processes
- Construction activities expected in direct proximity to the installation site

Wooden planks or steel plates can be used as load-distributing base supports. The foundation must be horizontal to erect the mast.

The total weight (refer to table) of the transport platform and mast sections is transferred through the foot section support under the mast in the foundation.

☞ **The ground pressure of the different platform models is the same, since the load bearing capacity of the platforms differ.**

Load capacity (max.)	3700 kg
Mass per mast	88 kg
Length per mast	1.5 m
Height of base unit	2.7 m
Empty weight of the compl. base unit (max.)	4500 kg
Base area without base support (2 x 0.6 m x 1.0 m)	2 x 0.6 m²

Ground pressure per mast

Assembly height in m	10	20	30	40	50	60	70	80	90	100
Total weight [kg]	6270	6830	7480	8120	8680	9310	9960	**10510**	11150	11790
Ground pressure [kN/m^2]	**105**	**114**	**125**	**136**	**145**	**156**	**166**	**176**	**186**	**197**

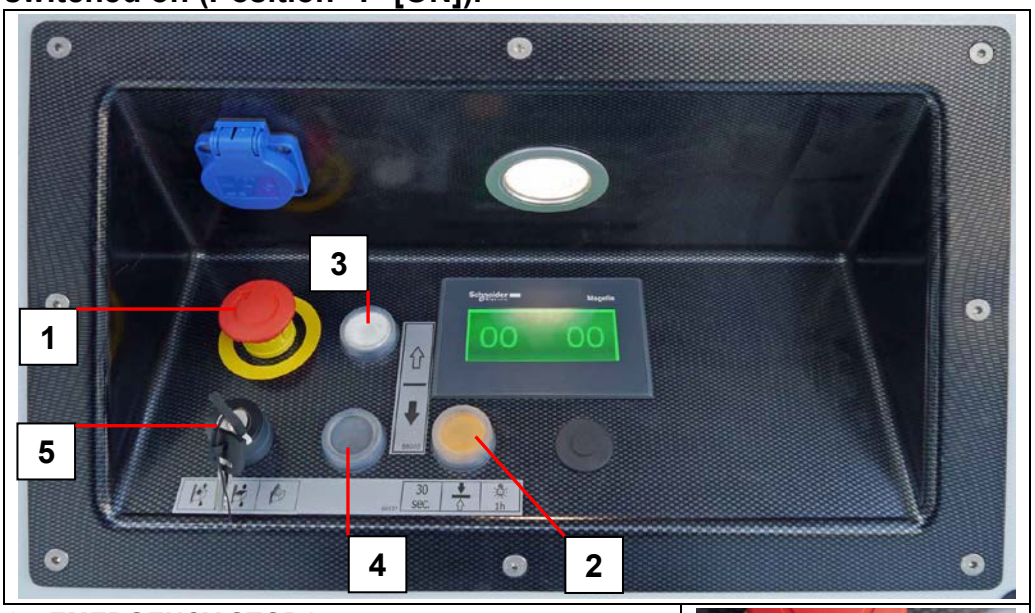
Assembly height in m	110	120	130	140	150	160	170	180	190	200
Total weight [kg]	12350	13000	13640	14200	14480	15480	16040	**16700**	17350	17900
Ground pressure [kN/m^2]	**206**	**217**	**228**	**237**	**248**	**258**	**268**	**278**	**289**	**298**

6.3 Operation for assembly

For installation, it is only possible to operate from the platform in dead man's control with two hands. The platform only moves for as long as the operating buttons are pressed.

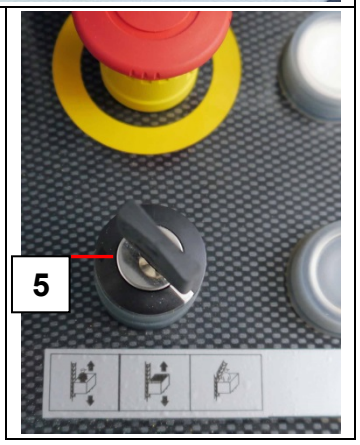
Loading doors, barriers with unloading ramp and assembly plank must be closed and engaged. The assembly guard must be properly hung up.

☞ **The main switch (on the ground station switch box) must be switched on (Position "I" [ON]).**



1 = **EMERGENCY STOP** button

➢ Put key into the key switch (5) and turn to the right.



☞ **Only the platform control is activated for installing the lift.**

☞ **The lifting speed of the platform is approx. 12 m/min. or 24 m/min. respectively.**

Ascent

➢ Press and hold the **UP** button (3).
➢ Also press the button (2) to release the ascent.

The platform only moves while the **UP** (3) button and button (2) are pressed.

Descent

➢ Press the **DOWN** button (4) and keep it pressed.
➢ Also press the button (2) to release the descent.
The platform only moves while the **DOWN** (4) button and button (2) are pressed.

The platform descends and automatically stops above the lower safety area (about 2 m above the ground).

WARNING

The **installation personnel** can only continue to travel after ensuring that the path of travel downwards is clear.

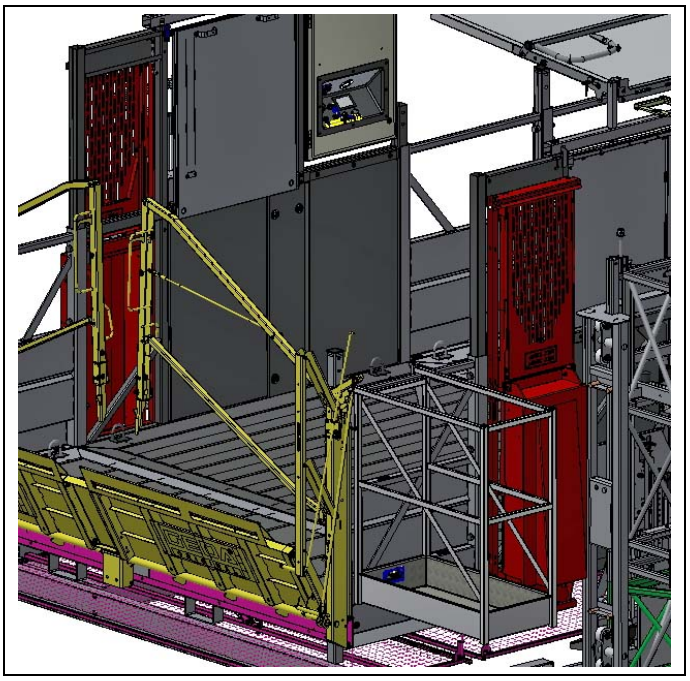
➢ Again press and hold the **DOWN** button (4) and button (2).
The system issues an alarm signal and after about 3 seconds, the platform starts up and stops at the **DOWN** limit switch.

6.4 Assembly plank

The assembly plank is a narrow, fold-out platform which assists in assembling the mast brackets from the platform.

☞ **The assembly plank must only be used during assembly and disassembly.**

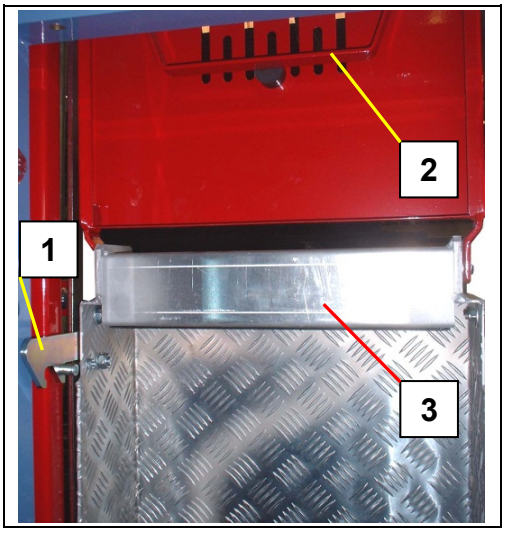
☞ **When assembling using an assembly plank, the assembly plank must be assembled to the mast on both sides of the platform.**



☞ **Move up the platform high enough so that the mast anchoring can be set at a height that facilitates convenient assembly.**

Unfolding the assembly plank:

- With your right hand in the handle grip (3) of the assembly plank, pull the assembly bridge towards yourself and open the locking latch (1) with your left hand.
- Slowly push the handle grip (3) outwards and grip the pulling bar (2) with the other hand.



- Release the handle grip (3) and completely lower the bridge using the pulling bar (2).

- As soon as the base pan is horizontal it can be stepped on, in order to press the end wall out.

The assembly plank is now ready for operation.

☞ **When the assembly plank is unfolded, the control function is interrupted by a limit switch, making travel impossible.**

☞ **The assembly plank cannot be folded if the fixing tube is mounted at a height lower than 1.6 m above the floor of the platform. The platform must then be slightly lowered by carefully releasing the drive brake.**

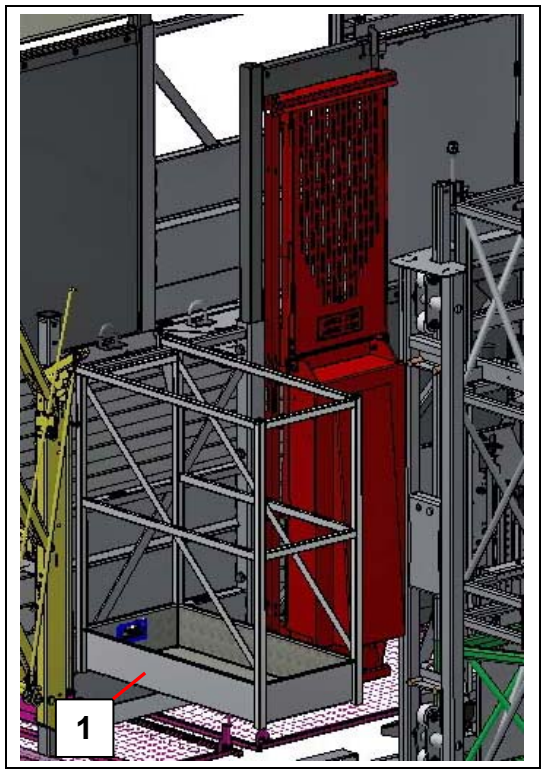
Folding up the assembly plank:

- Step on the platform side and grip the pulling bar (2) to fold up the assembly plank.
- Pull the end wall towards yourself using the pulling bar (2) until the base pan of the bridge moves with it.
- Use the handle grip (3) to pull the bridge towards yourself to facilitate the remaining movement, until the locking latch (1) engages with the second tooth.

⚠ **Prior to beginning travel, check to ensure that the latching hook (1) is properly locked.**

6.5 Assembly car

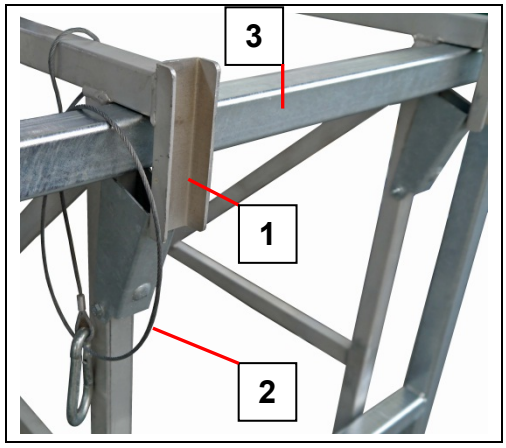
To overcome the distance between the assembly plank and the wall anchor, an assembly car can be hung on the platform railing.



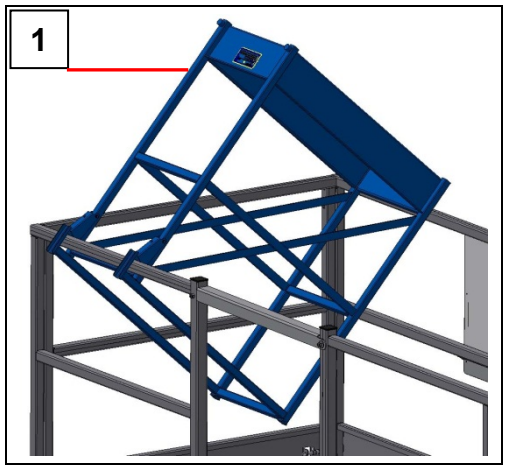
☞ **The assembly car must only be used during assembly and disassembly.**

Installing the assembly car

- Use the safety rope (2) to secure the assembly car (1) on the platform railing (3) against falling.
- Hang the assembly car (1) on the platform railing (3).



☞ **For assembly travel, the assembly car can be pivoted inwards to the platform.**



6.6 Assembly procedure

The installation plan shows the basic assembly stages and their chronological sequence. However, installation is always carried out in accordance with the detailed instructions in this manual and, as necessary, the released assembly drawings. Depending on the work equipment available / number of installation engineers, work may be carried out in parallel or the sequence of the installation steps may be changed. If the sequence is changed, the amended installation plan must be checked by the operating company to ensure that it is sensible and that there are no potential hazards and must be subsequently approved.

	GEDA 3700 Z/ZP assembly schematic
	Erecting the base unit Aligning the base unit anchor the foot section to the ground Cordon off/identify the hazard area and assemble the 1.1 m base enclosure (optional) Mount/position the roof for swivelling. Installing the mast assembly aid (optional)
	**Electrical connection** Connecting / switching on the electrical components Insert mains plug at the building site main cabinet
	**Assembly / anchoring the mast** Install the mast sections Install the mast ties Align the mast Install the travelling cable guides
	Position EMERGENCY top limit switch bar
	Cable carriage option Assembling the cable carriage Assembling the central feeder Routing the travelling cable over the cable carriage
	Secure the loading positions with the landing level safety gates Position the limit switch approach bar, landing level Installing the landing level safety gates Assembly of the electric modules
	Inspection after assembly Check the machine for initial commissioning Before commissioning each time, check the machine
	Instruct authorized personnel on how to use.

6.7 Assembling the base unit

The machine must be installed and deployed only vertically!
The base unit must be aligned at right-angles to the building or scaffolding.

WARNING

Hazard to life through the base unit slipping or tilting.

The support plates must not carry any load, they serve the sole purpose of adjusting the base unit.
The foot section must be anchored to the ground.
Secure at least two support plates with screws against dislocating.
If this is not possible, one **mast tie** must be installed at a **height of approx. three metre.**

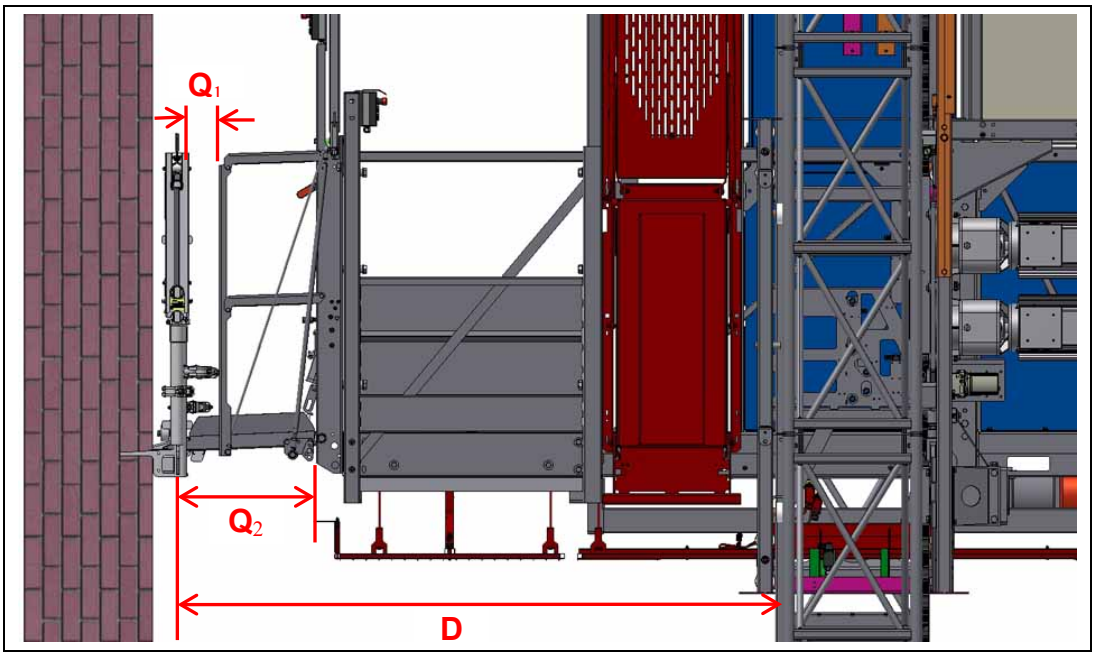
After the base unit is erected, check to make sure that it stands securely and can be used by personnel to assemble the mast.

Set the basic unit on the support points (support plate of the spindles and, above all, on the foot section support beneath the mast) on load distributing and even base supports and align. Observe load-bearing capacity of the foundation!

The foot section must be supported under the mast and protective buffer on a minimum area of 1.0 m x 0.6 m, the spindles are only used for adjustment and not for transferring forces from the mast sections.

➢ Determine the precise position of the base unit in relation to the landing level safety gates using a plumb bob dropped from the landings.

☞ **The maximum distance from the post of the scissor-type railing to the landing gate (Q_1) must not exceed 0.15 m!**



Distance "**Q_1**" = max. **0.15 m**
Distance "**Q_2**" = max. **0.55 m**

Platforms A, B → Dimension **"D"** = 1.42 m
Platform C, D → Dimension **"D"** = 2.36 m

6.7.1 Base enclosure with barriers (optional)

DANGER

Danger to life
By crushing.
Never remain inside the cordoned-off area during operation.
When operating without underride protection, the base enclosure with barrier must be installed.

☞ **Assembly of the base enclosure is described in separate assembly instructions.**

6.7.2 Roof for all platforms

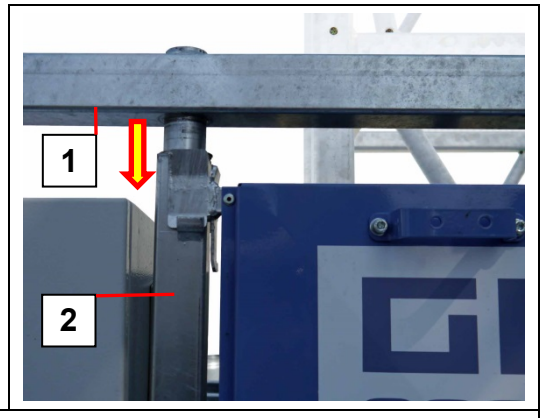
DANGER

Danger to life
Due to parts falling.
Transporting persons is only permitted with the roof folded up.

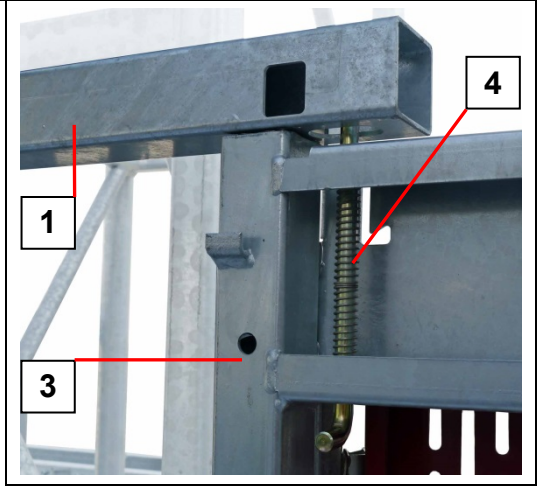
Function:
To protect people from falling parts.
To protect from direct sunlight/from rain and snow.

Assembly

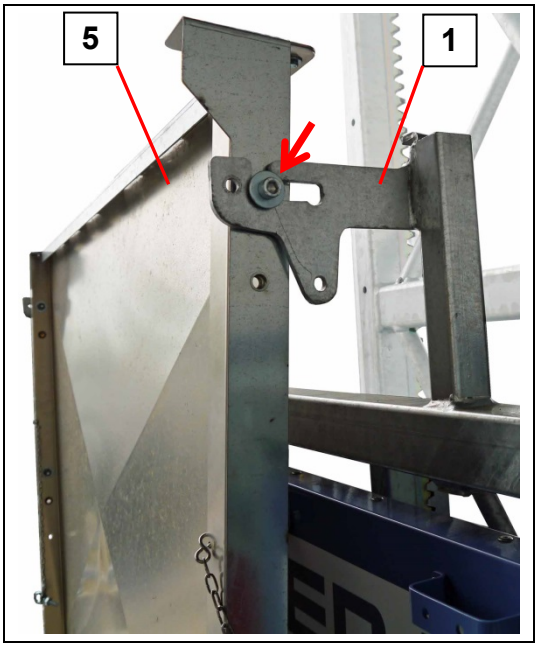
➢ Insert the roof bracket (1) into the platform posts (2) (beside the platform switch box).



➢ Secure the roof bracket (1) on the opposite platform post (3) using the spring catch (4).

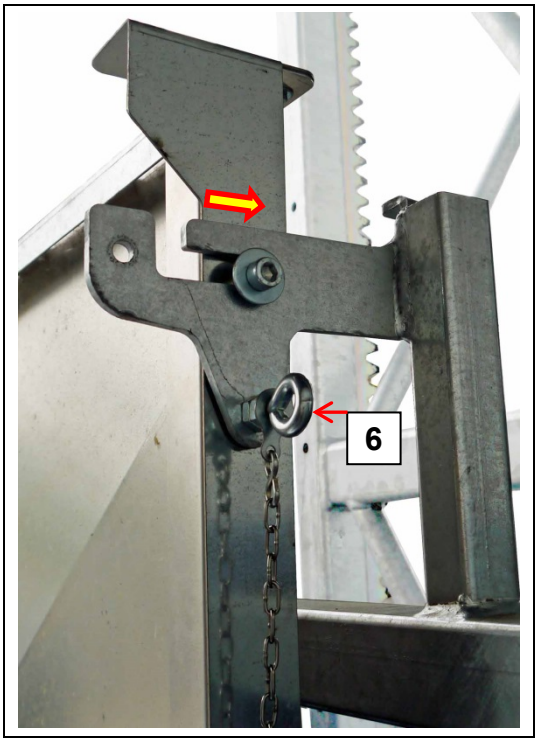


➢ Suspend the roof plate (5) on the outer locking bolts on both sides on the roof bracket (1).



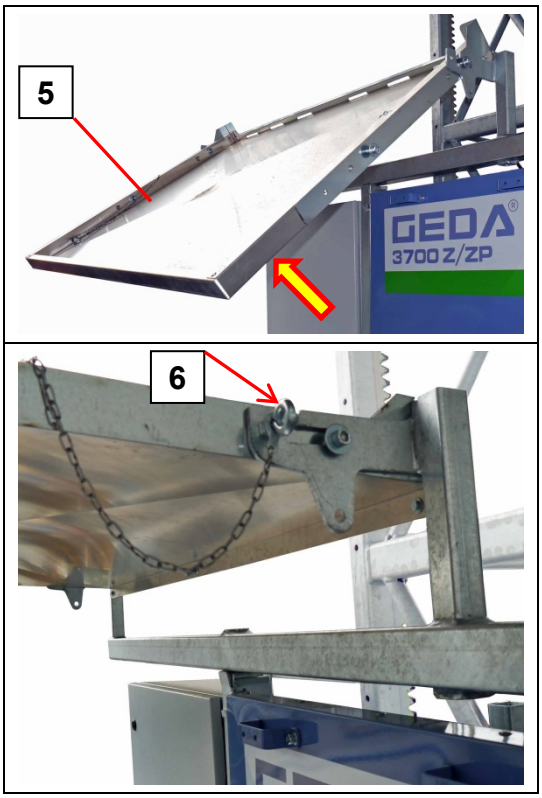
Operating the platform with the roof plate folded back

Fix the roof plate on both sides using the eyebolts (6).



Operating the platform with the roof plate swung up

➢ Fold the roof plate (5) upwards and bolt it tight on both sides using the eyebolts (6).



Roof, right, assembled

Roof, left, assembled

	WARNING **Risk of injury** Each time before you fold back the roof plate, you must check whether there are any components, stones or other construction material lying on the roof. Always clear the roof before folding back the roof plate!

Swivel the roof to install the mast sections

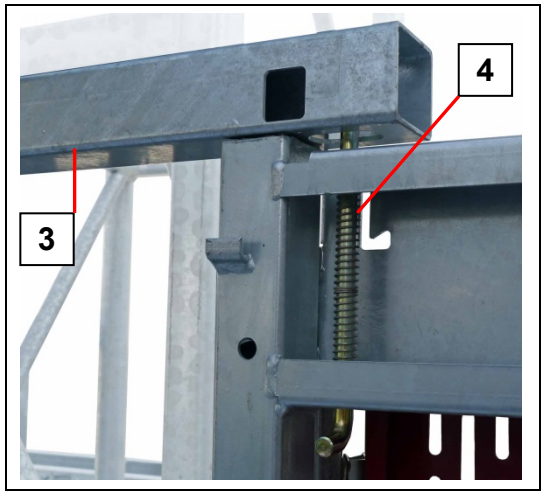
When setting up the masts, you can keep the roof mounted. To clear the area on the mast protection, you just need to swivel it out of the way.

WARNING

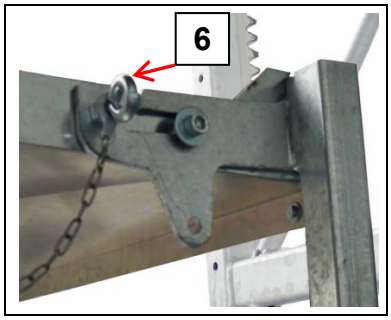
Danger of collision
When swivelling the roof, avoid collisions with the building, scaffolding, etc.
If it is windy, you must be particularly careful when swivelling the roof.

Swivelling the roof

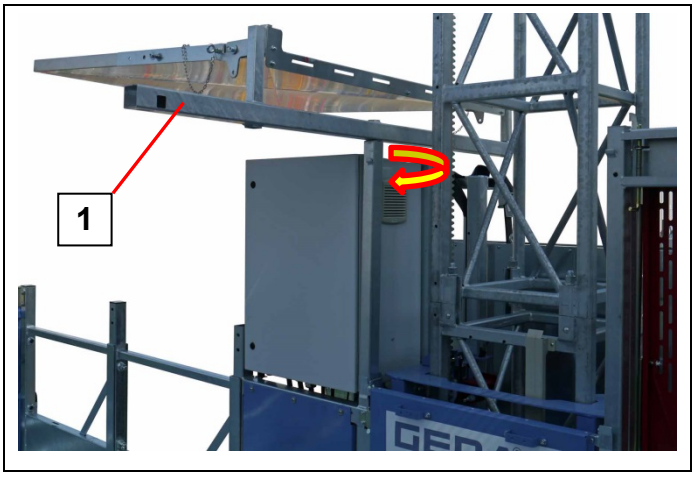
- Remove the spring catch (4) from the roof bracket (1) and fix it to the edge of the assembly plank by turning it.



You must screw the folded-up roof plate tight on both sides using the eyebolts (6).



➢ Slightly raise the roof bracket (1) and swivel to the side.



WARNING

Danger of collision
When the roof is swung out, you must **not** run the platform!

Swinging the roof back

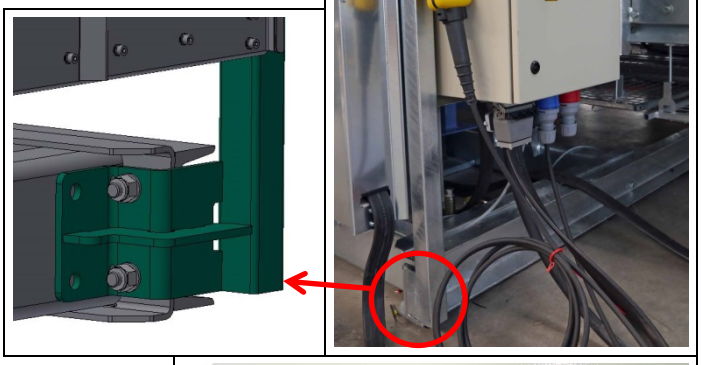
➢ Carefully swing the roof back.
➢ Slightly raise the roof bracket (1), place on the platform post and secure using the spring catch (4).

6.7.3 Connecting / switching on the electrical components

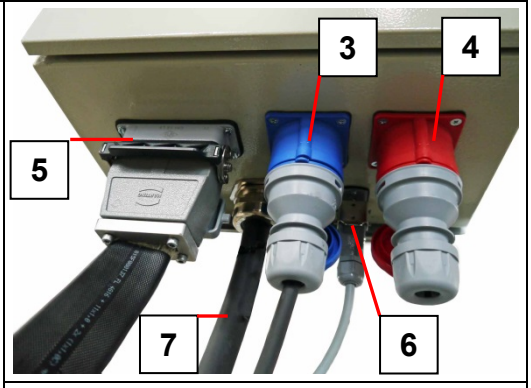
Ground station switch box

- Assemble the ground station switch box in the foot section.

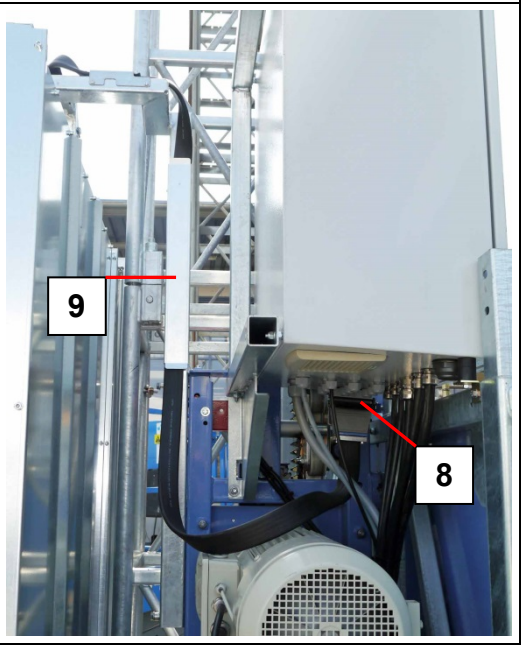
1 = Main switch
2 = Ground control



- Insert the flat cable plug from the cable box into the plug connection (5).
- Connect the ground control to the blue 7-pole socket (3).
- During assembly, connect the red dummy plug to the 7-pole red socket (4).
- Connect the plug for the setting mechanism (on the base mast) to the plug-in device (6).
- Connect the mains supply line (7) to the mains network (building site main distributor).



- Insert the flat cable coupling from the cable bracket (9) on the plug connection (8) under the left platform switch box.



After assembly

*Operation **without** ground base enclosure with barrier*

- Connect the supply line for first level control to the 7-pole red socket (4).

*Operation **with** ground base enclosure with barrier*

- Plug the 7-pole, red plug of the limit switch (barrier) into the 7-pole, red socket (4).
- Plug the supply line of the landing gate's first electrical module into the 7-pole, red coupling of the barrier.

Controls at the landings (option)
(after assembly of the landing level safety gates)

The electric module must be installed on the landing level equipment when local regulations specify electrical monitoring of the landing level safety gate or control of an upper stop is required.

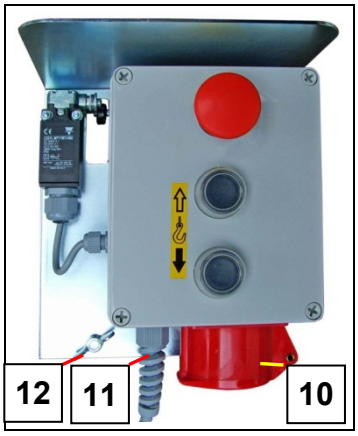
☞ **Control from the stop is only possible in operating mode "construction hoist" and only above the initial 2 m safety height.**

Additional equipment: Extension cable 20 m

Assembly

- Install the electric module on the sliding door mounting of the landing level equipment and attach with the wing nut (12).

- The supply line (11) [7-pole plug, red] from the first electric module is connected to the ground station at the switch box.



- If there are several levels with electric modules, the supply line (11) [7-pole plug, red] from the second level is connected to the socket (10) of the electric module below.

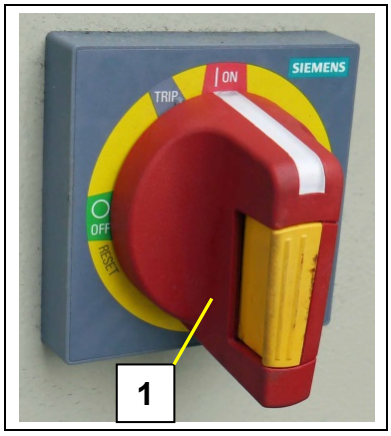
☞ **The dummy plug is always changed over from the ground-station switch box to the top landing control.**

Operation without electric module
(**Attention!** Observe national regulations)

The dummy plug remains in the red plug connector of the switch box of the ground station, thus, operation of the machine is only possible from the ground control.

Switching on the transport platform

➢ After the preparation, set the main switch (1) to Position “**I**” (ON).
The green control light must illuminate.



☞ **If the control light does not illuminate, refer to the Malfunctions Chapter in the instruction manual.**

6.7.4 Assembling the mast assembly aid

When assembling the masts, the mast sections can be lifted onto the already mounted mast using the mast assembly aids.

WARNING

Danger to life
Raised load!
Do not stand under suspended loads.
Only use suitable lifting gear.

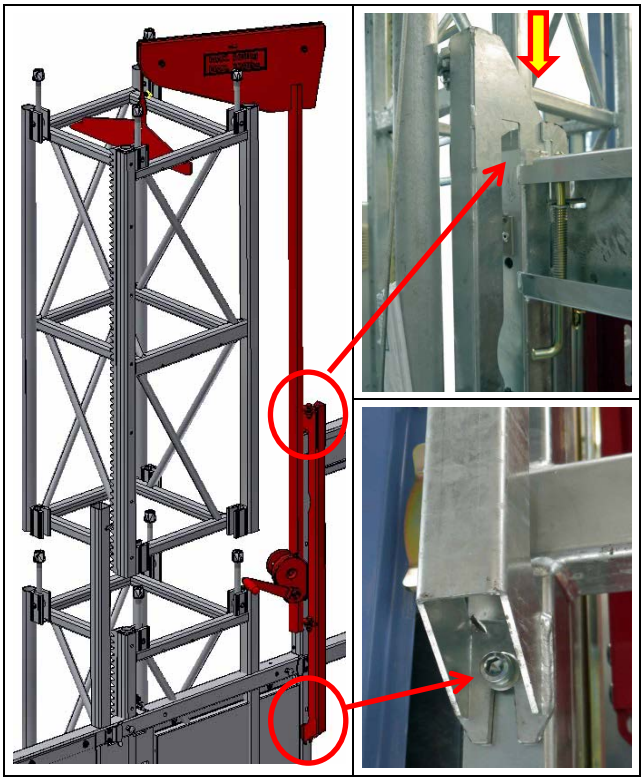
☞ **Only mast assembly aids from production 01/2016 onwards can be used on the GEDA 3700 Z/ZP.**

Mounting

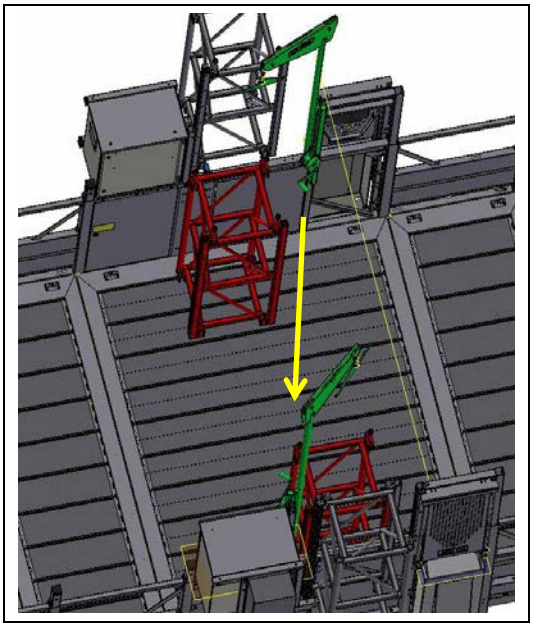
- Hang the mast assembly aid onto the upper platform cross bar and bolt from below.

Operation

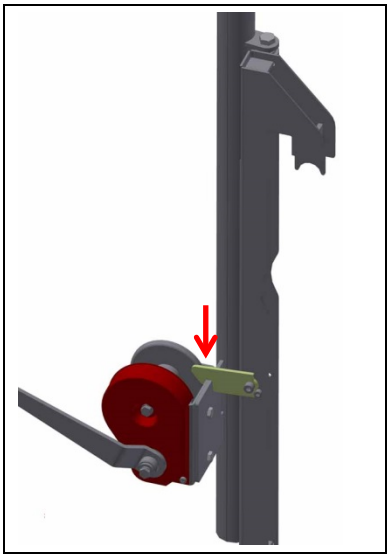
- Attach the suspended cross beam to the mast section.
- Wind up the mast section using the manual winch.
- Swivel mast section towards the mast, attach and screw in place.
- Unhook the suspended crossbeam and crank it out of the mast section.



The mast assembly aids must be assembled diagonally opposite each other.



During travel, the mast assembly aids must be secured against swivelling away.



The load-bearing capacity of the mast assembly aid and the prescribed inspection intervals for load-bearing devices must be observed.

6.8 Assembly / anchoring the mast

Assembly and anchoring of the mast is fundamentally carried out from the platform and scaffolding. If assembling without scaffolding, anchoring to the building is carried out from the assembly plank and assembly car.

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

☞ **It can also be anchored directly to the scaffolding if the scaffolding has been designed for the additional load (refer to anchoring forces).**

WARNING

The following points must be observed:

- The mast sections are assembled from the platform.
- Operation is with the platform control.
- Never reach or lean into the travel path during travel.
- Never allow parts to project into the travel path during travel.
- Never stand on the load.
- Never exit the platform to climb onto the mast or the building / scaffolding.

WARNING

Danger to life

Life-threatening hazard through fracture of the mast and falling platform.
During assembly, observe the **reduced payload** of **1000 kg**!

Mast brackets must be provided at the following distances.

- **First mast anchor at a max. height of 6 m.**
- **Distance of following mast brackets max. 12 m**.

During **assembly**, the upper edge of the trolley may be raised **up to 12 m** above the last mast tie.
During **operation**, the **max.** loading height above the last anchor is **7.5 m**.

After assembly of a mast bracket, align the mast correctly using a spirit level.

6.8.1 Assembling mast sections

- Load the platform with mast sections, parts for mast tie and tools. **(max. 1000 kg)**.
- Close the platform access of the ground station from the inside.

☞ **Open barriers, door or assembly guard must be closed. They interrupt the control.**

- Switch the platform control to “Assembly” mode (see section 6.2).
- Press the **UP** button (on the platform control).

Platform stops at the top of the mast.

Assembly guard

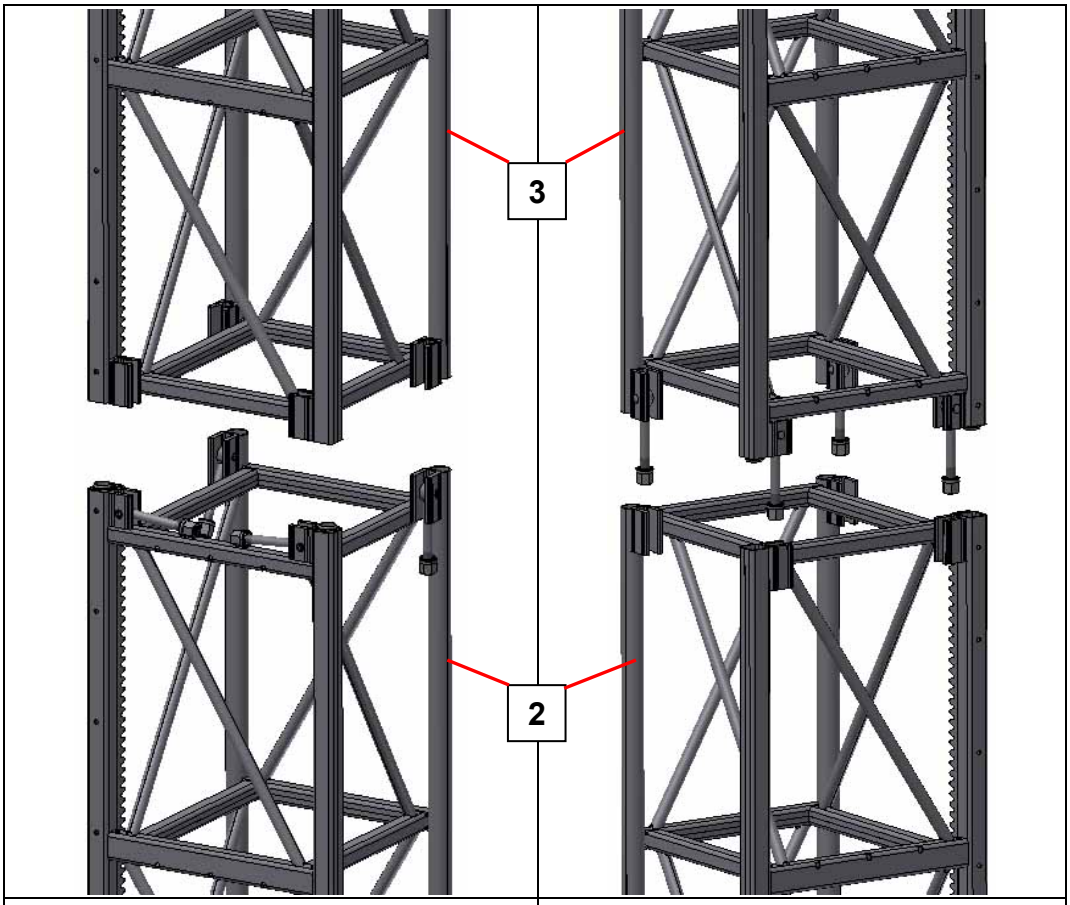
Opening

- Slightly raise the assembly guard (1), pull forwards and lower.

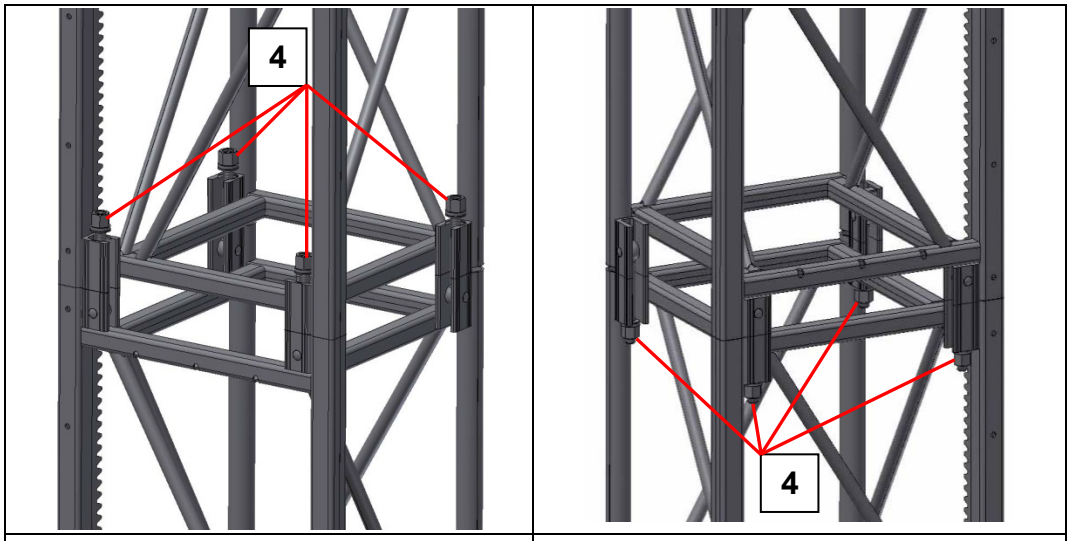
Closing

- Lift up the assembly guard (1), push towards the mast and hook to the platform frame.

☞ **The open assembly guard interrupts the safety circuit. The platform cannot be moved whilst the assembly guard is open.**



➢ Place the 1.5 m mast section (3) with the eye bolts up onto the left base mast (2).	➢ Place the 1.5 m mast section (3) with the eye bolts down onto the right base mast (2).



➢ Lift and fully tighten four eye bolts (4).	➢ Fold the four eye bolts (4) downwards and fully tighten.

Tightening torque **300 Nm**, width Across Flats (AF) 30 mm

Always extend masts in pairs.

➢ Slide up and hook the assembly guard into place.

DANGER

Danger to life
Never reach into the travel path of the machine during operation.

➢ Press the **UP** button (platform control) to assemble further mast sections.
➢ Press the **DOWN** button (platform control) to collect further mast parts from the ground.

Check length of the trailing cable!

For new mast sections or higher structures, the gear racks must be manually lubricated during assembly!

Initial lubrication of the racks

CAUTION

High wear on the racks
Before operation, the racks of new mast sections must be manually lubricated using GEDA special grease.

This manual lubrication must be repeated after approx. 3 days!

6.8.2 Travelling cable guides

Travelling cable guides must be installed to ensure that the travelling cable runs freely in the cable box and is operated using the cable carriage.
The more sensitive the hoist location is to wind forces, the shorter the distances should be between travelling cable guides.
Recommended distance to each other: max. 4.5 m

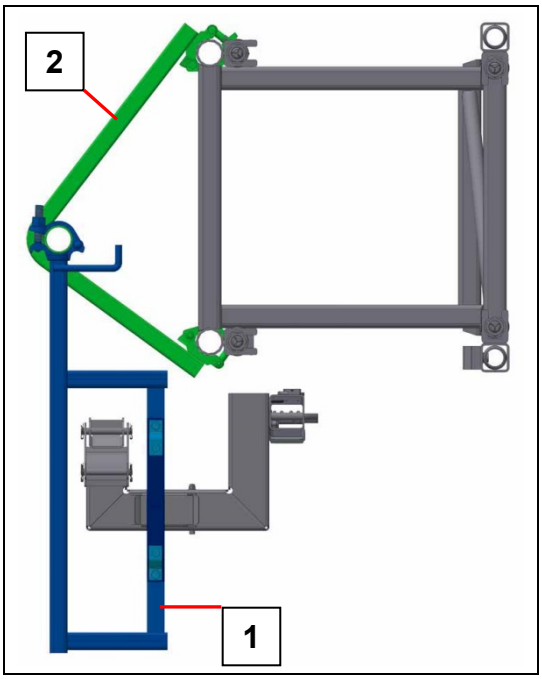
Operation with a cable box

CAUTION

Recommended distance:
First travelling cable guide **approx. 1 m** above the cable box.
Further travelling cable guides **max. 4.5 m** between one another.

Assembly

- Assemble the adapter (2) to the mast circular tube.
- Assemble the travelling cable guide (1) using the rubber straps on the drive side to the adapter (2) and align centrally to the cable holder on the car.



Tightening torque **50 Nm**, width Across Flats (AF) 22 mm

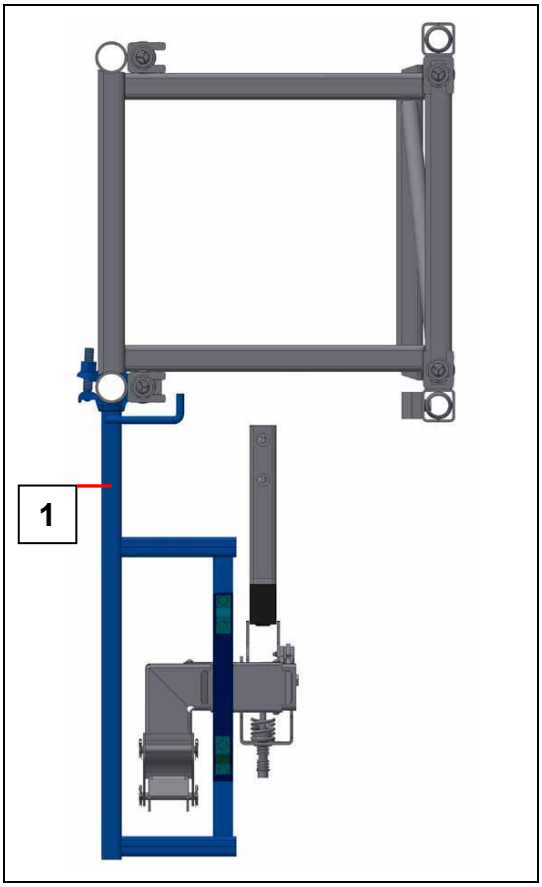
Operation with cable carriage

CAUTION

Recommended distance:
First trailing-cable guide **approx. 4.5 m** above ground.
Further travelling cable guides **max. 4.5 m** between one another

Assembly

- Assemble the travelling cable guide (1) using the rubber straps on the drive side to the left round tube of the mast and align centrally to the cable holder on the trolley.



Tightening torque **50 Nm**, width Across Flats (AF) 22 mm

During assembly of the travelling cable guides, make sure that the cable carriage is not located within a travelling cable guide when the car is stationary at a landing. Install trailing cable guides accordingly.

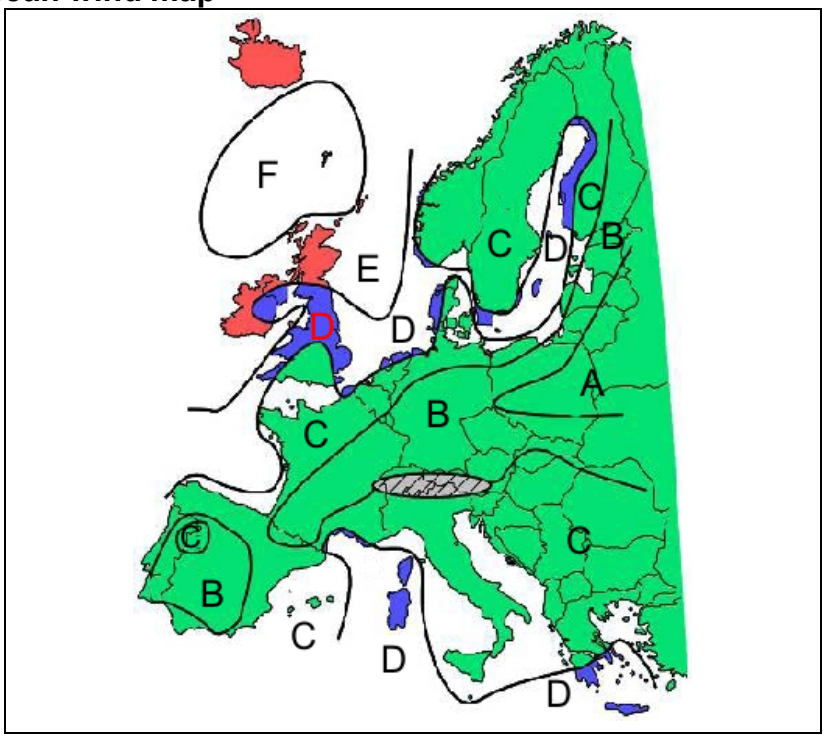
6.8.3 Tie forces

The stated values apply:

- per tie point
- for the assembly geometry shown

If the assembly geometry is changed, the corresponding values must be requested. The stated values do not include any safety factors. The wind loads used to determine the tie forces refer to the European wind regions according to EN 12158.
The wind load in other regions must be calculated according to ISO 4302 and the next value up in the table below must be applied.

European wind map

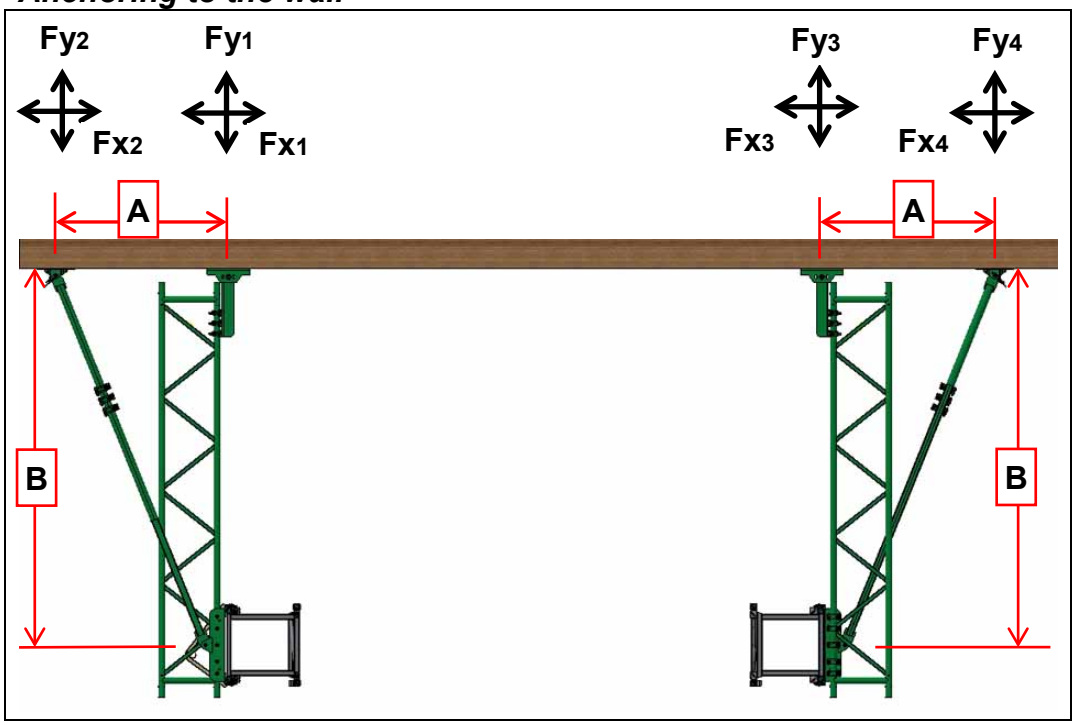


Assembly height H[m]	Wind forces for geographical regions [N/m²]			
	A/B	**C**	**D**	**E**
0<H≤10	544	741	968	1225
10<H≤20	627	853	1114	1410
20<H≤50	757	1031	1347	1704
50<H≤100	879	1196	1562	1977
100<H≤150	960	1306	1706	2159
150<H≤200	1023	1393	1819	2303

6.8.3.1 *Mast tie [assembly 90° to the wall] for distance (B) 1.7 m to 2.8 m*

(2 x item no. 54390)

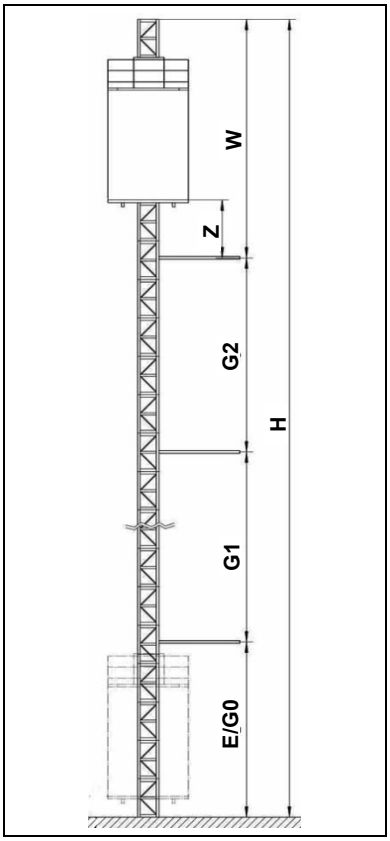
Anchoring to the wall



☞ **The appropriate anchoring forces must be requested if the assembly geometry shown is changed.**

Tie requirements:

E/G0 = 6 m	first mast tie
G = 12 m	vertical anchoring distance
H = 200 m	max. installation height
W = 10.5 m	max. distance of last anchor until the end of the mast
Z = 7.5 m	max. loading height above last anchor
Z<1.5 m	The last anchor is **not** overrun by the platform



Platform A	**Anchoring conditions / forces**		
Load capacity		**3700 kg**	
Anchoring distance	**G**	**12 m**	
Anchoring distance Distance mast (centre) to the wall	**A** **B**	**≥1.2 m** **1.7 m - 1.8 m**	Variable fixed - >minimal wall distance
Anchoring distance Distance mast (centre) to the wall	**A** **B**	**≥1.7 m** **2.7 m - 2.8 m**	Variable fixed - >maximal wall distance

Wind region A / B EN 16719	Wind speed 141 km/h					Wind load / dynamic pressure 960 N/m²		
Tie force	**F_{x1}** [N]	**F_{y1}** [N]	**F_{x2}** [N]	**F_{y2}** [N]	**F_{x3}** [N]	**F_{y3}** [N]	**F_{x4}** [N]	**F_{y4}** [N]
All anchor points **without** mast projection	512	5495	3450	5495	512	5495	3450	5495
Uppermost anchor at ***M = 7.5 m**	950	14800	8581	14783	950	14800	8581	14783
Wind region C EN 16719	Wind speed 165 km/h					Wind load / dynamic pressure 1306 N/m²		
Tie force	**F_{x1}** [N]	**F_{y1}** [N]	**F_{x2}** [N]	**F_{y2}** [N]	**F_{x3}** [N]	**F_{y3}** [N]	**F_{x4}** [N]	**F_{y4}** [N]
All anchor points **without** mast projection	681	7463	4122	7463	681	7463	4122	7463
Uppermost anchor at ***M = 7.5 m**	1275	19860	11635	20054	1275	19860	11635	20054
Wind region D EN 16719	Wind speed 188 km/h					Wind load / dynamic pressure 1706 N/m²		
Tie force	**F_{x1}** [N]	**F_{y1}** [N]	**F_{x2}** [N]	**F_{y2}** [N]	**F_{x3}** [N]	**F_{y3}** [N]	**F_{x4}** [N]	**F_{y4}** [N]
All anchor points **without** mast projection	876	9736	5393	9736	876	9736	5393	9736
Uppermost anchor at ***M = 7.5 m**	1650	25895	15154	26135	1650	25895	15154	26135
Wind region E EN 16719	Wind speed 212 km/h					Wind load / dynamic pressure 2159 N/m²		
Tie force	**F_{x1}** [N]	**F_{y1}** [N]	**F_{x2}** [N]	**F_{y2}** [N]	**F_{x3}** [N]	**F_{y3}** [N]	**F_{x4}** [N]	**F_{y4}** [N]
All anchor points **without** mast projection	1166	13145	7286	13145	1166	13145	7286	13145
Uppermost anchor at ***M = 7.5 m**	2206	34919	20407	35228	2206	34919	20407	35228

* At dimension **Z <7.5 m,** the lowest anchoring forces are required.

Platform B / C / D Anchoring conditions / forces			
Load capacity		**3000-3400 kg**	
Anchoring distance	**G**	**12 m**	
Anchoring distance Distance mast (centre) to the wall	**A** **B**	**≥1.2 m** **1.7 m - 1.8 m**	Variable fixed - >minimal wall distance
Anchoring distance Distance mast (centre) to the wall	**A** **B**	**≥1.7 m** **2.7 m - 2.8 m**	Variable fixed - >maximal wall distance

Wind region A / B EN 16719	Wind speed 141 km/h					Wind load / dynamic pressure 960 N/m²		
Tie force	**Fx_1** [N]	**Fy_1** [N]	**Fx_2** [N]	**Fy_2** [N]	**Fx_3** [N]	**Fy_3** [N]	**Fx_4** [N]	**Fy_4** [N]
All anchor points **without** mast projection	512	5495	3028	5495	512	5495	3028	5495
Uppermost anchor at ***M = 7.5 m**	950	16340	8581	14783	950	16340	8581	14783
Wind region C EN 16719	Wind speed 165 km/h					Wind load / dynamic pressure 1306 N/m²		
Tie force	**Fx_1** [N]	**Fy_1** [N]	**Fx_2** [N]	**Fy_2** [N]	**Fx_3** [N]	**Fy_3** [N]	**Fx_4** [N]	**Fy_4** [N]
All anchor points **without** mast projection	681	7463	4122	7463	681	7463	4122	7463
Uppermost anchor at ***M = 7.5 m**	1275	19860	11635	20054	1275	19860	11635	20054
Wind region D EN 16719	Wind speed 188 km/h					Wind load / dynamic pressure 1706 N/m²		
Tie force	**Fx_1** [N]	**Fy_1** [N]	**Fx_2** [N]	**Fy_2** [N]	**Fx_3** [N]	**Fy_3** [N]	**Fx_4** [N]	**Fy_4** [N]
All anchor points **without** mast projection	876	9736	5393	9736	876	9736	5393	9736
Uppermost anchor at ***M = 7.5 m**	1650	25895	15154	26135	1650	25895	15154	26135
Wind region E EN 16719	Wind speed 212 km/h					Wind load / dynamic pressure 2159 N/m²		
Tie force	**Fx_1** [N]	**Fy_1** [N]	**Fx_2** [N]	**Fy_2** [N]	**Fx_3** [N]	**Fy_3** [N]	**Fx_4** [N]	**Fy_4** [N]
All anchor points **without** mast projection	1166	13145	7286	13145	1166	13145	7286	13145
Uppermost anchor at ***M = 7.5 m**	2206	34919	20407	35228	2206	34919	20407	35228

* At dimension **Z <7.5 m,** the lowest anchoring forces are required.

6.8.4 Installing the mast tie

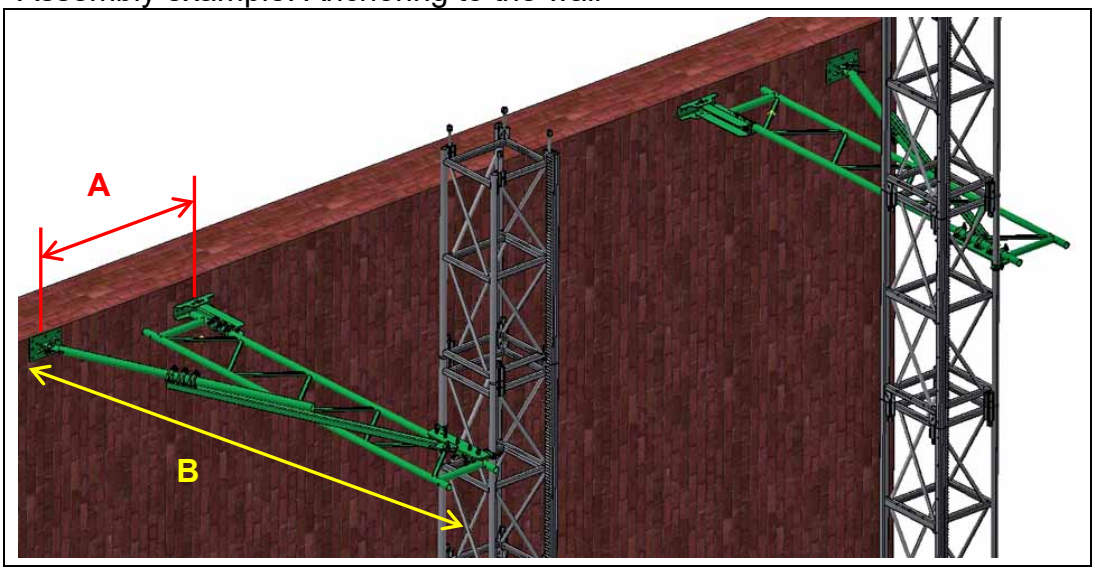
Mast tie for distance (B) 1.7 m to 2.8 m
(assembly 90° to the wall) *Item No.: 54390*

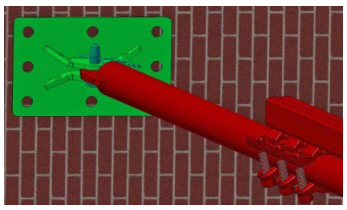
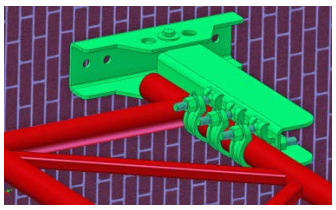
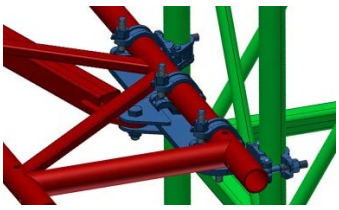
Distance **A**	**≥1.2 m**	Variable
Distance **B**	**1.7 m - 1.8 m**	fixed - >minimal wall distance
Distance **A**	**≥1.7 m**	Variable
Distance **B**	**2.7 m - 2.8 m**	fixed - >maximal wall distance

☞ **Select distance (A) as wide as possible. The minimum distance of both fastening plates is aligned against the distance between mast and building.**

For distances and tie forces, also refer to Chapter 3.11.1

Assembly example: Anchoring to the wall



		
Use the fixing bolt to install the bracing tube	Firmly clamp the girder using pipe clamps	Use close-tolerance bolts and install the bracing tube

Tightening torque of the 1.5”- tube clamps = **50 Nm** (across flats = 22 mm)

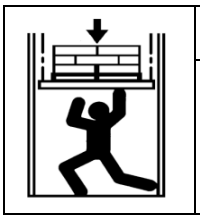
6.9 Assembling the cable carriage and central feeder (optional)

The cable box is only designed for a flat cable of approx. 50 m. Installation up to the assembly height is carried out as previously described. For assembly heights of more than 50 m, the travelling cable must be extended and guided by a central feeder and cable carriage.

6.9.1 Installing the cable carriage

The cable carriage is installed when the platform is a minimum of 3 m above the ground.

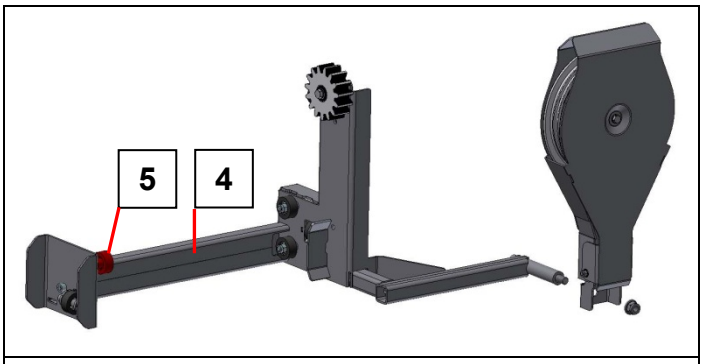
☞ **To install the cable carriage, a minimum of two mast sections must be assembled on the base mast (refer to Chapter6.7.1).**



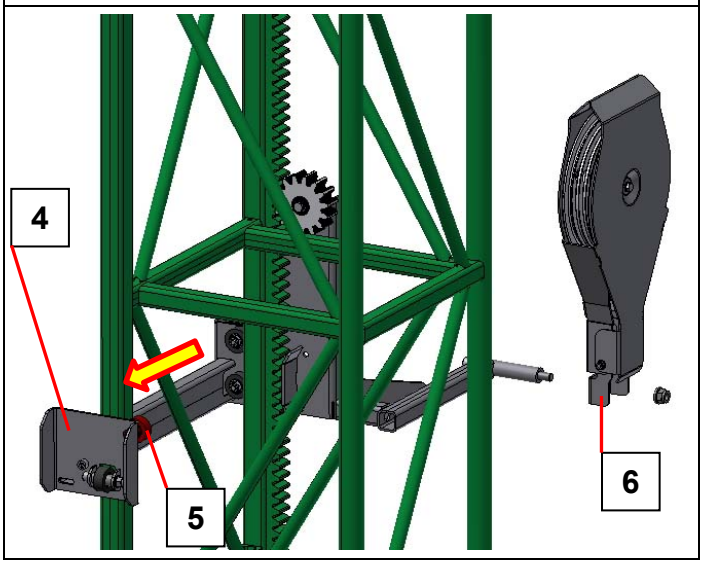
DANGER

Danger to life
Crushing by the platform.
Never remain inside the cordoned-off area during operation.

- Use the ground control and move the platform upwards to approx. 3 metres above the ground.
- Push the setting mechanism into the right base mast (see maintenance manual).
- Remove the counter roller (5) from the cable carriage (4).



- Insert the cable carriage (4) on the mast in the direction of the arrow.
- Install the counter roller (5) on the cable carriage (4).



- Place the cable roller (6) on the shaft of the cable carriage (4), align vertical and firmly attach with screws.

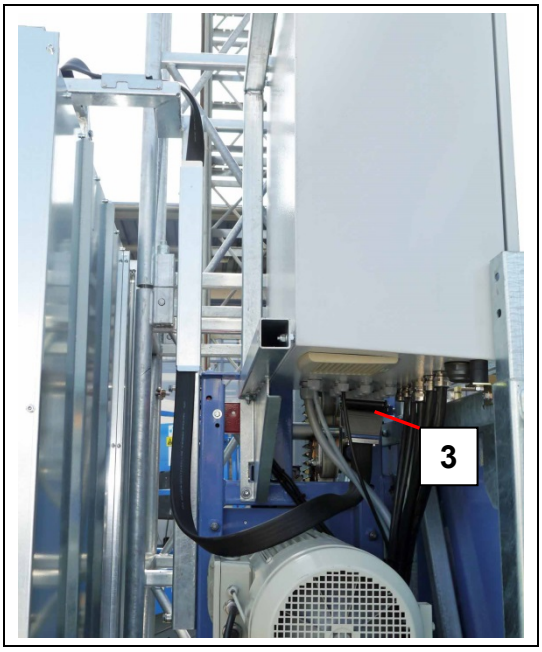
6.9.2 Installing the central feeder and travelling cable

	**CAUTION** **Damage to the cable and cable carriage** During assembly, make sure that there is sufficient length of cable. The cable must be installed so that the side with the cable identification is located on the outside of the cable pulley / cable carriage.

Extending the trailing cable

For the final assembly height, the travelling cable must be extended.

- Disconnect the travelling cable from the cable box at the right switch box of the platform and remove from the cable holder.
- Unwind the extension of the travelling cable (1) from the transportation cable drum.
- Connect the coupling of this extension (1) to the plug connection (3) below the right switch box on the platform, route to the cable holder (2) and install there.



- Connect the plug of the extension (1) to the coupling of the travelling-cable cable box disconnected.

Installing the central feeder

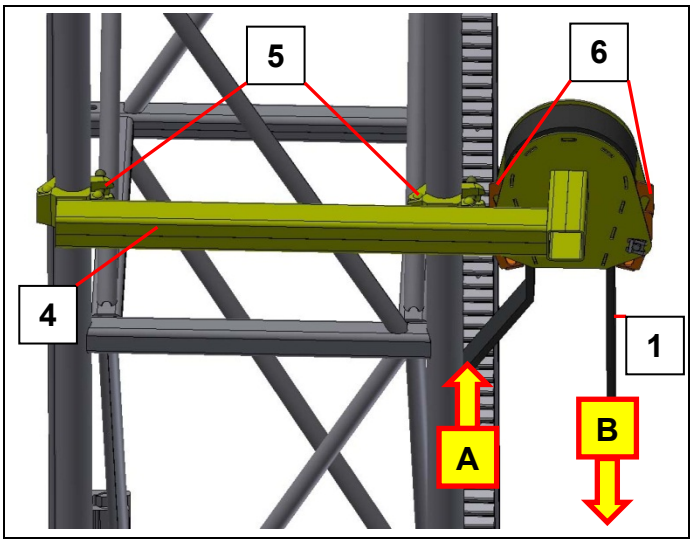
- Make a loop in the centre of the travelling cable required for the assembly (cable from the cable box + extension) and attach this to the platform so that it is accessible.
- Carefully move to half the final assembly height, or to the mast sections already installed (maximum 100 m).

☞ **In order to prevent damage to the cable, one person guides the halves of the cable from the ground.**

- Using the pipe clamps (5), install the central feeder (4) to the round tubes of the mast.

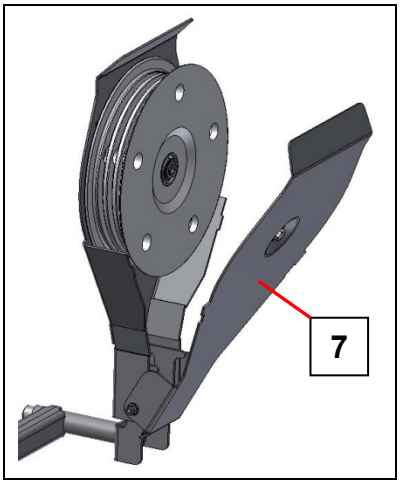
Installing the travelling cable

- Place the travelling cable (1) over the central feeder (4) and attach by tapping in the clamping wedges (6).



Direction of cable:
A = Cable from the ground station
B = Cable to the cable carriage

- Release the cover (7) of the cable roller and fold up.

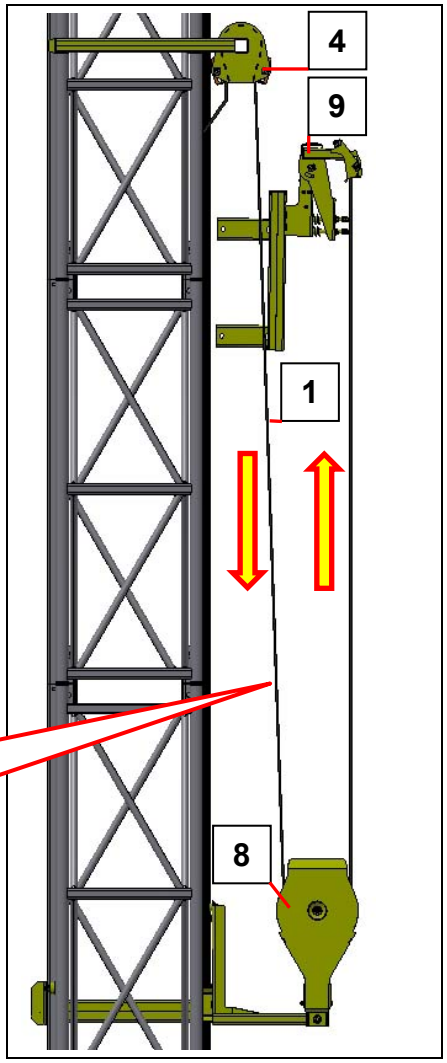


The cable carriage is fully at the bottom.

- Guide the travelling cable (1) over the cable roller of the cable carriage (8) to the cable holder (9) on the trolley.
- Fold down the cover of the cable roller and firmly attach.

Pull any remaining travelling cable towards the mast over the central feeder.

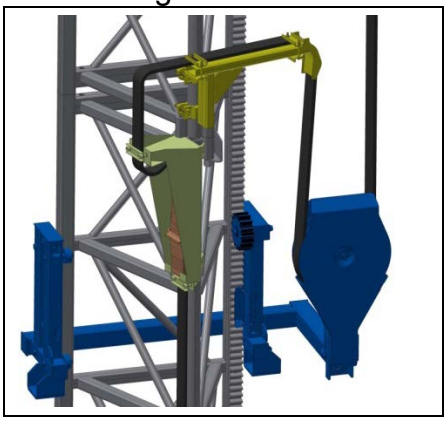
The cable must be installed so that the side with the cable identification is located on the outside of the cable pulley / cable carriage.



- Route the other side of the cable loop at the mast downwards to the cable box and attach it using suitable fasteners in regular intervals.

Tension relief with weather protection must be installed at the plug connection of the travelling cable from the cable box and travelling cable extension.

Position of the pull relief between the cable box and central feeder on the extension plug.



- Place excess travelling cable in the cable box.

CAUTION

Damage to the cable and cable carriage.
During installation, make sure that also when moving the platform upwards towards the protective buffer, that there is sufficient length of cable.

Moving the central feeder

- Loosen the travelling cable at the mast and move the platform towards the central feeder.
- Pull the required length of cable from the cable box.
- Move the central feeder, with the travelling cable installed, upwards.

The cable loop to the cable carriage is changed as a result.

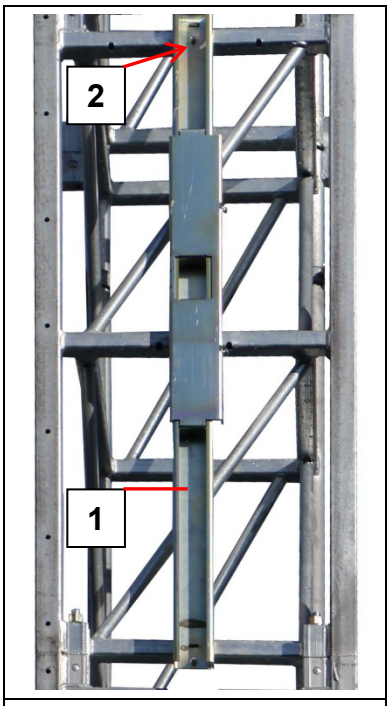
- Secure the travelling cable to the mast again.

6.10 Limit switch approach bar

	**WARNING** **Danger to life** During **operation**, the max. loading height above the last anchor is **7.5 m**. The limit switch approach bar of the uppermost landing must be set correspondingly low. Operation without a correctly installed limit switch approach bar is prohibited. Before the initial intended use, the **EMERGENCY limit switch approach bar** must be installed in accordance with the following information.

6.10.1 Landing limit switch, approach bar

Assembly
Place the landing limit switch approach bar (1) into the mast section.

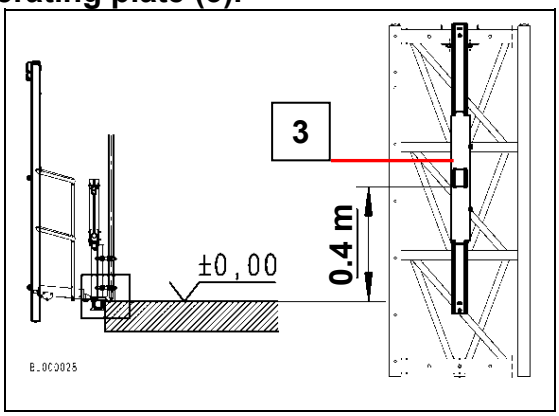


➢ Place the landing limit switch approach bar (1) at the centre hole (2) on the top crossbeam of the mast section and align vertically.

➢ Firmly attach the landing limit switch approach bar (1) at the rear on both crossbeams of the mast section.

Align the variably adjustable operating plate (3).

- Set the distance from the landing floor to the opening of the variably adjustable approach plate (3) to **0.4 m**.

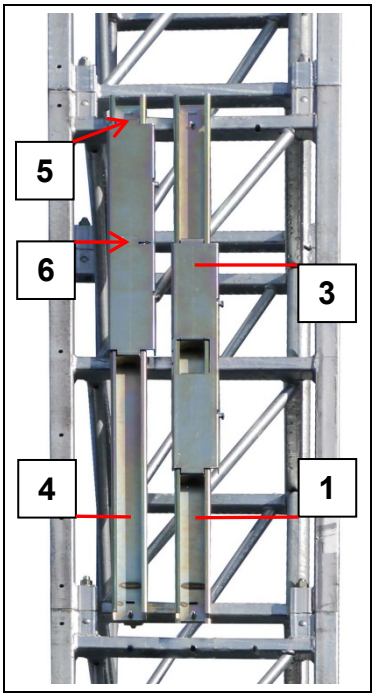


6.10.2 EMERGENCY limit switch approach bar

At the top stop position, an **EMERGENCY** limit switch approach bar (4) must be installed parallel to the landing limit switch approach bar (1). In the event of an error, the platform is stopped at this bar.

- Place the **EMERGENCY** limit switch approach bar (1) at the left hole (5) on the top crossbeam of the mast section and align vertically.
- Firmly attach the **EMERGENCY** limit switch approach bar (4) at the rear to both cross tubes of the mast section.

- Position the arrow mark for the variably adjustable approach bar (6) to the upper edge of the variably adjustable approach bar (3) of the landing limit switch approach bar (1).

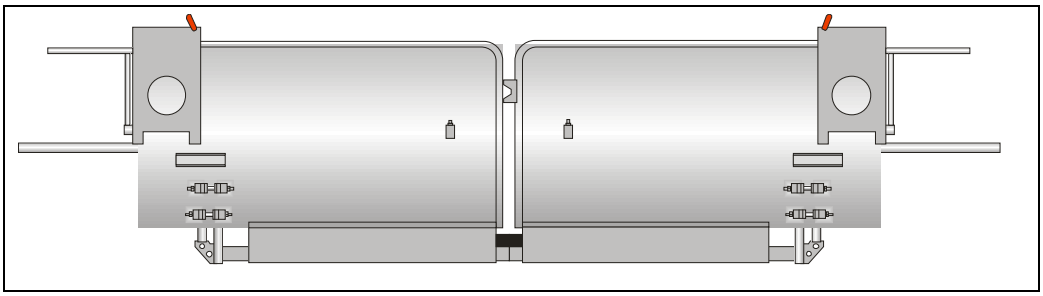


6.11 Landing level safety gates

Fall protection to prevent persons falling must be provided at **all** stop positions where there is a risk of falling from a height greater than 2 m. Only landing level safety gates, in combination with the car that ensure safe transfer to the building, are permitted for the tested and approved GEDA hoists.

GEDA landing level safety gate that has been inspected and acceptance tested with the **GEDA 3700 Z/ZP** and complies with these requirements.

- Item no. 01213



☞ **The opening width of these landing level safety gates is adjustable using a moveable scaffold coupling.**

Ensure that there is correct, reciprocal, mechanical locking of the loading ramp and landing level safety gate. (Refer to the assembly manual of the landing level safety gate).

☞ **Assembly of these landing level safety gates is described in their own assembly manuals supplied with them.**

6.11.1 Assembly of the electric modules

When used as a construction hoist

Assembly is described in chapter 6.6.3.

Landing level safety gate without electric module
(**Attention!** Observe national regulations)

The dummy plug remains in the red plug connector of the switch box of the ground station, thus, operation of the machine is only possible from the ground control.

Using as a transport platform
When using the equipment as a transport platform, operation is exclusively from the platform control.

6.12 Check after assembly and before each operation

- Check to ensure that
  - the specified maintenance work and inspection procedures have been carried out.
  - the gear rack is adequately greased.
    (Check/set the lubricating pump selector switch.)
  - there is no oil leakage at the geared motor.
  - the supply cable has an adequate cross section.
  - the motor rotation direction agrees with the **UP** and **DOWN** buttons of the control locations and that the **EMERGENCY STOP** button interrupts travel.
  - the length of trailing cable is sufficient for the assembly height.
  - information plates are present and legible (refer to Appendix A)
  - The danger zone at the lower loading point is cordoned off and marked or a ground base enclosure is fitted.
  - The loading door can only be opened when the platform is stationary on the ground (stopped by the **DOWN** limit switch).
  - a landing level safety gate can only be opened when the platform has been unlocked by the open barrier with unloading ramp.
- Carry out a test run with **loaded** platform and check whether the motor brake functions correctly.
- Check to make sure that the platform control, ground control (manual) and (if present) electric module on the landing level safety gate function correctly. (Refer to the instruction manual).
- There must be no sign of damage to the trailing cable, mains supply line and control lines.
- Carry out a drop test to check the function of the safety gear.
  (Refer to the maintenance manual).

6.12.1 Train authorized personnel

- Instruct the platform operator, give the handover report and documentation to an authorised person (platform operator) (record name and obtain signature of the trained persons in the handover report).
- Transfer the key for the platform control to the authorised and instructed person.

☞ **Check the 3700 Z/ZP in accordance with national regulations after assembly and before initial commissioning, as well as after each assembly at a new site.**

7 Dismantling (disassembly)

For disassembly, the same regulations and safety instructions are applicable as described in Chapter 6.
Disassembly is generally carried out in reverse order to installation; in addition, also observe:

- Disassemble the landing level safety gate first.
- Then check whether all mast connection bolts are in engaged.
- The platform must be stopped so that the mast connection to the mast to be removed is located above the upper edge of the trolley.
- Only release the mast ties when there are no more mast sections above the anchor point.
- Always intermittently unload the platform.

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